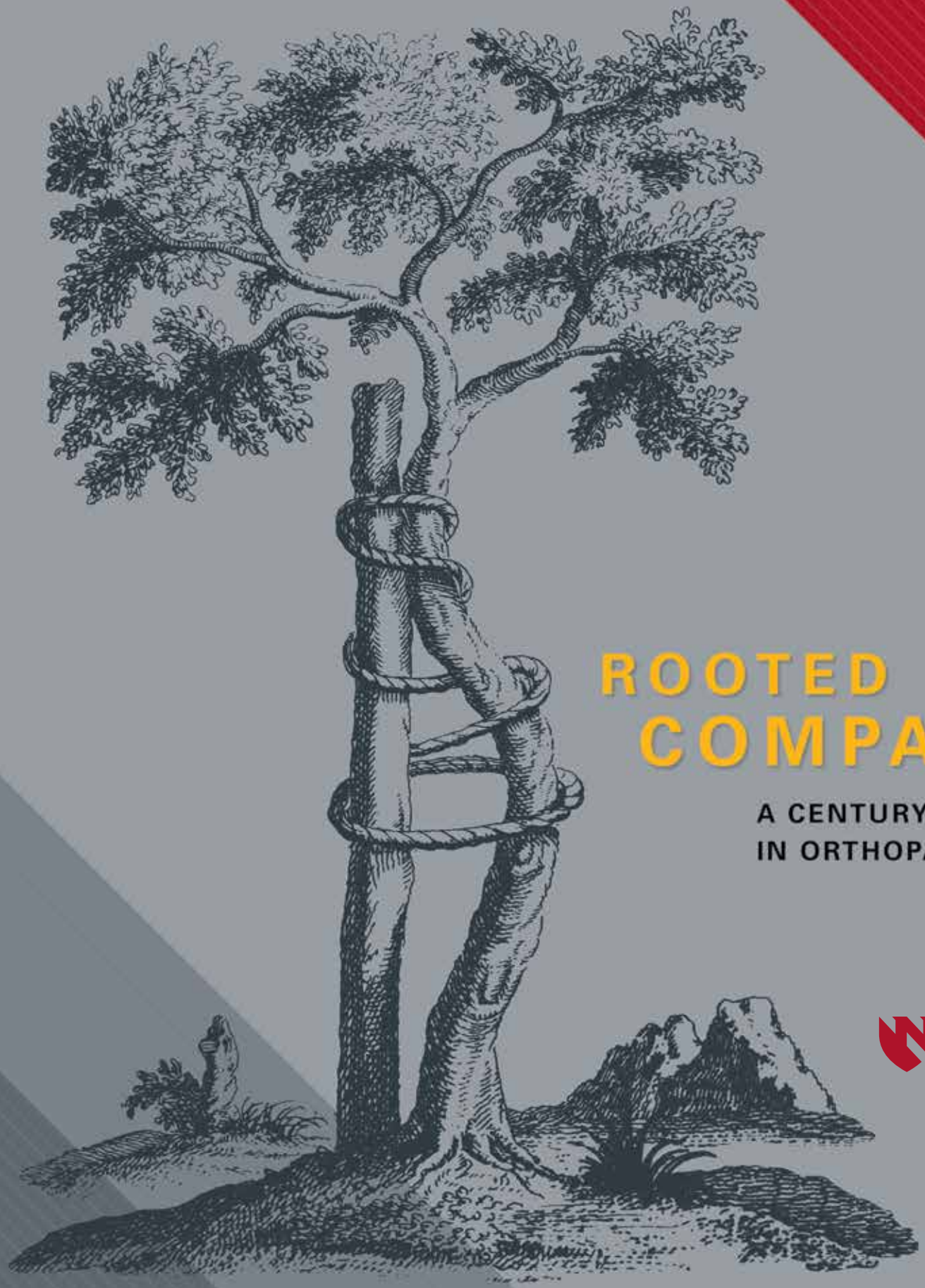


ROOTED IN COMPASSION

A CENTURY OF ADVANCEMENT IN ORTHOPAEDIC MEDICINE

University of Nebraska Medical Center

ORTHOPAEDIC SURGERY AND REHABILITATION

University of Nebraska Medical Center Department of Orthopaedic Surgery and Rehabilitation Mission Statement

Patient Care

Our surgeons are a team of dedicated, caring health professionals who specialize in the prevention, diagnosis, and treatment of musculoskeletal disorders in children, adolescents and adults. We provide quality, cost-effective care in all nine orthopaedic subspecialties, to more than 35,000 patients each year from Nebraska, the Midwest, and around the world.

Research

At our laboratories, cutting-edge research is being performed to define tomorrow's treatment methods. We are doing innovative research focused on the areas of musculoskeletal diseases, molecular biology and genetics, the development of less invasive surgical techniques, knee implant simulation, and computer-aided and robotic surgery.

Education

Through the orthopaedic residency program at UNMC, we are not only creating the orthopaedic surgeons of tomorrow, we are investing in Nebraska by cultivating promising educators who will teach the orthopaedic surgeons of generations to come. In addition, doctors throughout the region regard our program as a source of continuing education where they can learn the latest techniques for the treatment and prevention of bone and joint conditions.

University of Nebraska Medical Center

ORTHOPAEDIC SURGERY AND REHABILITATION

CELEBRATING 100 YEARS OF THE UNIVERSITY OF NEBRASKA MEDICAL CENTER DEPARTMENT OF ORTHOPAEDIC SURGERY AND REHABILITATION

Jeffrey P. Gold, M.D.

The University of Nebraska Medical Center was No. 1 in U.S. News & World Report's 2021-22 rankings for Best Hospitals in Nebraska. In addition, Orthopaedics was among five UNMC specialties rated as high performing on the prestigious list. UNMC's pediatric clinical partner, Children's Hospital & Medical Center, was most recently recognized as a Best Children's Hospital in orthopaedics in 2019-20.

A Legacy of Innovation

A CENTURY OF ONGOING ADVANCEMENT in orthopaedic medicine, surgery and care in our community comes to life in this ambitious book by Dr. Kevin L. Garvin and the Department of Orthopaedic Surgery and Rehabilitation at the University of Nebraska Medical Center.

"Rooted in Compassion" takes a fascinating – and comprehensive – look at 100 years of pioneering programs, treatments, research, innovation and philanthropy that have resulted in a truly world-class approach to improving the lives of those with musculoskeletal disorders. The historic images, clinical experiences and personal accounts chronicle the legacy of a modern, forward-facing Department of Orthopaedics.

We see, too, the department's commitment to educating and training future generations of experts who have and continue to give back to the communities they serve locally, across the nation, and around the world. Many have been noted for their academic excellence in the areas of research and education and training, others in clinical care, but all for a blend of compassion and caring, as they apply their knowledge and skill.

This manuscript also gives testament to the ongoing quest to learn more about causes of a wide spectrum of afflictions and ways to prevent them, as well as develop state-of-the-art treatments that have become so critical for mobility-related maladies. Research on bone metabolism and healing, development of clinically applicable prosthesis, stereoscopic robotic surgery, and so many more areas, have been core to the mission of our faculty, staff, and learners going back to the very beginnings of this department.

The ability to better understand these diseases and to find ways to restore function, to ease pain and suffering, have underscored the true roots in compassion and have distinguished the UNMC Department of Orthopaedic Surgery for generations and generations. In addition, access to truly world-class and innovative clinical care has been the hallmark, blended with the educational and research discovery environment.

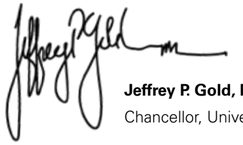
The opportunity to provide truly compassionate healing for a wide spectrum of those afflicted across all ages, races, genders, across all economic spectrums, has underpinned the approach to care and has formed the basis of the caring for patients with orthopaedic maladies. The opportunity to learn from our patients and their families and, at the same time, to help provide a normal quality and quantity of life has been the goal consistent with the mission and values of our organization.

"Rooted in Compassion" nicely depicts the legacy of those who have had the privilege to lead this department, those who are pioneers undaunted by clinical and scientific challenges and willing to push the frontiers of Orthopaedics forward.

Durham Outpatient Center, UNMC.

Early on, Dr. J.P. Lord broke through many important barriers. Most recently, under the leadership of Dr. Garvin, the department has continued to thrive across the entirety of its educational, research, and clinical missions. Fueled by the energy of a world-class academic Medical Center and generously supported by the private philanthropic community, Orthopaedic Medicine is an exemplar for all of our departments, institutes, centers of excellence, and colleges as a wonderful blend across each of the pedestals of the academic mission.

As we like to say, "serious medicine extraordinary care" always rooted in compassion, always dedicated to a brighter future, always building on the shoulders of giants in their field but having a clear vision of a better tomorrow. Congratulations to all honored in this manuscript. Without any question, the best is yet to come.

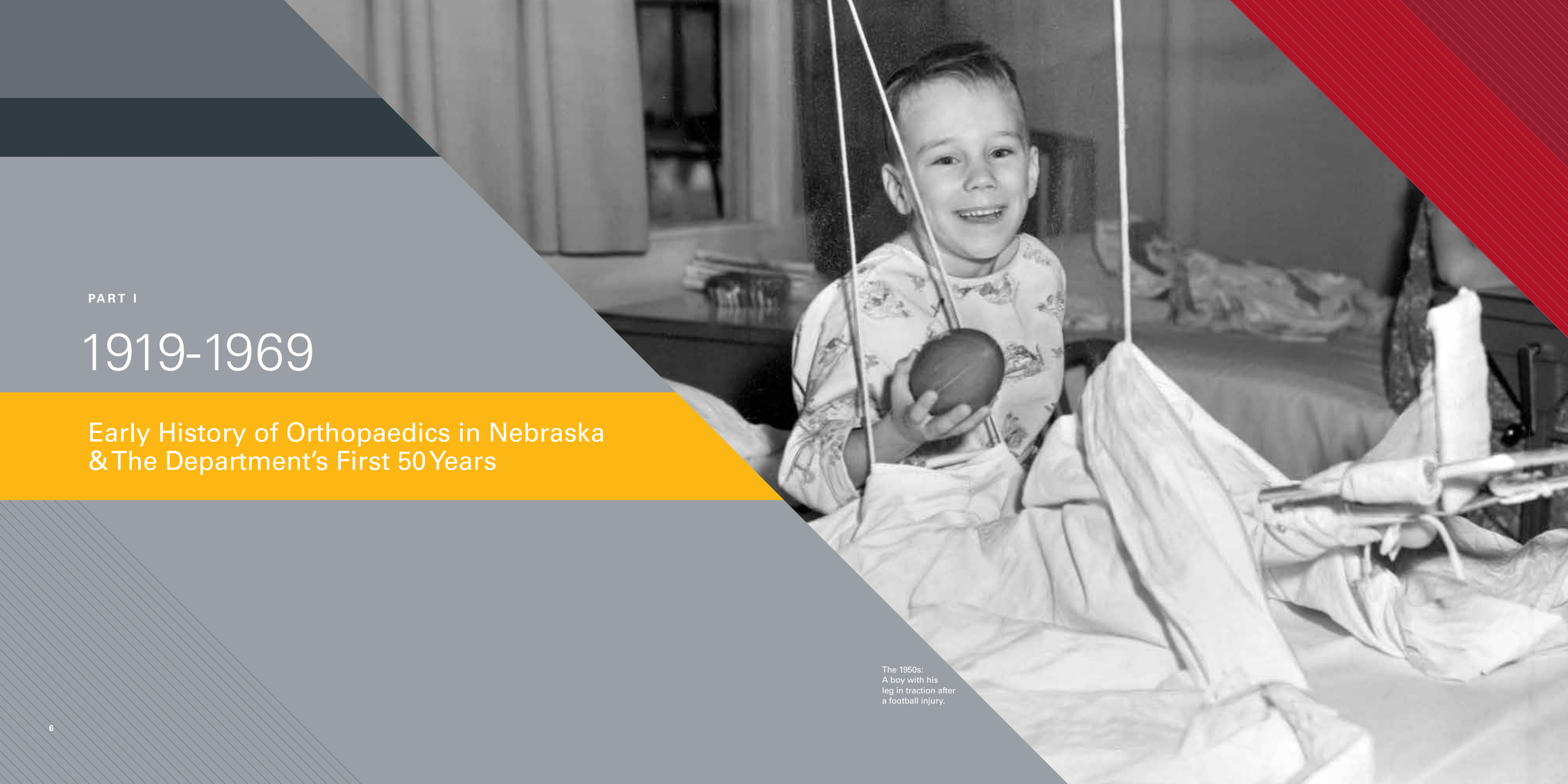


Jeffrey P. Gold, M.D.
Chancellor, University of Nebraska Medical Center

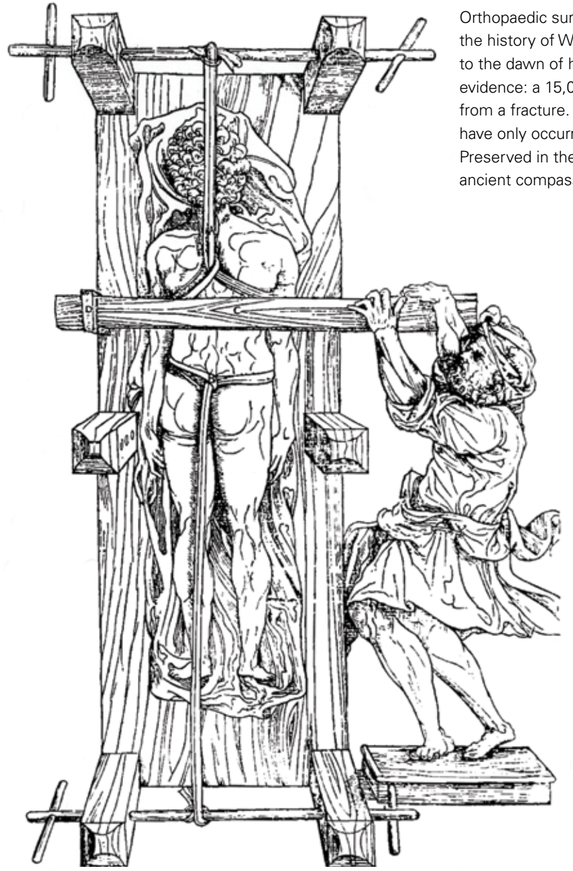
PART I

1919-1969

Early History of Orthopaedics in Nebraska & The Department's First 50 Years



The 1950s:
A boy with his leg in traction after a football injury.



Ancient Tradition, Modern Specialization

Orthopaedic surgery and rehabilitation is a relatively recent specialization in the history of Western medicine. The root of orthopaedics, however, dates to the dawn of human civilization. Anthropologist Margaret Mead cites this evidence: a 15,000-year-old human femur that showed signs of healing from a fracture. Such an achievement of musculoskeletal recovery could have only occurred with extended assistance from fellow hunter-gatherers. Preserved in the thighbone specimen, Mead argued that this evidence of ancient compassion marked the earliest proof of human civilization.

Later, New Stone Age archaeological sites from around the world reveal prehistoric limb amputations, non-operative bone unions and rehabilitation efforts with splints made of clay or fresh rawhide soaked in water. Carvings on ancient temple walls showing mummies entombed with elaborate splints and crutches suggest the presence of proto-orthopaedics in ancient Egypt, several millennia before the term "orthopaedics" appeared in the historical record.

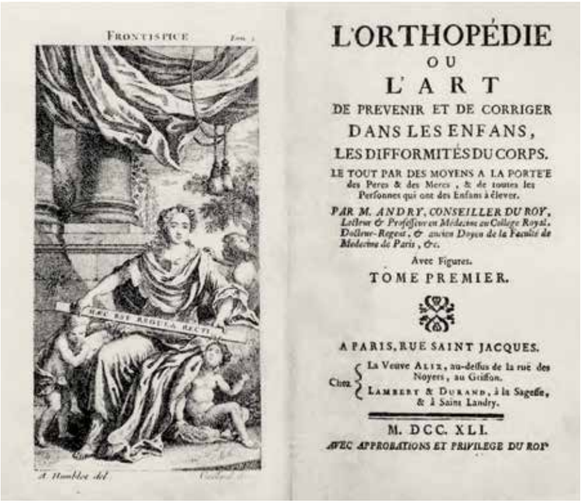
Personalities of ancient medical lore — from Hippocrates in Greece, who wrote that "there is no better training ground for the surgeon than war," to the Roman gladiatorial physician Galen, considered the "father of sports medicine," referred extensively to techniques and procedures that provided a foundation for continued orthopaedic advancements into the Renaissance. But the word "orthopaedics" didn't exist yet.

The structured field of specialization now known as orthopaedics gradually coalesced with advancements in general surgery, prosthetic innovations and diverse medical improvements relating to the complex system of bones, joints, ligaments, tendons, muscles and nerves that allow the human body to move. The singular word now used to encompass that expansive field was invented in the mid-18th century.

The Scamnum, illustrated by Guido Guidi in 1544, was an ancient surgical appliance.

French physician and professor Nicolas Andry de Bois-Regard coined the term "orthopaedics" in his 1741 text, "L'Orthopedie ou l'art d'Homme," a book exploring the treatment of childhood musculoskeletal disorders and diseases. The word orthopaedic comes from Greek: orthos, meaning "straight, correct" and paideia, meaning "rearing of children." Many subsequent early orthopaedists focused their careers on the correction of musculoskeletal deformity in children including polio, clubfoot and scoliosis.

By the early 20th century, the historically child-centric root of modern orthopaedics had emerged in Nebraska. Dr. John Prentiss Lord, an Omaha orthopaedic surgeon, became a guiding force for the Nebraska Society for Crippled Children when it chartered in 1919. His advocacy on behalf of the new charity was the start of what would become a lifelong passion, one that would long associate the Lord name with service to Omaha youth with disabilities. Lord was also the first chairman of the Department of Orthopaedics at the University of Nebraska College of Medicine from 1919 through 1931, making him a forefather to the contemporary University of Nebraska Medical Center Department of Orthopaedic Surgery and Rehabilitation. Andry's seminal book, "Orthopédie," included an illustration of a crooked tree anchored to a straight stake; the image became a universal symbol for orthopaedics and has remained important for UNMC's orthopaedic department. Past department annual reports have featured the image, and it is preserved in the official logo of the national American Board of Orthopaedic Surgery.



"L'Orthopedie ou l'art d'Homme," published in 1741, included an illustration of a crooked tree anchored to a straight stake; the image, a universal symbol for orthopaedics, has remained important to UNMC's Orthopaedic Department.

Over time, the modern field of orthopaedics broadened to include a range of surgical and non-operative treatments for musculoskeletal disease, disorder and trauma experienced by children and adults. The specialization developed thanks to several seemingly disparate breakthroughs in medical technology: Crawford Long first using ether anesthetic for a surgical procedure in 1842; Joseph Lister publishing on antiseptic surgery in 1867; and Wilhelm Röntgen's discovering X-rays in 1894. The rise of the automobile created a surge in high-impact trauma after the first Ford Model T rolled out of the factory in 1908, and the unprecedented carnage of World War I increased demand for more and better surgeons with specialized training.

Wounded soldiers, World War I, 1917.

Along with Dr. Lord, several notable Nebraska physicians helped advance the emerging field of modern orthopaedic surgery and rehabilitation. Dr. H. Winnett Orr (1877-1956) and Dr. Robert Schrock (1884-1960) were two pioneering orthopaedists from Nebraska with global influence. Dr. Orr was an early president of the American Orthopaedic Association in 1937 and a founding member of the American Academy of Orthopaedic Surgeons in 1931. Dr. Schrock served as president of the AAOS in 1941, as did Dr. Orr's partner in private practice, Dr. James E.M. Thomson, in 1946.

With the formative legacy of early Nebraska orthopaedic surgeons — and the continuing excellence of faculty and residents at UNMC's Department of Orthopaedic Surgery and Rehabilitation — the program's lineage begins with the rise of modern orthopaedic medicine. The following text explores the heritage of the UNMC program as well as the history of orthopaedics in Nebraska.

J.P. Lord, M.D.

The Early Days

The University of Nebraska College of Medicine was preceded by the type of institution which was common in the earliest days of medical education — a proprietary medical school. In those institutions, physicians were educated not unlike an apprentice in a simultaneous teaching-learning method. In Midwestern frontier days, much of the medical care was little better than that available from "irregular" practitioners and entrepreneurial purveyors of poultices, onion soup, asafoetida and alcohol-based tonics. Musculoskeletal injuries, including fractures, were treated with crude splints since operative intervention usually led to life-threatening sepsis.

In the summer of 1866, a group of Omaha physicians interested in "the advancement and promotion of medical science" formed the Omaha Medical Society. In the spring of 1869, Nebraska's first school of medicine was organized in Omaha under the name Omaha Medical College. Five physicians served on the Board of Trustees and individuals for 11 professorship chairs were selected by the trustees and a curriculum developed. The school never really got off the ground due to lack of facilities and bickering among the faculty. It was ultimately dissolved as a corporation in 1881.

Surgical Clinic Amphitheatre, 1894.

St. Joseph Hospital at 12th and Mason Streets could handle 28 patients in its two wards and 10 rooms. The original section was built in 1870 as St. Joseph Mercy Hospital. The addition came in 1882 after the Franciscan Sisters purchased the hospital from the Sisters of Mercy. The name then became St. Joseph Hospital.

In Lincoln, the University of Nebraska Board of Regents became interested in establishing an institution for medical education in 1875 even though it lacked funds, classroom space and a local hospital. Interest led to the opening of the Nebraska School of Medicine, Preparatory, in 1880 not in Lincoln, but in Omaha. Its purpose was not to prepare young men to practice medicine, but to qualify for entry into any "graded" medical school — essentially a pre-medical curriculum. The initial class of 14 was so successful that at the end of the first year, the Nebraska School of Medicine reorganized and took the name of the Omaha Medical College. Facilities near St. Joseph Hospital were acquired with funds invested by each faculty member.

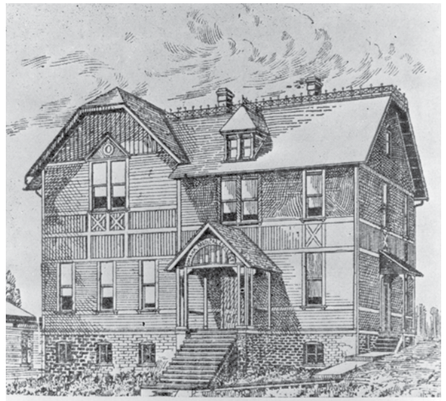
The proprietary Omaha Medical College grew from its original enrollment of 14 students and one paid faculty member in 1880 to 35 entering students in 1881. Stimulated by the success of the private Omaha Medical College, the Board of Regents initiated the first University of Nebraska Medical School in Lincoln in 1883. This venture, perhaps fueled by inter-city rivalry, lasted until 1887 when it was closed due to lack of funds and the absence of a hospital in Lincoln.

Unlike many proprietary schools willing to accept students who might not be academically qualified but were able to pay the tuition, the then-existing Omaha Medical College enjoyed sufficient stature that the admission committee had the luxury of rejecting many applicants who had the money but lacked intellectual requirements.

Growth of the student body led to affiliation with an increasing number of Omaha-area hospitals: St. Joseph, Immanuel, Bishop Clarkson, the Douglas County Hospital and St. Bernard's Hospital in Council Bluffs. Industrial accidents, including those at the Union Pacific Railroad, provided patients with bone and joint injuries for the students to learn orthopaedic principles from general surgeons on the faculty. The three-year curriculum of 1890 was expanded to four years in 1896 in response to public demand for high standards as well as stiffening licensure requirements of the Nebraska legislature.

In the 1890s, attempts at developing affiliations with the Nebraska Episcopal College in York and the University of Omaha never came to fruition. It became clear that a proprietary medical college without university affiliation could not survive. The costs and facility demands were too onerous. In 1902 a somewhat loose affiliation of the Omaha Medical College with the University of Nebraska was instituted. Dr. Baldwin Ward, a zoology professor, and Dr. Harold Gifford Sr., an ophthalmologist, became Dean and Associate Dean of the new University of Nebraska College of Medicine. An innovative six-year course of study leading to Bachelor of Science and Doctor of Medicine degrees was offered. By 1908, two years of preparatory college education were required for admission into the College of Medicine, a move that was well ahead of what became widely accepted by other medical schools across the country. Ultimately, the two-year pre-medical requirement was extended to three or four years, with the University of Nebraska leading the way.

The original Douglas County Hospital at 4102 Woolworth Ave. It was completed in 1892 and was demolished in 1947, making way for the new hospital building.



FIRST OMAHA MEDICAL COLLEGE

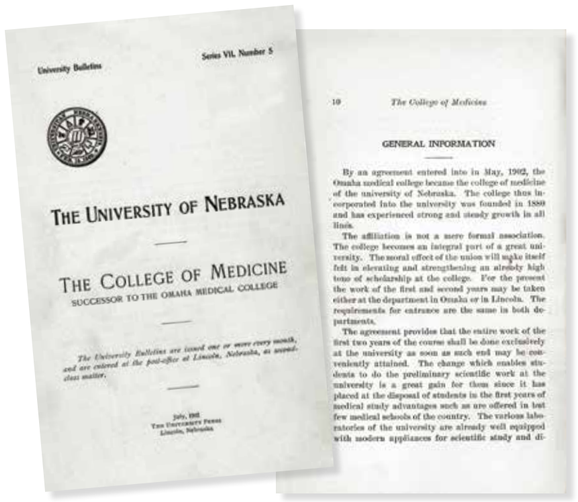
Omaha Medical College in Transition

According to research by John Schleicher, former head of special collections at UNMC McGoogan Library of Medicine, the Omaha Medical College opened June 14, 1881, at 11th and Mason Streets. It was a doctor-owned, for-profit school, which was typical in the 19th century. A board of trustees made up of physicians from Omaha and surrounding communities ran the college. Most of the same doctors made up the faculty as well.

In 1886, the Omaha Medical College's wood frame building was moved to 12th and Pacific Streets and enlarged. The college built a new brick-and-stone building in 1893, and in 1899 a major addition more than doubled the college's facilities.

The Omaha Medical College excelled in its medical education mission, but the college struggled financially. The college became affiliated with the University of Nebraska in 1902. It evolved over the years into the present College of Medicine, eventually expanding to include all of the colleges and institutes that make up UNMC today.

Above:
Omaha Medical College at 11th and Mason Streets. In the two decades after the Civil War, Nebraska's increasing population created a great need for physicians. But medical schools were scarce and their training facilities spotty. Medical training usually started in the office of a practicing physician — a sort of apprenticeship — to be followed with a few weeks of formal medical education.



University Bulletins — Series VII, Number 5

THE UNIVERSITY OF NEBRASKA

THE COLLEGE OF MEDICINE

SUCCESSOR TO THE OMAHA MEDICAL COLLEGE

The University Bulletins are issued one or more every month, and are entered at the post-office at Lincoln, Nebraska, as second-class matter.

July, 1902
The University Press
Lincoln, Nebraska

10 *The College of Medicine*

GENERAL INFORMATION

By an agreement entered into in May, 1902, the Omaha medical college became the college of medicine of the university of Nebraska. The college thus incorporated into the university was founded in 1880 and has experienced strong and steady growth in all lines.

The affiliation is not a mere formal association. The college becomes an integral part of a great university. The moral effect of the union will make itself felt in elevating and strengthening an already high tone of scholarship at the college. For the present the work of the first and second years may be taken either at the department in Omaha or in Lincoln. The requirements for entrance are the same in both departments.

The agreement provides that the entire work of the first two years of the course shall be done exclusively at the university as soon as such end may be conveniently attained. The change which enables students to do the preliminary scientific work at the university is a great gain for them since it has placed at the disposal of students in the first years of medical study advantages such as are offered in but few medical schools of the country. The various laboratories of the university are already well equipped with modern appliances for scientific study and di-

The 1902-03 Bulletin of University of Nebraska College of Medicine breaks down how the university operated as a two-part campus (early classes in Lincoln, and clinical studies in Omaha). Dr. Jonas is listed as a Professor of Clinical Surgery with Orthopaedic surgery listed as a senior level class.

Flexner Report and Omaha Consolidation

After the University of Nebraska system absorbed the Omaha Medical College in 1902, the program's medical degree coursework was divided between Omaha and Lincoln. The UNL campus taught basic sciences, and the Omaha-based Nebraska Medical College provided clinical instruction. This divided campus consolidated in Omaha after "The Flexner Report" was published.

Commissioned by the Carnegie Foundation, Dr. Abraham Flexner visited Nebraska in April 1909 while conducting research on the state of the nation's medical schools. Results of his efforts published in 1910 praised the quality of education and faculty at the University of Nebraska College of Medicine. However, Dr. Flexner criticized the dual campus arrangement as being disruptive. He urged the university to consolidate at one site.

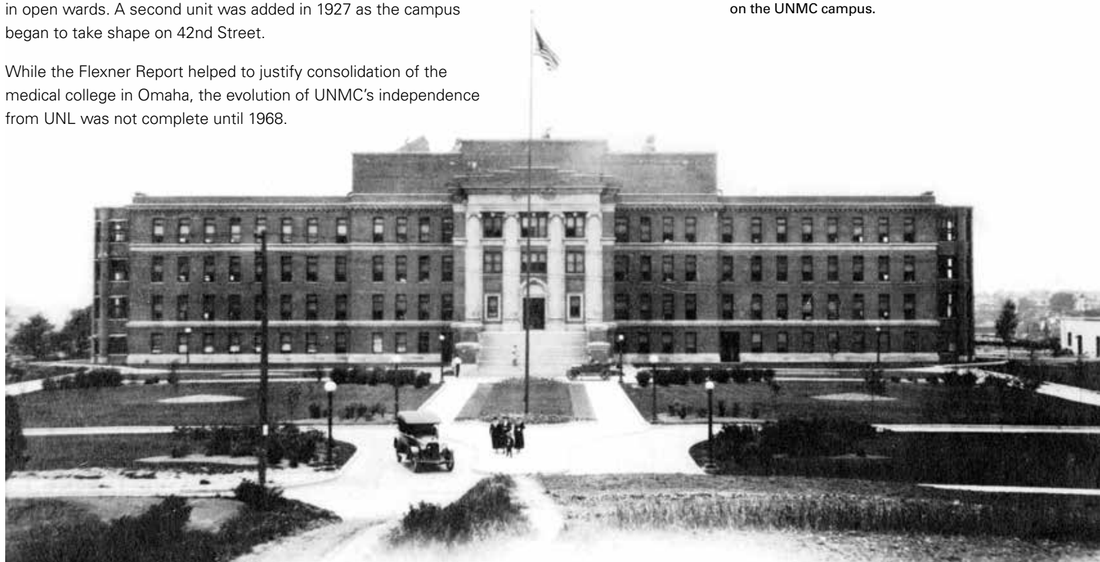
A proposal to consolidate the medical college in Omaha proved controversial in the Nebraska Legislature. Special interests from Lincoln and Creighton University opposed the unified Omaha campus, and the funding approval passed by only one vote in 1909. The Legislature approved $20,000 to buy land for a campus west of the city at 42nd Street and Dewey Avenue and added an additional $100,000 to build a laboratory building. The first building was completed in 1913.

The full transfer of basic sciences instruction finished consolidating in Omaha in 1915, during Dr. Irving Cutter's tenure as dean. In 1916, the Legislature approved an appropriation of $150,000 for the University Hospital. The hospital had 130 beds in open wards. A second unit was added in 1927 as the campus began to take shape on 42nd Street.

While the Flexner Report helped to justify consolidation of the medical college in Omaha, the evolution of UNMC's independence from UNL was not complete until 1968.

Irving S. Cutter, M.D.

Today, University Hospital's columned facade is preserved in the glass atrium of the Wigton Heritage Center on the UNMC campus.



Dr. August Frederick Jonas (1858-1934)

August Frederick Jonas, M.D.

Dr. August Frederick Jonas was not only one of the first trained surgeons to practice in Omaha, he was also among the first to teach orthopaedic surgery in the city.

Born in Arlington, Wisconsin, he began studying medicine at age 14 under Dr. A.T. Koch. Dr. Jonas graduated from Chicago's Bennett Medical College (which Loyola University later absorbed) in 1877, and continued training at Ludwig Maximilian University in Munich. He did postgraduate surgical work in Vienna, Berlin and Paris.

Dr. Jonas joined the Omaha Medical College in 1892 as a professor of surgery. Archival course catalogs of the University of Nebraska College of Medicine show that Dr. Jonas was the college's primary (and often sole) instructor of orthopaedic surgery for many years. Dr. H. Winnett Orr, assistant professor of the history of medicine, contributed to teaching orthopaedic surgery in 1911-12, according to that year's bulletin. Dr. Jonas remained the primary instructor of orthopaedics until Dr. John Prentiss Lord joined the volunteer faculty and was first listed as professor of orthopaedic surgery in the college's 1914-15 bulletin.

Dr. Jonas teaching in 1894.

Dr. Jonas was among 80 members of the College of Medicine faculty who contributed to the U.S. effort during World War I, serving as a lieutenant in the Medical Reserve Corps. After the war, he was named chairman of the Nebraska Medical College's surgical department, according to the 1919-20 bulletin. The same year, Dr. Lord became the first chairman of the Department of Orthopaedics. Dr. Jonas went on to become dean of Omaha Medical College and was the last dean before the college's merger with the University of Nebraska in 1902. He was a leading advocate for the affiliation and in favor of locating all medical college programs and courses in Omaha.

Dr. Jonas also organized the surgical department of Methodist Hospital and was its first chief surgeon. In 1898 he became the first chief surgeon of the Union Pacific Railroad and remained in this post for 27 years. He retired in 1929.

In a paper by Dr. Orr titled "History of Orthopaedic Surgery in the Western Part of the United States before 1900," which he presented at a January 1947 meeting of the American Academy of Orthopaedic Surgeons, Dr. Orr praised Drs. Jonas and Lord for being early luminaries in the developing field of bone and joint surgery before the turn of the 20th century.

Orthopaedic care was needed for soldiers on the front lines and those returning home with injuries.

War, Polio and Academic Rivalry

The University of Nebraska Medical College quickly grew at 42nd Street and Dewey Avenue as its Omaha advocates managed to secure more appropriations from the Legislature. Roughly seven months after the 1917 opening of a new University Hospital on campus, the U.S. joined its allies in World War I (1914-18).

University faculty and students served in the war effort. Even the new dean of the medical college, Dr. Irving S. Cutter, took an approved leave of absence to contribute. In his absence, the interim acting dean (1918-19), Dr. C.W.M. Poynter, observed: "Standards, of course, declined as they did in all other schools in the country. Student interest reached a low ebb and the members of the faculty who remained at home were worked to exhaustion and only did the minimum of essential teaching while military events filled everyone's minds."

Specialized orthopaedic skills became an increasingly hot commodity. New technology for guns and bombs necessitated improved treatment of traumatic injury. Wounded veterans returning home required continued orthopaedic care as well.

Meanwhile, on the homefront, children from impoverished families suffered disproportionately from orthopaedic ailments — scoliosis, clubfoot, cerebral palsy, tuberculosis and poliomyelitis — that led to lifelong disability if left untreated. The polio epidemics of 1909 and 1919 bookended the war effort and opened the eyes of Omaha's community leaders to the glaring need for more orthopaedic medical services for disadvantaged youths. Omaha's recurring polio epidemics would continue into the 1950s.

In the early 1900s, there was a pressing need for more orthopaedic medical services for disadvantaged children.

The years immediately following World War I solidified several prominent academic rivalries within the faculty of the Nebraska Medical College. Omaha's Dr. Lord and Lincoln's Dr. Orr became cheerleaders for orthopaedic interests in their respective cities — particularly in regard to state funding of the Nebraska Orthopaedic Hospital in Lincoln established by the Legislature in 1905. They also competed for public recognition as Nebraska's top orthopaedic surgeon.

Two accomplished deans of the Nebraska Medical College during these decades — Drs. Cutter and Poynter — exhibited another notable rivalry. Both men had previous experience working in the Lincoln practice of Dr. Orr. After an internship at Bellevue Clinic in New York City, Dr. Poynter came to Lincoln and joined Dr. Orr's practice (1903-1906) before leaving to teach anatomy at the medical college in Lincoln. Dr. Cutter worked in Dr. Orr's practice for two years after finishing his degree from the medical college in 1910; he left to become the college's director of laboratories in 1912, where he proved his administrative prowess to secure the deanship in 1915.

Dr. Cutter was dean of the Nebraska College of Medicine from 1915 to 1925, returning to the position after his brief leave during the war. He left Nebraska in 1925 to become the dean of the College of Medicine at Northwestern University in Chicago from 1925 until 1941. Because of a longstanding feud between Drs. Cutter and Poynter, the outgoing dean, Dr. Cutter, appointed Dr. J. Jay Keegan as successor. Keegan was a neurosurgeon not especially interested in the administrative role to thwart Dr. Poynter's ambitions. In time, Dr. Keegan would pass the baton of leadership to Dr. Poynter, who became the university's longest-serving dean (1929-46).

Dr. Arthur Charles Stokes (1869-1940)

An Omaha site for the University of Nebraska Medical College's Department of Orthopaedics is a direct result of a consolidated Omaha campus — a once uncertain prospect made possible by the early political maneuverings of several prominent Omaha physicians, including crucial advocacy from a popular professor of surgical anatomy, Dr. Arthur Charles Stokes.

Dr. Stokes was born in Canada in 1869 and emigrated to the U.S. at age 15. He studied at Iowa State College (1892), spent two years with the College of Physicians and Surgeons in Chicago, and graduated from the Omaha Medical College in 1899. He taught chemistry at his Omaha alma mater for seven years and interned one year at Methodist Episcopal Hospital before post-graduate work at Roosevelt Hospital of New York, followed by two years of study overseas under leading surgeons in Berlin and London.

He, along with Dr. Irving S. Cutter and others, helped convince the Legislature to fund the medical college in Omaha in 1909. The Legislature approved a new location for the campus at 42nd Street and Dewey Avenue on what was then the western edge of Omaha. The building was completed in September 1913 at a cost of $110,000 and dedicated Oct. 16, 1913. Initially, the building held all medical school classes, labs and a small library. After other buildings were added to the campus, it remained the home of the departments of anatomy, embryology, microbiology and pathology and was known as the North Building. In 1970 it was renamed in memory of Poynter.

Arthur Stokes, M.D.

The University of Nebraska Medical College and Hospital on 42nd Street between Dewey Avenue and Emile Street had grown by 1928.

Above: Nebraska's Base Hospital No. 49 at Allerey, France.

Left: From left, Colonel Mitchell, Major Hull, Major Bridges, Major Stokes and A.E. Sheldon.

During World War I, Dr. Stokes was a lieutenant in the medical reserve corps of the U.S. Army, a director of University of Nebraska Overseas Base Hospital No. 49 and chief of surgical service in France.

In 1919, months after returning from France, Dr. Stokes presided over the first meeting of The Society for the Relief of the Disabled. There were several doctors representing the Nebraska College of Medicine present, including Drs. Lord and Cutter.

In 1927, the Society changed its name to the Orthopaedic Association of Omaha. Its focus was supporting orthopaedic treatment and rehabilitation of Omaha youth. It was a precursor to the contemporary Munroe-Meyer Institute.

Dr. Stokes worked in private practice, as an associate professor at the Nebraska Medical College, as medical director of the Guarantee Life Insurance Co. and as consulting surgeon to the Missouri Pacific Railroad. He was a member of the Omaha-Douglas County Medical Society, American College of Surgeons, American Medical Association, the Western Surgical Association and the American Urological Association. He was elected to the university's Board of Regents and died of a heart attack in 1940 while still a regent.

The operating room at Nebraska's Base Hospital No. 49 during World War I.

Dr. John Prentiss Lord (1860-1940)

John Prentiss Lord, M.D.

Dr. John Prentiss Lord was the first chair of the University of Nebraska Medical College's Department of Orthopaedics. More than any other early Omaha orthopaedic surgeon, his name remains recognizable, thanks to the Dr. J.P. Lord School, a longstanding Omaha Public Schools facility serving students with special education needs.

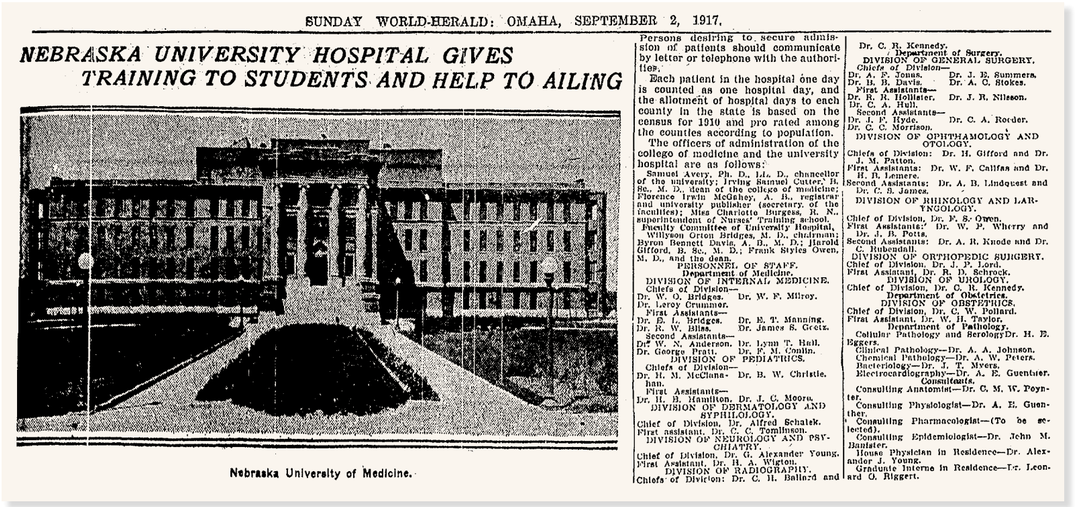
Dr. Lord was born in Dixon, Illinois, on April 17, 1860. He received a medical degree from Rush Medical College in Chicago in 1882 and first practiced general medicine in Creston, Illinois. After four years of general practice he went to New York for post-graduate study in preparation for surgery work. He later relocated to Omaha as a doctor with the Union Pacific Railroad. He quickly established himself as a leading figure in the city's community of medical educators with faculty positions at Creighton University and then the University of Nebraska College of Medicine.

Dr. Lord was one of the original faculty members when the John A. Creighton Medical School was founded on May 30, 1892. He was chairman of the anatomy department (1892-93) and the third dean of the medical school (1900-1901) before focusing his attention on surgery. Dr. Lord assumed the position of associate professor of surgery and attending surgeon at St. Joseph Hospital, then professor of surgery at Creighton (1893-1913).

The first Creighton Memorial St. Joseph Hospital, completed in 1892.

Creighton did not offer specialized orthopaedics training to students. So, his decision to specialize exclusively in orthopaedics prompted his joining the University of Nebraska Medical College, where he was named professor of orthopaedic surgery in 1913, according to the Omaha World-Herald. The absence of a designated "chairman" in archival Medical College bulletins suggests that a formalized department of orthopaedics did not exist, but orthopaedic instruction was offered.

Dr. Lord was instrumental in lobbying the Legislature for the establishment of the Nebraska Orthopaedic Hospital in Lincoln (originally called the State Hospital for the Crippled, Ruptured and Deformed Children) in 1905. He served as the surgeon in chief of the pediatric facility from 1905 through 1917, with a temporary leave of absence during World War I. He became acquainted with Dr. H. Winnett Orr through their shared involvement with the Lincoln hospital. Dr. Orr was the hospital's superintendent during Dr. Lord's time as head surgeon. Dr. Orr eventually succeeded Dr. Lord as surgeon in chief.



SUNDAY WORLD-HERALD: OMAHA, SEPTEMBER 2, 1917.

NEBRASKA UNIVERSITY HOSPITAL GIVES TRAINING TO STUDENTS AND HELP TO AILING

Nebraska University of Medicine.

Persons desiring to secure admission of patients should communicate by letter or telephone with the authorities.

Each patient in the hospital one day is counted as one hospital day, and the allotment of hospital days to each county in the state is based on the census for 1910 and pro rated among the counties according to population.

The officers of administration of the college of medicine and the university hospital are as follows:

Samuel Avery, Ph. D., LL. D., chancellor of the university; Irving Samuel Cutter, B. Sc., M. D., dean of the college of medicine; Florence Irwin McGahey, A. B., registrar and university publisher (secretary of the faculties); Miss Charlotte Burgess, R. N., superintendent of Nurses' Training school.

Faculty Committee of University Hospital, Willyson Orton Bridges, M. D., chairman; Byron Bennett Davis, A. B., M. D.; Harold Gifford, B. Sc., M. D.; Frank Styles Owen, M. D., and the dean.

PERSONNEL OF STAFF.

Department of Medicine.

DIVISION OF INTERNAL MEDICINE.

Chiefs of Division—

Dr. W. O. Bridges. Dr. W. F. Milroy.

Dr. Leroy Crummer.

First Assistants—

Dr. B. L. Bridges. Dr. E. T. Manning.

Dr. R. W. Bliss. Dr. James S. Greis.

Second Assistants—

Dr. W. N. Anderson. Dr. Lynn T. Hall.

Dr. George Pratt. Dr. F. M. Conlin.

DIVISION OF PEDIATRICS.

Chiefs of Division—

Dr. H. M. McClanahan. Dr. B. W. Christie.

First Assistants—

Dr. H. B. Hamilton. Dr. J. C. Moore.

DIVISION OF DERMATOLOGY AND SYPHILOLOGY.

Chief of Division, Dr. Alfred Schalek.

First assistant, Dr. C. C. Tomlinson.

DIVISION OF NEUROLOGY AND PSYCHIATRY.

Chief of Division, Dr. G. Alexander Young.

First Assistant, Dr. H. A. Wigton.

DIVISION OF RADIOGRAPHY.

Chiefs of Division: Dr. C. H. Ballard and Dr. C. R. Kennedy.

Department of Surgery.

DIVISION OF GENERAL SURGERY.

Chiefs of Division—

Dr. A. F. Jones. Dr. J. B. Summers.

Dr. L. H. Davis. Dr. A. C. Stokes.

First Assistants—

Dr. R. R. Hollister. Dr. J. R. Nilsson.

Dr. C. A. Hull.

Second Assistants—

Dr. J. F. Hyde. Dr. C. A. Roeder.

Dr. C. C. Morrison.

DIVISION OF OPHTHAMOLOGY AND OTOLOGY.

Chiefs of Division: Dr. H. Gifford and Dr. J. M. Patton.

First Assistants: Dr. W. F. Callfas and Dr. H. R. Lemere.

Second Assistants: Dr. A. B. Lindquest and Dr. C. S. James.

DIVISION OF RHINOLOGY AND LARYNGOLOGY.

Chief of Division, Dr. F. S. Owen.

First Assistants: Dr. W. P. Wherry and Dr. J. B. Potts.

Second Assistants: Dr. A. R. Knode and Dr. C. Rubendall.

DIVISION OF ORTHOPEDIC SURGERY.

Chief of Division, Dr. J. P. Lord.

First Assistant, Dr. R. D. Schrock.

DIVISION OF UROLOGY.

Chief of Division, Dr. C. R. Kennedy.

Department of Obstetrics.

DIVISION OF OBSTETRICS.

Chief of Division, Dr. C. W. Pollard.

First Assistant, Dr. W. H. Taylor.

Department of Pathology.

Cellular Pathology and Serology—Dr. H. E. Eggers.

Clinical Pathology—Dr. A. A. Johnson.

Chemical Pathology—Dr. A. W. Peters.

Bacteriology—Dr. J. T. Myers.

Electrocardiography—Dr. A. E. Guentner.

Consultants.

Consulting Anatomist—Dr. C. M. W. Poynter.

Consulting Physiologist—Dr. A. E. Guenther.

Consulting Pharmacologist—(To be selected).

Consulting Epidemiologist—Dr. John M. Banister.

House Physician in Residence—Dr. Alexander J. Young.

Graduate Interns in Residence—Dr. Leonard O. Siggert.

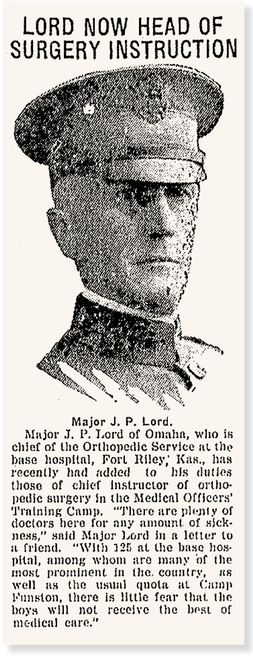
Coinciding with Dr. Lord's affiliation to the Nebraska Orthopaedic Hospital in Lincoln, the Nebraska Medical College bulletins list him among the Omaha faculty from 1914 to 1918. He also served as the fifth president of the Central States Orthopaedic Club in 1916. The organization evolved into the Clinical Orthopaedic Society that exists today.

When the University Hospital opened Sept. 2, 1917, on the campus of the Nebraska Medical College its purpose was to serve indigent members of the community while offering clinical education to medical students. According to The World-Herald, "An applicant for admission to this splendid new hospital needs only two qualifications — he must be sick and must be poor — no other question is asked. If the applicant is sick and cannot afford paid medical service at another hospital, then the big, generous State of Nebraska volunteers to take him into its new institution, gives him free medical and surgical aid and nurses him back to health."

The World-Herald listed the clinical staff, naming Dr. Lord "Chief of the Division of Orthopaedic Surgery" and Dr. Robert Schrock as "First Assistant." The state-of-the-art facility at 42nd Street and Dewey Avenue housed four floors of patient services and the latest technology, including an "up-to-date X-ray department."

When University Hospital opened in September 1917, Dr. J.P. Lord was listed as "Chief of the Division of Orthopaedic Surgery" and Dr. Robert Schrock as "First Assistant."

Omaha World-Herald, Feb. 14, 1918:



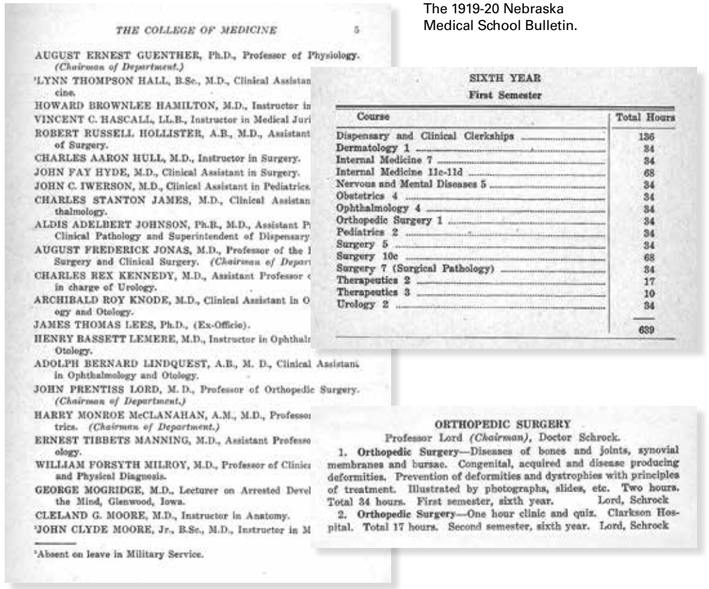
LORD NOW HEAD OF SURGERY INSTRUCTION

Major J. P. Lord.

Major J. P. Lord of Omaha, who is chief of the Orthopedic Service at the base hospital, Fort Riley, Kas., has recently had added to his duties those of chief instructor of orthopedic surgery in the Medical Officers' Training Camp. "There are plenty of doctors here for any amount of sickness," said Major Lord in a letter to a friend. "With 125 at the base hospital, among whom are many of the most prominent in the country, as well as the usual quota at Camp Funston, there is little fear that the boys will not receive the best of medical care."

Military service during World War I interrupted Dr. Lord's career. He served on the examination board at Camp Funston in Fort Riley, Kansas, and later took over orthopaedic duties at the base and in Des Moines. Upon returning to Nebraska in the fall of 1918, he reported for duty as chief surgeon at the Nebraska Orthopaedic Hospital in Lincoln. A Sept. 7, 1918, article in The World-Herald noted that he would also resume teaching orthopaedic surgery in Omaha while working as an attending surgeon at the University and Clarkson Hospitals.

Omaha obligations soon began to absorb more of his time, and he stepped away from the Orthopaedic Hospital in Lincoln. For the 1919-1920 academic year, the Nebraska Medical College Bulletin listed Dr. Lord as chairman of its orthopaedics department, the first time orthopaedics was listed as a medical school department.



THE COLLEGE OF MEDICINE 5

AUGUST ERNEST GUENTHER, Ph.D., Professor of Physiology. *(Chairman of Department.)*

'LYNN THOMPSON HALL, B.Sc., M.D., Clinical Assistan cine.

HOWARD BROWNLEE HAMILTON, M.D., Instructor in

VINCENT C. HASCALL, LL.B., Instructor in Medical Juri

ROBERT RUSSELL HOLLISTER, A.B., M.D., Assistant of Surgery.

CHARLES AARON HULL, M.D., Instructor in Surgery.

JOHN FAY HYDE, M.D., Clinical Assistant in Surgery.

JOHN C. IWERSON, M.D., Clinical Assistant in Pediatrics.

CHARLES STANTON JAMES, M.D., Clinical Assistan thalmology.

ALDIS ADELBERT JOHNSON, Ph.B., M.D., Assistant P Clinical Pathology and Superintendent of Dispensary

AUGUST FREDERICK JONAS, M.D., Professor of the Surgery and Clinical Surgery. *(Chairman of Depar*

CHARLES REX KENNEDY, M.D., Assistant Professor in charge of Urology.

ARCHIBALD ROY KNODE, M.D., Clinical Assistant in O ogy and Otology.

JAMES THOMAS LEES, Ph.D., (Ex-Officio).

HENRY BASSETT LEMERE, M.D., Instructor in Ophthalr Otology.

ADOLPH BERNARD LINDQUEST, A.B., M. D., Clinical Assistant in Ophthalmology and Otology.

JOHN PRENTISS LORD, M. D., Professor of Orthopedic Surgery. *(Chairman of Department.)*

HARRY MONROE McCLANAHAN, A.M., M.D., Professor trics. *(Chairman of Department.)*

ERNEST TIBBETS MANNING, M.D., Assistant Professo ology.

WILLIAM FORSYTH MILROY, M.D., Professor of Clinic and Physical Diagnosis.

GEORGE MOGRIDGE, M.D., Lecturer on Arrested Devel the Mind, Glenwood, Iowa.

CLELAND G. MOORE, M.D., Instructor in Anatomy.

'JOHN CLYDE MOORE, Jr., B.Sc., M.D., Instructor in M

'Absent on leave in Military Service.

SIXTH YEAR

First Semester

Course	Total Hours
Dispensary and Clinical Clerkships	136
Dermatology 1	34
Internal Medicine 7	34
Internal Medicine 11c-11d	68
Nervous and Mental Diseases 5	34
Obstetrics 4	34
Ophthalmology 4	34
Orthopedic Surgery 1	34
Pediatrics 2	34
Surgery 5	34
Surgery 10c	68
Surgery 7 (Surgical Pathology)	34
Therapeutics 2	17
Therapeutics 3	10
Urology 2	34
	689

ORTHOPEDIC SURGERY

Professor Lord *(Chairman)*, Doctor Schrock.

1. **Orthopedic Surgery**—Diseases of bones and joints, synovial membranes and bursae. Congenital, acquired and disease producing deformities. Prevention of deformities and dystrophies with principles of treatment. Illustrated by photographs, slides, etc. Two hours. Total 34 hours. First semester, sixth year. Lord, Schrock

2. **Orthopedic Surgery**—One hour clinic and quiz. Clarkson Hospital. Total 17 hours. Second semester, sixth year. Lord, Schrock

The 1919-20 Nebraska Medical School Bulletin.

Dr. Lord was a founder of the Nebraska Society for Crippled Children as well as a consultant to the Hattie B. Munroe Home for Convalescing Crippled Children — precursors to UNMC's contemporary Munroe-Meyer Institute. He served on the professional advisory council for the Nebraska Society for Crippled Children until his death. He is also the namesake for the J.P. Lord School, which the society and the Omaha Public Schools opened in the basement of the old Field Club School in 1938. The school for youths with orthopaedic impairments was renamed in tribute to Dr. Lord when it relocated to the UNMC campus in 1957. In 2018, the J.P. Lord School for special needs students moved to 4444 Marinda St. in Omaha.

Throughout Dr. Lord's career, he served on the staff of Bishop Clarkson (president in 1924-1925), University, Methodist, St. Catherine's and Lord Lister Hospitals in Omaha. For many years in Omaha, Dr. Lord maintained private practice with the department's subsequent chair, Dr. Robert Schrock, along with Dr. Herman F. Johnson, who eventually became father-in-law to Dr. Thomas Hood, a much later department chair and founder of UNMC's Orthopaedic Residency Program in 1969.

Children arriving at J.P. Lord School in 1946. The school educated children whose physical disabilities kept them from attending public school.

Dr. Lord was active in many orthopaedic and medical societies, and according to a tribute in the minutes of the Omaha-Douglas County Medical Society, he served as president of several: Omaha-Douglas County Medical Society, the Omaha Mid-West Clinical Society, the Nebraska State Medical Association, the Sioux Valley Medical Association, the Medical Society of the Missouri Valley, the Central States Orthopaedic Club (prior to it becoming the Clinical Orthopaedic Society in 1923), and the Western Surgical Association. He was also chairman of the Orthopaedic Section of the American Medical Association from 1930 to 1931, a charter member of the American College of Surgeons, one of the AMA's first Nebraska Governors, and a member of the American Orthopaedic Association and American Academy of Orthopaedic Surgeons.

He was named professor emeritus of orthopaedic surgery in 1932, a position he held until his death, March 3, 1940, in Coral Cables, Florida. The Omaha-Douglas County Medical Society credited him as being the first to make practical application of skin grafting in large bone cavities, and it lauded his contributions to the treatment of malignant diseases of bone. He made many other notable contributions to orthopaedic surgery and "contributed generously to the literature in this field."

Dr. Hiram Winnett Orr (1877-1956)

H. Winnett Orr, M.D.

Dr. Hiram Winnett Orr left an indelible imprint on the development of modern orthopaedics — from innovative technique (the "Orr Method"), to the shaping of today's most important orthopaedic institutions, including establishing the American Association of Orthopaedic Surgeons and editing of the publication now known as The Journal of Bone and Joint Surgery. He was born March 17, 1877, in West Newton, Pennsylvania, the son of dentist Dr. Andrew Wilson Orr. According to Who's Who in Orthopaedics, he replaced "Hiram" in his name with the enigmatic initial H. "as soon as he learned to sign his name."

H. Winnett Orr's maternal uncle, Dr. Hudson J. Winnett, was a physician practicing in Lincoln. After finishing high school at age 15, he journeyed west to live with and work for his uncle while pursuing pre-med studies at the University of Nebraska (1892-1895). He became an assistant to Dr. Henry B. Ward in the Nebraska Zoology Department during his second year, and he continued to gain valuable clinical experience while accompanying his uncle frequently on house calls.

He was accepted to the University of Michigan College of Medicine during his junior year. He received his medical degree from Michigan in 1899. He interned at Bellevue Hospital in New York City before returning to Lincoln to take over his uncle's practice while Dr. Winnett served one term as mayor of Lincoln (1899-1903). Dr. Orr departed in 1904 to study in Chicago for several months under Dr. John Ridlon of Northwestern University. He discovered a passion for orthopaedics. Upon returning to Lincoln, Dr. Ridlon's inspiration motivated Dr. Orr to join ongoing efforts to draw up legislation for the establishment of the Nebraska Orthopaedic Hospital.

Nebraska was the third U.S. state (following Minnesota and New York) to initiate state-sponsored care of children disabled by orthopaedic ailments. Advocating for the hospital and working on its staff brought Dr. Orr into a professional relationship with the hospital's head surgeon, Dr. J.P. Lord. After the hospital opened in Lincoln in 1905, Dr. Orr served in various roles on its staff: assistant surgeon, superintendent and chief surgeon. He remained involved with the hospital for some 50 years. In his thriving private practice in Lincoln, Dr. Orr became professionally acquainted with several critically important figures in early Nebraska medical history, including Dr. Poynter and Dr. Cutter, a fraternity brother and fellow graduate of the Nebraska Medical College.

Dr. Orr exhibited an early talent for medical writing as editor of the Western Medical Review (1899-1906). He joined the Lincoln campus of the University of Nebraska College of Medicine as a lecturer (1903-1909), was promoted to assistant professor of the history of medicine (1910), and held the position through 1916. In 1916, he and another famous early Nebraskan orthopaedic surgeon — Dr. J.E.M. Thomson, who later served as president of several national orthopaedic organizations — began a private practice that evolved into the present-day Lincoln Orthopaedic Center.

WWI and 'The Orr Method'

Dr. Orr was an active member of the American Orthopaedic Association (AOA). Founded in 1887, it is the world's oldest and most distinguished organization of orthopaedic surgeons. He served as AOA secretary from 1915-1917 and as president in 1936.

The AOA website notes the success of orthopaedic care in the U.S. is closely tied to the treatment of wounded soldiers in WWI. "Many prominent American orthopaedists from this era served in the war effort, none to more acclaim than Dr. Orr. He was among the first American orthopaedic surgeons to respond to the call for help from their British counterparts."

Weary soldiers in the trenches during World War I.

In a speech on the history of orthopaedics, "History and Biography of Orthopaedic Surgery," Dr. Orr recalled that Sir Robert Jones, Britain's leading orthopaedic surgeon, spoke to the AOA in 1916. "I was one of those who decided, on the spot, to respond to the call," Dr. Orr said. "The following April, when we entered the War, 20 of us went with Major Goldthwait, arriving in London 10 days before General Pershing himself." The orthopaedic surgeons who went over would receive an education of a lifetime, which they would bring back to the U.S. for further dissemination after WW I.

"The widening field of orthopaedic surgery, which had begun before World War I, was almost entirely completed by the time the war was over," Dr. Orr said. "And change was due in large part to the efforts and accomplishments of one man — Sir Robert Jones. His Thomas splints at the front reduced mortality rates by 50%, and he brought the field into high esteem in the view of military and civilian leadership."

Hugh Owen Thomas, pioneer of orthopaedic surgery

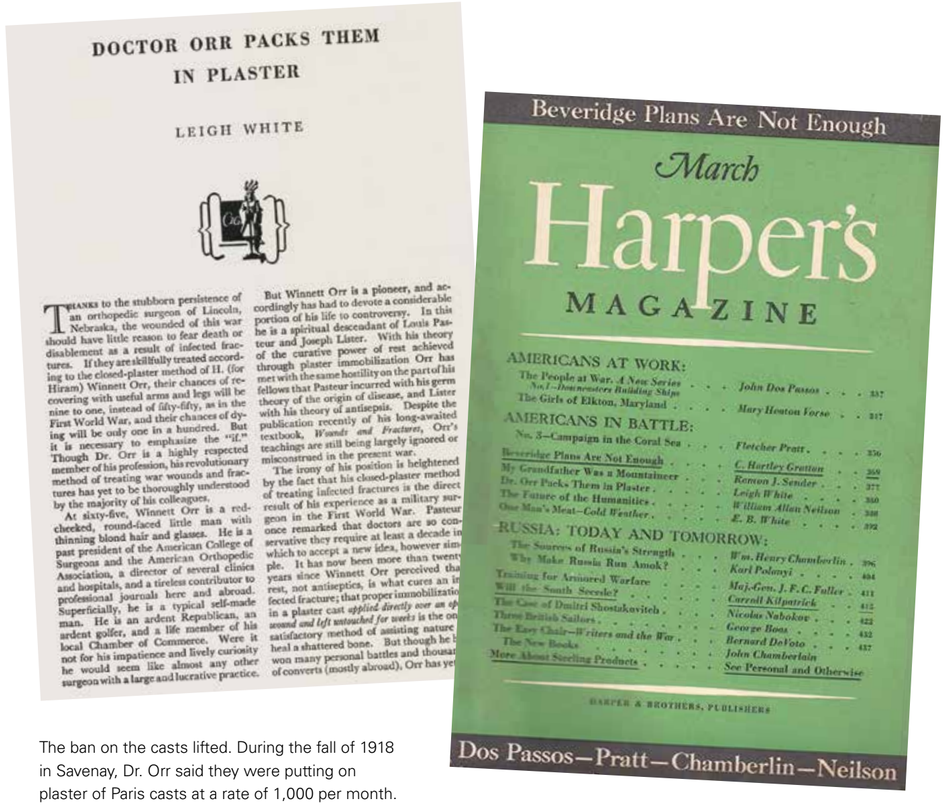
Sir Robert Jones was the nephew of Dr. Hugh Owen Thomas, inventor of the Thomas Splint and many other innovative orthopaedic contraptions. Dr. Thomas is considered to be the father of orthopaedic surgery in Britain. He is best known for advancing the philosophy of rest "enforced, uninterrupted and prolonged" as treatment for fractures and tuberculosis. Sir Robert, supported by reinforcements from America's orthopaedic community, would bring fame to the Thomas Splint for its drastic decrease in mortality from compound femur fractures.

Sir Robert, in his own right a legend already before WW I, rose to prominence as "surgeon-superintendent" during the construction of the Manchester Ship Canal. He was responsible for treating injuries of roughly 20,000 workers during the seven-year project. He applied his large-scale logistical know-how as inspector of military orthopaedics before attaining rank of major general by the war's end.

Dr. Orr was stationed at the Goldthwait Unit of Orthopaedic Surgery in England. By the end of the war, he was at the Surgical Hospital Center in Savenay, France. During these war years, Dr. Orr rose from the rank of captain (1917) to lieutenant colonel (1919) in the Army Medical Department. While stationed in France, Dr. Orr devised the "Orr Method" for treating osteomyelitis, compound fractures and other infected wounds.

The then-controversial method advocated for drainage and rest in wound healing and developed replacement techniques and control of fragments in fractures by skeletal pin fixation in plaster of Paris casts and other immobilization devices. He described the method as a synthesis of Lister's theories of antiseptic surgery combined with the fracture control methods of his former teacher, Dr. Ridlon, and Sir Robert Jones. Antibiotics were yet to be developed as a weapon against bacterial infections. His utilization of the then-new technique of plaster of Paris casts provided a controversial contrast to the then-standard method of frequently changing bandaging:

> *According to Dr. Orr, "When we arrived in France in the summer of 1918, there was an order from headquarters that no patients were to be sent to the United States in plaster of Paris casts. When we undertook to evacuate our wounded at Savenay and Brest, there were not enough splints, as bad as they were, even in the attics of the French hospitals, to prepare them for transportation. So, I arranged by telephone with headquarters to have an experienced surgeon put on plaster, and in a short time we were sending out patients by hundreds, well immobilized in well-fitting and comfortable casts. Also we have a letter written by Robert Osgood from the surgeon general's office in Washington congratulating us upon the excellent condition in which these patients arrived. Major Cilley of New York accompanied 150 femur and hip patients to the United States and had no trouble whatever with the casts. In fact, this feature in our care of the wounded in France and during transportation was one reason which led me to the infrequent dressing method."*



DOCTOR ORR PACKS THEM IN PLASTER

LEIGH WHITE

THANKS to the stubborn persistence of an orthopedic surgeon of Lincoln, Nebraska, the wounded of this war should have little reason to fear death or disablement as a result of infected fractures. If they are skillfully treated according to the closed-plaster method of H. (for Hiram) Winnett Orr, their chances of recovering with useful arms and legs will be nine to one, instead of fifty-fifty, as in the First World War, and their chances of dying will be only one in a hundred. But it is necessary to emphasize the "if." Though Dr. Orr is a highly respected member of his profession, his revolutionary method of treating war wounds and fractures has yet to be thoroughly understood by the majority of his colleagues.

At sixty-five, Winnett Orr is a red-cheeked, round-faced little man with thinning blond hair and glasses. He is a past president of the American College of Surgeons and the American Orthopedic Association, a director of several clinics and hospitals, and a tireless contributor to professional journals here and abroad. Superficially, he is a typical self-made man. He is an ardent Republican, an ardent golfer, and a life member of his local Chamber of Commerce. Were it not for his impatience and lively curiosity he would seem like almost any other surgeon with a large and lucrative practice.

But Winnett Orr is a pioneer, and accordingly has had to devote a considerable portion of his life to controversy. In this he is a spiritual descendant of Louis Pasteur and Joseph Lister. With his theory of the curative power of rest achieved through plaster immobilization Orr has met with the same hostility on the part of his fellows that Pasteur incurred with his germ theory of the origin of disease, and Lister with his theory of antisepsis. Despite the publication recently of his long-awaited textbook, *Wounds and Fractures*, Orr's teachings are still being largely ignored or misconstrued in the present war.

The irony of his position is heightened by the fact that his closed-plaster method of treating infected fractures is the direct result of his experience as a military surgeon in the First World War. Pasteur once remarked that doctors are so conservative they require at least a decade in which to accept a new idea, however simple. It has now been more than twenty years since Winnett Orr perceived that rest, not antiseptics, is what cures an infected fracture; that proper immobilization in a plaster cast *applied directly over an open wound and left untouched for weeks* is the only satisfactory method of assisting nature to heal a shattered bone. But though he has won many personal battles and thousands of converts (mostly abroad), Orr has yet

The ban on the casts lifted. During the fall of 1918 in Savenay, Dr. Orr said they were putting on plaster of Paris casts at a rate of 1,000 per month. The process of immobilizing fractures would become standard practice through World War II and into present day. The rise of the Orr Method was famously documented in a March 1943 article in Harper's Magazine by war correspondent Leigh White, "Dr. Orr Packs Them in Plaster." The journalist was himself a patient of Dr. Orr's during the war.

The March 1943 issue of Harper's Magazine featured an article about Dr. H. Winnett Orr and his plaster of Paris casting technique to immobilize fractures.

Nebraska Editorship of 'The Journal'

Upon returning to the United States, Dr. Orr continued his active involvement with the AOA as editor of its journal from 1919 to 1921.

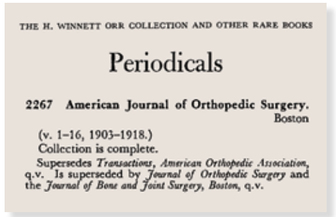
> *"Upon my return from France at the meeting of the association in 1919, I was approached by Drs. Osgood and Allison with a request that I take over the Journal which, because of editorial and financial difficulties, was about to suspend publication."*

The origins of the AOA's journal began with the Boston Medical and Surgical, which published an annual review for several years before the Association's second annual meeting in 1888. The AOA began publishing Transactions of the American Orthopaedic Association in 1889, replaced by The Journal of Orthopaedic Surgery in 1903.

In light of the strengthened British-U.S. orthopaedic relations and following the 1918 forming of the British Orthopaedic Association, the AOA offered the journal as a joint publication for the two entities. The publication's name changed to reflect the British spelling of "orthopaedic" in place of the standard American spelling, "orthopaedic".

"This enables one to have a better idea as to the contributions that were being made by the orthopaedic specialists of that time and by those who did not call themselves orthopaedic surgeons, to the literature before the time when orthopaedic specialism was recognized as it is now."

— Dr. H. Winnett Orr


THE H. WINNETT ORR COLLECTION AND OTHER RARE BOOKS

Periodicals

2267 American Journal of Orthopedic Surgery. Boston

(v. 1–16, 1903–1918.)
Collection is complete.
Supersedes *Transactions, American Orthopedic Association*, q.v. Is superseded by *Journal of Orthopedic Surgery* and the *Journal of Bone and Joint Surgery, Boston*, q.v.

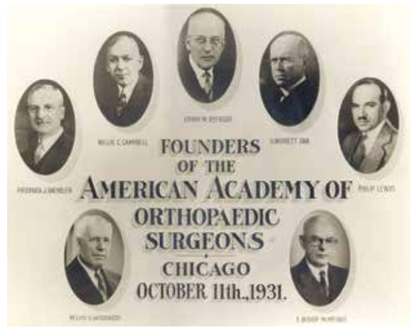
In making his collection on the history of surgery and orthopaedic surgery, Dr. Orr felt that it would be interesting to include the early volumes, or at least the first volume, of as many American medical periodicals as possible.

Dr. Orr was the first editor of the Journal of Orthopaedic Surgery, the publication of both AOA and BOA. But the long-struggling journal continued to limp along despite Dr. Orr's best efforts." The assistance from the association, which had been promised to me, was not forthcoming," he said, "In 1921, after some dissatisfaction on both sides, the publication office was removed again to Boston. Dr. (Elliott G.) Bracket had taken over and was accorded the necessary moral and financial support to develop the fine Journal it has become."

The publication's name changed to The Journal of Bone and Joint Surgery in 1922 under the new editorship of Dr. Bracket. It would continue to undergo various administrative updates as it continued to struggle over the decades. In 1948, the journal split into American (AOA) and British (BOA) editions. The American Academy of Orthopaedic Surgeons later gained an editorial stake in the journal, and its editorial operation eventually shifted to an independent nonprofit corporation in 1951.

A Nebraskan Founder of 'The Academy'

Dr. Orr stayed busy after the conclusion of World War I. He remained in charge of the medical regiment of the Nebraska National Guard for three years, retiring with the rank of colonel. He served the Nebraska State Medical Society as president from 1919-1920. For part of 1920, he was president of the Central States Orthopaedic Club, the precursor of the Clinical Orthopaedic Society, of which he was an early member along with his Northwestern mentor, Dr. Ridlon. In 1921-22, he was chairman of the Orthopaedic Section of the American Medical Association. Now the American Academy of Orthopaedic Surgeons, it is a member organization under the American Medical Association. Dr. Orr also served as chief consultant and chief orthopaedic surgeon at Lincoln General Hospital, Bryan Memorial Hospital and Veterans Hospital in Lincoln from 1923-1956. His obituary noted that he maintained a private practice in association with Dr. Fritz Teal.



Throughout his post-war career, he also remained active in the AOA, which faced an ongoing debate about its exclusivity and mission in representing the broad community of orthopaedic surgeons in America. In "Seventy-Five Years of Doing the Right Thing," the history of the American Board of Orthopaedic Surgery, the author speculates that the informal discussions about forming the AAOS may have taken place at the AOA's Chicago meeting in April 1931. The AAOS officially established itself Oct. 11, 1931, and it was officially incorporated in 1933. That first AAOS meeting in Chicago was held in conjunction with an annual meeting of the Clinical Orthopaedic Society. This joint meeting marked the Society's first gathering as an organization of national scope, having previously existed as a club for clinical "show-and-tell" for orthopaedists working in the interior of the United States.

From Central States Orthopaedic Club to Clinical Orthopaedic Society

Nebraska Medical College Faculty in Key Leadership Roles

1912: Central States Orthopaedic Club founded with 38 members representing Illinois, Indiana, Iowa, Kansas, Louisiana, Michigan, Minnesota, Missouri, Nebraska, Ohio, Tennessee and Wisconsin.

1913: Annual meeting in Omaha and Lincoln

1916: Dr. John Prentiss Lord (Omaha), President

1920: Dr. H. Winnett Orr (Lincoln), President

1923: The growing organization changes name to Clinical Orthopaedic Society.

1925: Annual meeting in Omaha and Lincoln

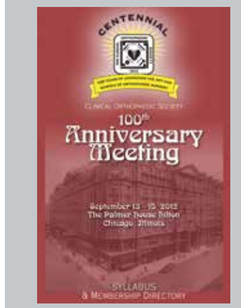
1929: Dr. Robert Schrock (Omaha), President

1933: Clinical Orthopaedic Society expands to national organization, holds meeting in conjunction with first meeting of American Academy of Orthopaedic Surgeons

1937: Dr. J.E.M. Thomson (Lincoln), President

1947: Dr. Herman F. Johnson (Omaha), President

Current Mission Statement: "Founded in 1912, the mission of the Clinical Orthopaedic Society is to optimize the science of the physical examination as the central component in the diagnosis and management of musculoskeletal conditions and to educate society on orthopaedic issues impacting patient care."



Omaha World-Herald, June 5, 1937

Orthopedists End Meeting

Detroit Surgeon to Be Next Head of Group

With internationally known orthopedists present, a clinical session at the University of Nebraska medical school concluded the fiftieth annual meeting of the American Orthopedic association Friday.

Among the 150 specialists present were Dr. Lelio Zeno of Rosario, Argentina; Dr. Svante Orell of Stockholm, Sweden, know for his bone grafting technique; Dr. Alberto Inclan of Havana, Cuba, editor of the Spanish Orthopedic journal, and Dr. E. G. Brackett of Boston, Mass., editor of the Journal of Joint and Bone Surgery.

Elect Dr. F. C. Kidner

Dr. F. C. Kidner of Detroit was chosen president. Dr. Ward Plummer of Buffalo, N. Y., was named president-elect to take office two years hence. Vice-president is Lloyd Brown of Boston, Mass.

Other officers elected were: Dr. Ralph Dormley, Rochester, Minn., secretary; Dr. John M. Porter, Evanston, Ill., re-elected treasurer. Next year's convention will be held in Washington in connection with the congress of physicians and surgeons.

Friday's session was the third the association has held, the other two having been in Lincoln. Two groups of clinical demonstrations were given. One, concerning bone tumors, was presented by Doctors J. P. Lord, Robert D. Schrock and Herman F. Johnson, assisted by Dr. Howard B. Hunt and Dr. Charles T. Baker. The other, dealing with complicated fractures in the elbow region, was presented by Dr. Schrock, Dr. Johnson and Dr. Paul W. Tipton.

Omahans Read Papers

Papers read on technical subjects included those of Dr. William L. Sucha, Dr. James W. Martin, Dr. F. L. Simmonds and Herman F. Johnson, all of Omaha; Dr. J. E. M. Thomson of Lincoln, Dr. H. Winnett Orr of Lincoln, Dr. Dewey Bisgard of Omaha, Dr. Karl R. Werndorff of Council Bluffs, Dr. C. W. M. Poynter of Omaha.

Delegates were entertained at a luncheon at the Omaha Country club. Later they went to the Ak-Sar-Ben race track. A special race was dedicated to the association. Dr. Inclan, former owner of a racing stable, placed a flower wreath on the winner.

Dr. Orr was among the Academy's eight founding members. He summarized the chronology from his firsthand experiences in an article, "History and Biography of Orthopaedic Surgery," printed in the 1952 Volume IX of AAOS Instructional Course Lectures:

> *With the larger number of men interested in orthopaedic surgery and many becoming qualified, both by special training and military experience, there was a larger audience after the war, wherever our special problems were being discussed. Although members of the Orthopaedic Association were limited to one hundred, and guests to one per member, the attendance at the 1919 meeting was one of the largest we ever had. Membership was increased to 150, and nonmembers were encouraged to come as guests, but qualification for membership was maintained at the same level as formerly, and some of the war-time orthopaedists were not admitted. The feeling began to get around that the American Orthopaedic Association was becoming a sort of private club, and the demand for a more liberal group became so great that Willis Campbell, Melvin Henderson, Phil Lewin and a few others felt justified in going ahead with plans for an Academy.*

The academy's membership was open to qualified orthopaedic surgeons without a membership cap unlike AOA membership which remains more exclusive with fewer than 1,000 association members. Academy membership represents "the world's largest medical association of musculoskeletal specialists," and is involved with educational initiatives and engages in lobbying for member interests. According to the 2019 AAOS annual report, its members now include 18,000 active fellows and 39,195 total members.

The Association at 50

Annual meetings of the AOA have taken place since 1887, with the exception of 1945 due to travel restrictions during World War II. Dr. Orr was elected AOA president at the 1936 annual meeting in Milwaukee. The 1937 meeting — the first and only time that Nebraska hosted the AOA — was a major event celebrating the Association's 50th anniversary in a three-day extravaganza of orthopaedics split between Lincoln and Omaha.

The World-Herald reported that 150 specialists from across America and around the world were present, including Dr. Lelio Zeno of Rosario, Argentina; Dr. Svante Orell of Stockholm, Sweden, famous for his bone grafting technique; Dr. Alberto Inclan of Havana, Cuba; and Dr. E.G. Brackett of Boston — Dr. Orr's successor as editor of the Journal of Joint and Bone Surgery.

The gathering in Lincoln, on June 2 and 3, featured lectures from local orthopaedists Dr. Orr and Dr. J.E.M. Thomson and Omaha doctors and orthopaedists Drs. William L. Sucha, James W. Martin, F.L. Simmons, Herman F. Johnson, Dewey Bisgard, C.W.M. Poynter and Karl R. Werndorff of Council Bluffs. During the conference, attendees' visited the University of Nebraska's Morrill Hall and admired the museum's collection of prehistoric bones — including "Archie," the largest Columbian mammoth fossil in the world.

On June 4, the group visited University Hospital in Omaha. There, clinical demonstrations showcased the Nebraska Medical College's hospital and teaching facilities. Drs. J.P. Lord, Schrock and Johnson, assisted by Dr. Howard B. Hunt and Dr. Charles T. Baker, presented on bone tumors. The other demonstration presented by Drs. Schrock, Johnson and Paul W. Tipton addressed elbow fractures. Concluding the event was a golf outing at Omaha Country Club and an excursion to Ak-Sar-Ben racetrack for a special race. Dr. Inclan of Cuba, a former race stable owner, placed the wreath on the winner.

Herman F. Johnson, M.D.

Framework for Residency Accreditation

The period surrounding Dr. Orr's AOA presidency corresponded to great changes in national orthopaedic organizations' relationship to the internship and residency programs.

In 1937, an AOA committee carried out a study of hospitals suitable for residents in orthopaedic surgery. This early effort would culminate in the formation of a Residency Review Committee in 1954, with three objectives: 1. establishment of uniform standards; 2. development of a single list of approved residency programs; and 3. coordination of inspection and evaluation of procedures. This effort corresponded with other orthopaedic organizations' progress on creating a system for credentialing academic programs.

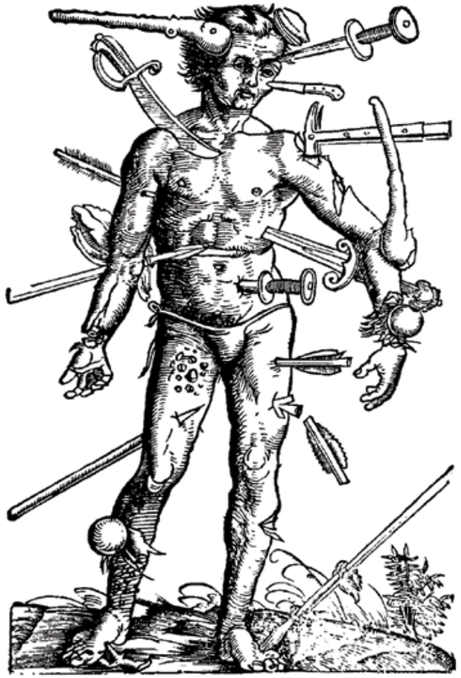
Meanwhile in "The Academy," the AAOS established a Committee on Graduate Medical Education in 1937. The committee published its survey of training programs in 1938 and shared the findings at the AAOS' January 1939 meeting. Likewise, over in the relatively new American Board of Orthopaedic Surgery (aka, "The Board"), 1937 was the year when the then-three-year-old ABOS voted to join, and was accepted into, the Advisory Board of Medical Specialties.

These initiatives helped lay the foundation for the nationwide standards for graduating orthopaedic residents that exist today. The AOA's initial 1937 review committee eventually gave way to the AOA's Residency Review Committee established in 1954, and later orthopaedic representation in a nationwide residency accreditation system that spanned across medical specialties.

By 1981, the CCME orthopaedic residency review committee failed under the weight of its own bureaucracy, giving way to the Liaison Committee for Graduate Medical Education, which was renamed as the current Accreditation Council for Graduate Medical Education. The ACGME became an independent entity in 2000. UNMC Chancellor Dr. Jeffrey P. Gold was elected board president in September 2018.

The Orr Collection at UNMC's McGoogan Library

Along with his involvement in AOA and AAOS, Dr. Orr was a member of the Lancaster County Medical Association, the Nebraska Medical Association, the American Medical Association (serving as chairman of its orthopaedic section from 1921-1922) and the American College of Surgeons. He was a prolific writer and speaker and campaigned for the advancement of orthopaedic surgery. He died at Rochester, Minnesota, on Oct. 11, 1956.



Wound Man, dated 1532, from The Orr Collection.

A devout scholar of medical history, Dr. Orr was an avid collector of medical texts. His collection forms one of the most authoritative bibliographies for the history of orthopaedics and the development of Western medicine in general. An article in the 1992 ACS Bulletin, a publication of the American College of Surgeons, highlights how Dr. Orr's continued "living" literary legacy is a testament to his being a "humanist, historian, editor, educator and bibliophile" on top of his distinguished career as a physician and surgeon:

According to the catalog of Orr's collection, during his many years of wandering through the dust and cobwebs of second-hand bookstores throughout the world, Dr. Orr acquired an outstanding medical library, book by book. As these books accumulated, like so many bricks, they build a lasting monument to medical scholarship — the H. Winnett Orr Historical Collection.

The collection began during medical school in Michigan, where his first dollar spent went to a medical text. Later, while studying under Dr. Ridlon in Chicago, he purchased his first rare text — a two-volume set of Hippocrates for $10. Other rare prizes in the collection include the complete works of Galen (republished in 1561 and 1562) and a 1941 edition of Andry's "L'Orthopedie ou l'art d'Homme."

Following his death in 1956, the collection of books went to libraries of the Lancaster County Medical Society, the Lincoln General Hospital and the University of Michigan, while some 2,600 items known as "The Orr Collection" went to the American College of Surgeons. The Orr Collection included a systematic organization of works broken down by several categories, "Rare Books and Classics" through the evolution of the healing arts, military medicine, general literature and more.

Two books of the wide-ranging works featured Dr. Orr's own byline: the biographical "Anne of Brittany" published in 1944, and another that highlights the work of his mentors, titled "On the Contributions of Hugh Owen Thomas, Sir Robert Jones and John Ridlon, M.D. to Modern Orthopaedic Surgery" published in 1949.

Because of the American College of Surgeons' concerns about its ability to preserve its special collections, the college discontinued the section of its library — including The Orr Collection. Returning the works to Dr. Orr's longtime home in Nebraska seemed appropriate, and on Oct. 11, 1974, UNMC accepted curatorship of The Orr Collection now safeguarded at the McGoogan Library on UMMC's campus.

Why Anne of Brittany?

Anne of Brittany was the only woman to have twice served as the queen consort of France. Orthopaedics inspired Dr. Orr's fascination with the historical figure, an obsession that began while stationed in France during World War I. He visited the famous cathedral at Nantes and became intrigued by the monument the Duchess of Brittany had erected in memorial to her parents. Four angels guard the monument. One of the angels exhibits a hip deformity. Dr. Orr learned this particular angel was a depiction of Anne herself, who had a congenital hip dislocation. He started collecting anything relating to the Duchess of Brittany (1477-1514) and he donated his related Anne of Brittany Collection to the University of Nebraska's Love Memorial Library in Lincoln.

"Portrait of Anne of Brittany," circa 1520, by artist Jan Mostaert.

Early Amputation, dated 1532, from The Orr Collection.

Dr. J.E.M. Thomson (1889-1962)

J.E.M. Thomson, M.D.

Dr. James E.M. Thomson was a pioneer of hip prosthesis replacement and the originator of the AAOS Instructional Course Lectures, an ongoing service of the academy.

The grandson of a Methodist missionary bishop, Dr. Thomson was born in 1889 to "pious and scholarly" parents in California. He attended Evanston Academy preparatory school and Northwestern University in Chicago for undergraduate studies. He began medical school at Texas Christian College and finished at Rush Medical College in 1915. During an internship in Chicago, he came under the influence of Drs. Edwin Ryerson, the first president of AAOS, and John Ridlon, Dr. H. Winnett Orr's mentor.

Dr. Thomson began medical practice in Lincoln with Dr. Orr in 1916, and worked as a physician in Lincoln for 44 years. During World War I, he served at University of Nebraska Overseas Base Hospital No. 49 before returning to his Lincoln practice in 1919. Dr. Thomson was an adjunct professor helping with orthopaedic rotations at Bryan Memorial Hospital from 1953 through 1955.

His research interests included innovative approaches to orthopaedic problems. A 75th anniversary tribute by the AAOS reprinted his 1933 article from the Journal of Bone and Joint Surgery, "Clinical and Experimental Observations With Regard to the Injection of Certain Agents (Pregl's Solution) Into Chronic Arthritic Joints." The article detailed Dr. Thomson's work with surgical alternatives for chronic arthritis at a time when such procedures remained undeveloped.

He was president of the Clinical Orthopaedic Society in 1937, and he was responsible for designing the Clinical Orthopaedic Society's logo, which remains in use today. The AAOS credits him with coming up with the concept for its Instructional Course Lectures — first presented in 1942 and published in 1943 with Dr. Thomson as editor. In 1946, he was the second Nebraskan to be president of AAOS (the first was Dr. Robert Schrock of Omaha) and he continued as editor of the popular Instructional Course Lectures until 1948.

Dr. Thomson traveled internationally for orthopaedic service and leisure, reportedly visiting every continent except Australia. He held honorary memberships in several overseas professional organizations, including the Czechoslovakian Orthopaedic Society, Finish Orthopaedic Association and the Latin American Society of Orthopaedics and Traumatology.

He was an ardent supporter of civic and cultural activity in Nebraska. The Lincoln Community Foundation credits Dr. Thomson as a founding member in 1955. He died in 1962 while giving lectures at the University of Kansas.

Omaha World-Herald, Jan. 26, 1947:

No Medical 'Iron Curtain' Found

Chicago, Ill. (AP)—Dr. J. E. M. Thomson of Lincoln, Neb., president of the American Academy of Orthopaedic Surgeons, said Saturday that an American medical mission "never was able to find the iron curtain" during a tour of medical colleges and centers in Czechoslovakia last summer.

"We found quite the opposite," he said. 'We moved as freely as we did in the United States and our stay was marked by many delightful experiences. We constantly looked for evidence of Russian intervention or influence, but never found it."

He said the teaching mission, which was invited by the Czechoslovakian Government Ministry of Health, sought to bridge the gap in medical progress between 1939 and 1946, during which time that country was cut off from the outside world by Germany.

Dr. Robert Schrock (1884-1969)

Dr. Robert Schrock was among the most influential early orthopaedic surgeons in Omaha. The son of a physician, he was born in 1884 in Delaware, Ohio. A son of his own would become a physician, too.

Dr. Schrock completed undergraduate studies at Wabash College in Indiana in 1908. He earned his medical degree from Cornell University Medical School in 1912 and did postgraduate work at New York Hospital in New York City. He joined the private practice of Dr. J.P. Lord after arriving in Omaha.

According to Nebraska Medical College bulletins, he began teaching as an Omaha instructor in 1917-18. The following year, he took leave as a lieutenant with the U.S. Army Medical Reserve Corps. He served under Lt. Col. Joel Goldthwait in France. Upon his return, the Nebraska course catalog listed Dr. Schrock as the second of a two-person orthopaedic department chaired by Dr. Lord.

Both Drs. Lord and Schrock shared concern for impoverished youth of Omaha. By early 1920, Dr. Schrock was holding weekly orthopaedic clinics offering free evaluations to young polio patients. They both also donated their services to regularly check on children's post-operational progress at the newly created Hattie B. Munroe Home for Convalescing Children.

The Hattie B. Munroe Home for Convalescing Children at 2824 N. 66th Ave. "Now we shall be able to provide proper nursing, wholesome surroundings, and good food for months until the children are really in condition to go to their homes," Dr. Schrock told The World-Herald during the home's first year.

Robert Schrock, M.D.

The World-Herald, Aug. 12, 1922:

CRIPPLED CHILDREN TO HAVE A REAL HOME

Two Omaha Givers Provide Place for Their Use in Benson.

CONTINUES GREAT WORK

Continuation of the work in a home for crippled children was made possible yesterday afternoon at a meeting of the board of directors of the Society for the Disabled. Announcement was made that the property at Sixty-sixth and Maple streets, including a commodious house and two acres of ground, had been purchased by Miss Clara E. Elder and John A. Munroe and loaned to the board for the work that has been done there under lease this summer.

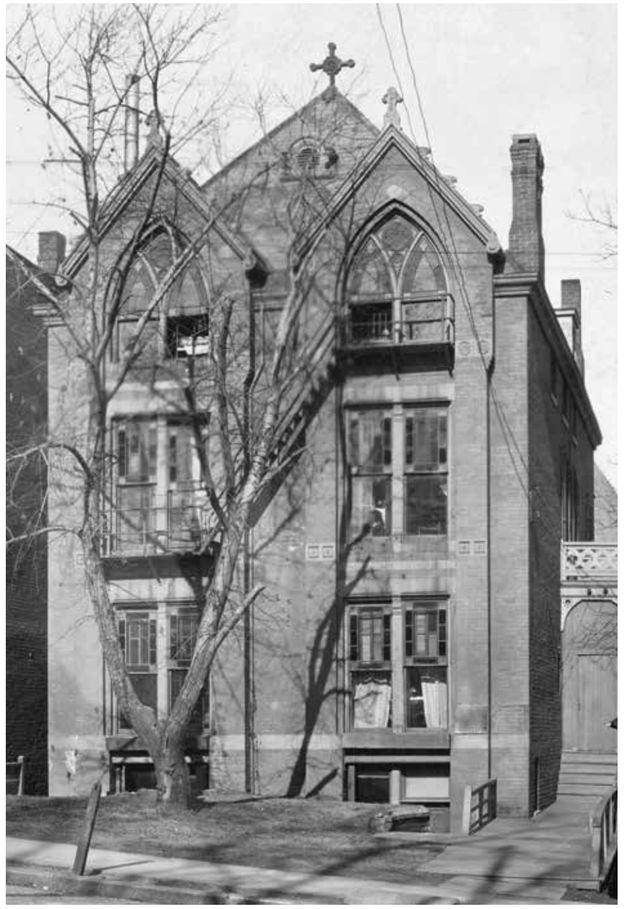
The brick house next to the one which has been the center of activity for poor crippled children, has a porch on three sides and spacious grounds for the little folks, who have been at the home following operations to straighten crooked limbs or readjust twisted figures.

Mrs. Frank W. Judson, president of the society, in accepting the proffer, expressed her delight, as did the board, at the proposition made by Miss Elder for herself and for Mr. Munroe, and plans are forming for a beginning in what is regarded as a very important enterprise in Omaha.

The conduct of the home through the summer was made possible by contributions of World-Herald readers to a fund which, together with raisin day sales, amounted to more than $2,500.

The site of the home, which is opposite a public school building at the end of the car line in Benson, was owned by Mrs. Sebina Moore, who is moving to California.

Dr. Robert D. Schrock is enthusiastic over the convalescent home for crippled children of the poor. "A lot of immediate relief will be afforded by the home," he said. "It is a great work and the practical beginning of a still greater work.



Dr. Schrock also held leadership positions in many local and national orthopaedic organizations. He was president of the Clinical Orthopaedic Society in 1929. In 1933, the University of Nebraska Board of Regents appointed Dr. Schrock, then an associate professor of orthopaedic surgery, as chairman of the Department of Orthopaedic Surgery at the University of Nebraska College of Medicine. He succeeded Dr. Lord, who transitioned into chairman emeritus status.

In his first year as department chair, the 1933-34 Nebraska Medical College's course catalog lists the department's faculty as Dr. Lord (emeritus), Dr. Schrock (chair), "Instructor Johnson" (Dr. Herman F. Johnson), and "Clinical Assistant Tipton" (Paul W. Tipton). Aside from his academic work and private practice, Dr. Schrock held local hospital administrative positions, including president of Bishop Clarkson Memorial Hospital from 1934 to1935.

Dr. Schrock was also an accomplished researcher. In a 75th anniversary tribute to past presidents, the AAOS published a tribute to Dr. Schrock and his classic paper from a 1926 edition of the Journal of Bone and Joint Surgery, "Congenital Elevation of the Scapula," which explained his then-radical approach to congenital elevation of the scapula.

He died Aug. 18, 1969, in Charles City, Michigan.

Bishop Clarkson Memorial Hospital.

Omaha Orthopaedists at Children's Hospital Predecessor to Children's Hospital & Medical Center

When the new Children's Memorial Hospital was under construction in 1943, Dr. Schrock told The World-Herald:

> *"The care of children offers so many varied and special problems that a hospital for children is essential in any community of metropolitan size. The problems in nutrition cannot be well handled in a general hospital. Their nursing needs are such that special surroundings are essential to their getting well. The care of physical deformities, whether acquired through disease or present from birth, requires special nursing and special surgical facilities, neither available in the average general hospital. This means a very definite step forward in the care of sick children. The idea has been a dream of a few for a number of years.*

Dr. Schrock and Dr. Lord were both longtime orthopaedic staff at Children's Memorial Hospital, as were later generations of UNMC orthopaedic faculty who continued to serve in leadership positions at the hospital. The historic synergy was evident with Dr. Schrock's department chair successor, Dr. William R. Hamsa Sr., and also in the careers of longtime UNMC professors Dr. Walter Huurman, Dr. Paul W. Esposito and other specialists in pediatric orthopaedics.

Children's Memorial Hospital, opening in 1948 on the University of Nebraska Medical Center campus, was essential in providing pediatric orthopaedic care.

The World-Herald, Nov. 16, 1943:

AAF Groups Meet at Base

Orthopedic, Training Sessions Open

Army Air Base, Lincoln (AP)—The air base was host Monday to two army air forces' conferences—a three-day meeting aimed at further improving the AAF method of training fighter airplane mechanics, and a fracture-orthopedic session.

In greeting representatives of AAF mechanics schools and factory training detachments throughout the country, Brig. Gen. Early E. W. Duncan, commanding general of the base, said:

"Exchange ideas and don't hesitate to offer suggestions. It is of utmost importance that student mechanics receive the best training possible before moving up to the fighting front."

Maj. Gen. John F. Curry, commanding general of the western technical training command, was to arrive Tuesday, and was to close the conference with an address Wednesday.

An all-day conference of the fracture-orthopedic group was held Monday, with a banquet Monday night.

The meeting will continue through Tuesday, as medical men from 17 AAF installations serve as representatives for their respective bases.

After greetings by Gen. Early, Lt. Col. Alfred R. Shands, former professor of orthopedic surgery at Duke university and now orthopedic surgery consultant for the army air forces, explained conference objectives.

Others on the program included Col. John L. Gallagher, surgeon, Lincoln base; Col. Grover C. Penberthy, surgical consultant, Seventh service command, Omaha; Maj. Wallace S. Duncan, Lincoln base; Maj. Mike O'Connor, medical service division, air surgeon's office, Washington; Dr. J. E. M. Thompson and Dr. H. Winnett Orr, Lincoln, and Dr. Robert D. Schrock, Omaha.

Dr. Orr, famed Lincoln specialist, spoke at a banquet Monday evening.

Dr. H. F. Johnson., Omaha, was to be one of the speakers Tuesday.

Certification Developments and Controversy

"If the measure of continued merit is to be maintained through our oncoming years, there need be an awareness of change, open-mindedness to new concepts, elasticity in viewpoint, with a ready reception and stimulating encouragement to the newer generation whose future is in the making."

— Dr. Schrock, in his 1941 presidential address to the AAOS

As AAOS president in 1940 and a director of the American Board of Orthopaedic Surgery from 1942 to 1948, Dr. Schrock helped oversee an era of rapid proliferation of orthopaedic residency programs throughout the United States. It was a crucial time for the development of board certification for orthopaedic surgeons and a system of accreditation for university residency programs. The ABOS was only a decade old when Dr. Schrock joined its board of directors. Its first batch of orthopaedic surgeons received board certification in 1934. There was no test. AOA members, professors, associate professors, and associate or attending professors in non-teaching institutions were grandfathered into receiving certifications that would remain valid for the lifetime of an individual orthopaedic surgeon. The first board exams took place in 1935. Although all ABOS certifications remained valid for life — for the time being — there were grumblings of change on the horizon.

In 1943, the ABOS proposed that board certification be integrated into the education process of residency programs: one phase of certification after completion of Year 1, and the second part after graduation from the residency program. Also in 1943, ABOS established a Committee on Resident Training to review the legitimacy of orthopaedic residency programs.

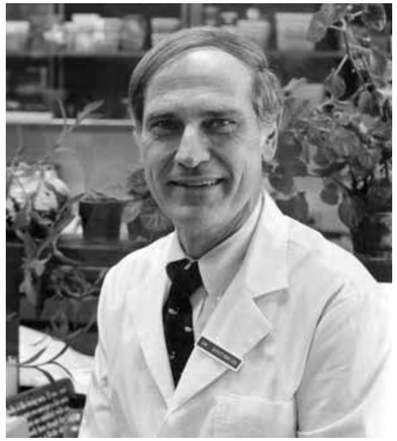
The following year, ABOS adopted a definitive plan for education in the specialization of orthopaedic surgery: six months of basic sciences training, six months of fracture management, 12 months of children's orthopaedic surgery and 12 months of adult orthopaedic problems, including reconstructive surgery. This framework would evolve over the years, eventually becoming the current system of ACGME accreditation.

Even before he had joined the board of the ABOS, Dr. Schrock demonstrated exceptional foresight on the subject of certification and the need for staying up to date with latest trends. Dr. Schrock's remarks during his 1941 presidential address to members of AAOS are among the earliest documented references to the need for ongoing certification (i.e., "re-certification"). Discussion about recertification came up from time to time at AAOS meetings over the subsequent decades. Recertification proposals generally pitted ABOS, which sought to implement recertification, in conflict with the AAOS, which opposed the renewal system on behalf of members. Recertification opposition from AAOS became particularly heated during the 1970s and 1980s.

The ABOS issued 10-year, time-limited certificates in orthopaedic surgery for the first time in 1986, and the ABMS revised the terminology of "recertification" to "maintenance of certification" in 2000. Dr. Schrock's prescient remarks to the AAOS in 1941 and his involvement with the ABOS in 1943 helped define the process of renewing MOC that exists today.

Dr. Kevin Garvin, the current chairman of the UNMC Department of Orthopaedic Surgery and Rehabilitation, was elected to the ABOS board of directors in 2018.

Dr. Wayne O. Southwick (1923-2016)



Wayne O. Southwick, M.D.

Dr. Wayne O. Southwick graduated from the University of Nebraska Medical College, and went on to become one of nation's preeminent educators in the field of orthopaedic surgery. He found most of his career accolades outside his home state as Nebraska had not yet established an ABOS-approved orthopaedic residency program when he left.

A child of the Great Depression, Dr. Southwick was born Feb. 6, 1923, in Friend, Nebraska. He played football for the University of Nebraska, graduated in 1945 with his undergraduate degree, and completed his medical degree from Nebraska College of Medicine in 1947. He inherited the legacy of Drs. Lord, Orr and Schrock through direct exposure to instruction from these orthopaedic contributors of Nebraska medical history.

Following medical school, he moved to Massachusetts to intern at Boston City Hospital and then to Maryland, for the orthopaedic residency program at Johns Hopkins Hospital. Johns Hopkins is a historically significant institution for its role in developing medical residencies. Under the direction of Dr. William Steward Halsted, Johns Hopkins hospital and university established the nation's first residency program inspired by Dr. Halsted's exposure to the German, Austrian and Swiss systems of surgical training, where aspiring new surgeons spend several years in a university surgical clinic. Johns Hopkins is also recognized as the first specialized orthopaedic residency program in the United States, with its first orthopaedic resident graduating in 1915 under the supervision of Dr. William S. Baer, a former student of Dr. Halsted.

Active duty in the U.S. Navy during the Korean War interrupted Dr. Southwick's residency training at Johns Hopkins. Upon his 1955 graduation, he remained at the university as assistant professor for three years. In 1958, Yale recruited Dr. Southwick to become the university's first full-time chief of orthopaedics. He led the Yale orthopaedic residency program to become one of the best in America nearly 10 years before the University of Nebraska system's orthopaedic residency program came into existence in Omaha at UNMC.

Dr. Southwick traveled to Haiti and Tunisia on orthopaedic service trips to benefit disadvantaged communities, and he was an accomplished sculptor. In 1984, he served as vice president of the American Orthopaedic Association. In 2003, AAOS awarded him the first American Orthopaedics Association Diversity Award, in recognition of his work promoting women and minorities in the field of orthopaedics, including Yale's first African-American resident, who Southwick welcomed despite departmental opposition in 1963.

The World-Herald, Feb. 25, 1958:

N.U. Medical College Grad Picked by Yale

A graduate of the University of Nebraska College of Medicine Tuesday was named an associate professor and director of the section of orthopedic surgery at the Yale University School of Medicine.

The new position of Dr. Wayne Southwick was announced by Johns Hopkins University, where he has been assistant professor of orthopedic surgery.

Dr. Southwick, a native of Lincoln, received his medical degree from the University of Nebraska in 1947. He served as an assistant in anatomy and histology at the University of Nebraska College of Medicine in his final year at the college.

Dr. Herman F. Johnson (1897-1968)

Herman F. Johnson, M.D.

Dr. Herman F. Johnson was an early defining force for UNMC's orthopaedics department. His family's legacy spans generations — stemming from his own notable work, that of his son-in-law, future department chair, Dr. Thomas Hood, philanthropic contributions by his daughter Marjorie, and a great-grandson, Brent Hood, who graduated from UNMC's orthopaedics program in 2015.

Dr. Johnson graduated from the University of Iowa in 1922 with a medical degree and came to Omaha in 1924. He joined the private practice of Drs. Lord and Schrock, and climbed the Nebraska Medical College faculty hierarchy from assistant to professor emeritus.

The university course catalog first named him among the faculty as clinical assistant in the 1924-25 bulletin. He held various assistant instructor roles until promoted to instructor in 1933. The 1934 bulletin updated his position to reflect his dual departmental positions as assistant professor of orthopaedics and assistant professor of surgery in charge of division of fractures. He became associate professor of orthopaedics in 1943, full professor in 1952 and professor emeritus in 1963.

He was president of the Clinical Orthopaedic Society and served as vice president of the AAOS. He was also a fellow in American College of Surgeons, a member of AOA, Pan-American Medical Association and the Nebraska Medical Association.

The old Nebraska Methodist Hospital building as it looked in 1959.

Dr. Johnson was a senior partner in the office of Lord, Schrock and Johnson. He was also on staff at Methodist, Clarkson and Immanuel Hospitals and consulted at Lutheran Hospital. He practiced in some out-of-state facilities as well.

His orthopaedic publications covered a broad range of topics. Two of his landmark articles included "Reconstruction Procedures in Traumatic Lesions of Bone and Joint Where Conservative Methods Fail" and "The Orthopaedic Care of the Arthritic Patient."

He died June 10, 1968. An endowed chair in Dr. Johnson's name was made possible through the generosity of his daughter, Marjorie Johnson Hood. Resident Program Director Dr. Matthew Mormino was named the first Herman Frank Johnson, M.D., Professor of Orthopaedic Surgery and Rehabilitation in 2005.

Dr. William R. Hamsa Sr. (1903-1980)

William R. Hamsa Sr., M.D.

The son of immigrants from East Bohemia (Czech Republic), Dr. William R. Hamsa Sr. would grow up to become the first Nebraska-born chairman of the University of Nebraska Medical College's Department of Orthopaedics. He was born in Stanton but grew up in Clarkson, in Colfax County, about 90 miles northwest of Omaha. The sparsely populated farmlands were popular for Czech settlers to Nebraska.

Dr. Hamsa attended the University of Nebraska (1922-1925), graduated from the Nebraska College of Medicine in 1929, interned at the Covenant and Douglas County Hospitals in Omaha, and completed a three-year residency at the University of Iowa College of Medicine in 1937.

He started his Omaha practice in 1937 and held positions at eight hospitals, including chief of staff at Clarkson Hospital, a post he assumed in 1951. A history of Bishop Clarkson Memorial Hospital notes that he was president of the staff in 1956 and "a highly educated surgeon, was well-known throughout the United States as well as locally as a highly competent surgeon who contributed much to the surgical literature."

Dr. Hamsa taught at the Nebraska College of Medicine for more than 25 years. He succeeded Dr. Schrock as chairman of the department of orthopaedic surgery in 1949 and was named a senior consultant in 1972, training residents at Clarkson. He continued in this role until 1978. Later in his career, Dr. Hamsa recalled the sequence of events that led to his tenure as department chair:

> *"I was in private practice immediately and, gradually, because of the lack of desire on the part of orthopaedic men here in Omaha to make the necessary trip to the Orthopaedic Hospital at Lincoln, and I being the youngest one, accepted it at their request. I mean at the request of the local men because they didn't want much to do with it to make those trips to Lincoln once a week. But as a result of that, I gradually finally had all of it with no particular desire on my part but it just drifted to me and then the extension clinics were here at the Douglas County Hospital, the old Douglas County Hospital in 1937. And when Dr. Schrock retired in 1949, I was kicked upstairs, which created a little furor, but it worked out all right. I kept the job of chairman of the department for 15 years, at which time I relinquished it to Dr. Waters, which he took at my insistence."*

In 1979, the Nebraska Medical Center gave him a golden anniversary award, and the Nebraska Medical Association honored him for 50 years of practice. He was a charter member of the Mid Central States Orthopaedic Club and a director of Physicians Mutual Insurance Co.

Lt. Gov. Dwight Burney and son Dr. Dwight Burney Jr. in 1964.

Dr. William R. Hamsa Jr. followed in his father's footsteps to become an orthopaedic surgeon. He joined the faculty of UNMC's orthopaedic department in 1968 and served through the 1989-90 academic year. Dr. Hamsa Jr. occupied his father's old private practice office with Drs. Dwight Burney Jr. and Michael O'Neil. All three were UNMC volunteer faculty, and their practice was limited only to orthopaedics.

When an interviewer asked Dr. Hamsa Sr. in 1979 to reflect on the most significant changes in the past 50 years, he noted private hospitals actually allowing the residents to do surgery on private patients. "That to me is varying in degree in various hospitals. I remember vividly when I was asked the first time the question came up at the orthopaedic monthly meeting regarding the residents' complaint, 'They're not letting us do enough at private hospitals.' And we went around the table asking how much do you let your resident do? I said, 'On my private patients, none.' And going around the table, some of the local men were allowing them to do almost half of the surgery. I don't believe that's legally right and it is certainly not morally right. Of course the alternative to that, 'Where will the resident be trained?' We used to have indigent patients." There are no indigent patients. Are there?" ["Very few," the interviewer answered.]

Dr. W.R. Hamsa Sr., and sons, William Jr., left, and Charles in 1950.

Although retiring from "active" practice in 1975, he remained involved with UNMC's orthopaedic residents as an emeritus professor while also staying active with other part-time work. He was a regular at Dr. John Connolly's 7 a.m. Monday morning conferences for residents.

Dr. Hamsa Jr. died July 23, 1989, at his summer home in Ten Mile Lake, Minnesota. He stayed with his educational endeavors until cancer made it impossible to continue.

Growing in a New Century

Specialization was slow to come to the University of Nebraska College of Medicine. Historic records reveal that the exclusive purpose of the school's existence during the first half of the 20th century was to prepare students for general medical practice. This is reflected in the organization of the faculty.

The majority of clinicians — including the chairs of all clinical departments — held part-time or volunteer appointments until the 1950s, while community physicians volunteered their time for ward and clinic attending and classroom teaching. The first four chairmen of the Department of Orthopaedic Surgery volunteered their administrative leadership:

- Dr. J.P. Lord, 1919-20 to 1932-33
- Dr. Robert Schrock, 1933-34 to 1948-49
- Dr. William Hamsa Sr., 1949-1950 to 1962-63
- Dr. Chester Waters Jr., 1963-64 to 1966-67
- Dr. L. Thomas Hood, 1967-68 to 1972-73*

These department heads and their volunteer faculty members were responsible for educating medical students and rotating interns in caring for orthopaedic problems as well as supervising inpatient orthopaedic care at the University and Douglas County Hospitals.

University Hospital, 1941.

Following the stock market crash in 1929, University Hospital fell upon hard financial times. In order to maintain quality of care, the institution was forced to close down some of its hospital beds and reduce the size of the medical school classes.

The administrative organization at the University of Nebraska College of Medicine was considerably smaller in the early 1900s than it is today. There was no chancellor for the Medical Center campus; the College of Medicine dean reported directly to the University of Nebraska president. In addition to many academic responsibilities, the dean also had full administrative responsibility for operation of the University Hospital. Not until 1953 was the first professionally trained hospital administrator, Duane Johnson, named.

**Dr. Hood joined the department as voluntary faculty; however, he was among the early paid members of the orthopaedic faculty after the Nebraska Board of Regents designated that he receive a salary ($1,000 per month with 50% of his professional endeavors for chairing the department).*

Early Pioneers of the Orthopaedic Residency Program

J. Perry Tollman, M.D.

The first half of the 20th century saw the Nebraska Medical College primarily as a training ground for family practice physicians with little or no evidence of specialty education. The majority of students who completed a four-year curriculum leading to the Doctor of Medicine degree immediately went forth and occupied themselves in family practice. Annually, however, 14 to 16 individuals did receive additional training in a one-year internship. It was these 14 to 16 post-graduate physicians who manned the store and assisted volunteer clinical faculty members in caring for the patients. By state law, only patients unable to provide payment for care were admitted to the University Hospital, and thereby provided a patient base for educational needs.

Immediately following World War II, a change in the philosophy of medical education, as well as delivery of care, became evident at 42nd Street and Dewey Avenue. Meeting minutes from the College of Medicine Faculty Executive Committee reflect a generalized, but certainly not universal, agreement that specialty training was important. The dean of the Medical College, Dr. J. Perry Tollman, advanced the thought that perhaps the university should become a resident training center and not an intern-training center. The 12 clinical department chairmen, all volunteers and specialists, were of varied opinions when it came to the idea of training future specialists.

Dr. Stanley Bach examines a young patient. Bach was trained under Dr. Schrock in the years following World War II and stayed active in the department for many years.

The influence of matured military veteran physicians returning from World War II, however, forced the birth of clinical specialty residency programs. Dr. Stanley M. Bach had completed an internship at the University Hospital in 1941 and subsequently served in the Army. In January 1946 after returning from his Army duties, he began a preceptor-type of orthopaedic residency training program under orthopaedic chairman Dr. Robert Schrock, which concluded in December 1948.

The residency program itself had no formal structure as all clinical education and surgical training was carried out by volunteer faculty members. Research did not play a significant role because it was not integrated into the clinical and surgical training mission of the department.

Nearly forgotten in the history of the department has been the role of three additional "residents" during these very early years. Dr. Schrock, who had been president of the American Academy of Orthopaedic Surgeons in 1941, was their mentor as chairman of the department.

Dr. Robert Boal, at age 43 and an active duty colonel in the U.S. Army Medical Corps, spent two years in orthopaedic training at Nebraska, from August 1947 to August 1949. During this time he remained on active duty and was presumably administratively attached to Fitzsimmons Army Hospital in Denver, but excused from active duty obligations.

Dr. Robert Lockwood, also an active duty regular Army officer, concluded two years of orthopaedic training at the University of Nebraska in July 1950. It is assumed that these two individuals returned to active Army duty because the United States was becoming involved in the Korean police action.

Dr. Frank Sundstrum, a World War II regular Army veteran and 1947 graduate of the University of Nebraska College of Medicine, served one year as an intern at Nebraska Methodist Hospital. He became an orthopaedic preceptor in July 1948 and in June 1951 completed his three years of specialty training. Other than Dr. Bach, who remained affiliated with the department for many years, little is recorded regarding the subsequent careers of the other three physicians.

The rather sparse records available seem to indicate a fall-off in orthopaedic training activity for the next 15 years. University Hospital continued to be staffed by an expanding list of volunteers, including Drs. Herman Johnson, Tom Hood, Chester Waters Jr., Stan Bach, Lou Campbell, Dwight Burney Jr., Richard Smith, Jim Scott-Miller, Jim Dinsmore and Bill Hamsa Jr. Dr. Frederick "Fritz" Teal of Lincoln was advanced from associate professor to professor in July 1955, remaining the link to the Children's Hospital orthopaedic practitioners in Lincoln. These individuals were all faculty members under the guidance of Dr. Hamsa Sr., chairman of the department from 1949 to 1963.

Residency in other specialties — surgery, obstetrics and gynecology, pediatrics, pathology and internal medicine — all preceded the development of a more formal, certified program in orthopaedic surgery. In the absence of orthopaedic residents, general surgery residents covered the orthopaedic services at University Hospital, Douglas County Hospital and the VA Hospital. This was done under the direction of volunteer faculty who rotated their responsibility on a volunteer basis between the three hospitals. It would appear that no certificates of orthopaedic residency service were issued between 1951 and 1970.

James W. Dinsmore, M.D.

Frederick "Fritz" Teal, M.D.

Dr. Stanley Bach (1916-2004)

Stanley Bach, M.D.

Lorraine Nollette, 15, of Nenzel, Nebraska, at Children's Memorial Hospital in 1954. "I know I'm making progress because my visits get shorter."

Dr. Stanley Bach developed an early form of orthopaedic residency program at the University of Nebraska Medical College and remained involved with UNMC's current Orthopaedic Residency Program throughout the decades following its establishment in 1969.

Dr. Bach was born in Masterton, New Zealand, and earned a bachelor's degree from Dana College in Blair, Nebraska, in 1937. He attended medical school at the University of Nebraska College of Medicine, graduating in 1941. He served a one-year internship at University Hospital and then served in the Army from 1942 to 1945 during World War II. Following his service, Dr. Bach returned to Omaha and initiated the department's early preceptor-type of orthopaedic residency training program (1946-1948).

In 1949, he joined the staff at Children's Hospital where he served until 1998. Shortly after Dr. Bach joined Children's, he was appointed to the voluntary clinical faculty of both Orthopaedic Surgery and Anatomy. In 1955, Dr. Bach was advanced to assistant professor of orthopaedics, and associate professor of anatomy and physical medicine and rehabilitation. He recognized the need for a multidisciplinary approach to pediatric orthopaedic patients, and he contributed vital medical care to Nebraskans afflicted by the viral scourge of poliomyelitis, as he frequently led free-to-the-public clinics and training sessions for volunteer polio workers.

Polio was a major concern for the field of orthopaedics when Dr. Bach entered practice. The 100-bed Children's Memorial Hospital, now the UNMC building known as Swanson Hall, opened in March 1948 at a cost of $850,000. By August, the hospital devoted its entire north first-floor wing to polio patients. By November, it had nearly 150 patients with varying degrees of the disease. The hospital acquired its first iron lung in 1949 and added a second in 1952 as that year's nationwide polio epidemic worsened.

In 1952 alone, the U.S. recorded 57,628 polio cases with more than 21,000 being paralytic cases. Summer was the worst. During the summer of 1952, Omaha's Children's Memorial Hospital treated more than 360 children for polio. At least 14 were in iron lungs and 13 died.

Throughout the recurring spikes of polio cases in Omaha in the 1950s, Dr. Bach, other attending physicians and Omaha firefighters were often called upon to spend the night at the hospital. They had to be ready to provide manual operation of the iron lung machines — the large, awkward mechanical respirators used to treat polio patients — in the event that a power failure interrupted the iron lung's breathing assistance.

Dr. Bach was the primary orthopaedic surgeon for most local children suffering from the paralytic residuals of polio, and his practice was busy for many years directing the orthopaedic care of these individuals.

When the current orthopaedic residency program began in 1969, Dr. Bach worked at the Omaha Veterans Affairs Medical Center. He accepted residents into his office, and he also taught anatomy at the university. He retired from active clinical practice in 1998, 50 years to the day that he opened his orthopaedic practice in Omaha.

He died Dec. 30, 2004, at age 88. In 2007, Children's Hospital and Medical Center posthumously honored Dr. Bach as a "Pediatric Legend" for his impact on the lives of children.

Children suffering from polio in iron lungs at Children's Memorial Hospital. Thanks to vaccines and other developments, the huge machines used to facilitate breathing are a thing of the past.

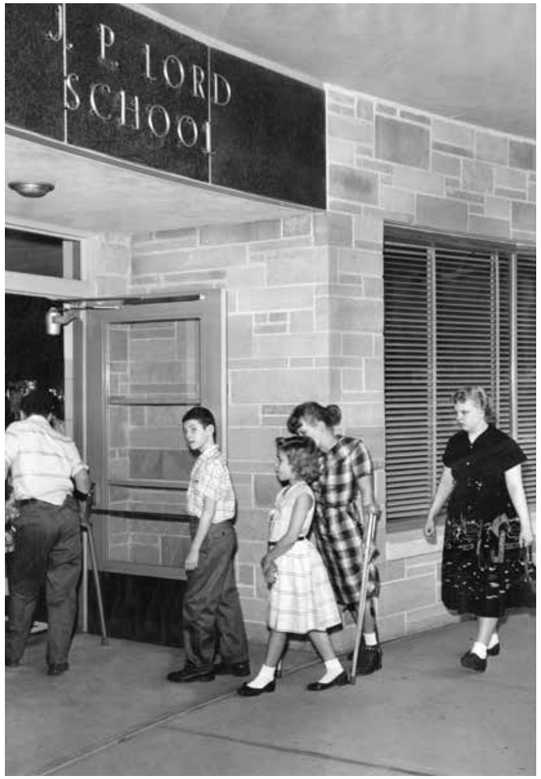
Douglas County polio vaccination program began May 2, 1955, with no difficulties. Teams of doctors, nurses and PTA volunteers set up efficient production lines such as this one at Dundee Elementary School. Mrs. Sherman Lipstein swabbed the children's left arms. Then Dr. Lynn MacQuiddy administered the shots while nurse Nelda Belknap and Mrs. John H. Dey prepared new hypodermics.

A Cure for Polio Arrives in Omaha

American researcher Dr. Jonas Salk announced the world's first vaccine for polio in 1953. Improvements to polio vaccinations continued through the 1960s, but Omaha's polio crisis took several years to subside.

In 1956, childhood polio patients overwhelmed the capacity of the Hattie B. Munroe Home for Convalescing Crippled Children in Omaha's Benson neighborhood. By 1958-59, construction had been completed on the new Hattie B. Munroe Home adjacent to the J.P. Lord School and Children's Hospital's new Meyer Therapy Center on the current UNMC campus. The Meyer Therapy Center served children with mental and physical disabilities, including individuals who had suffered from polio.

As widespread polio inoculation efforts diminished the scourge, funding soon diminished for the Munroe Home. Its occupancy dropped to 18 patients by 1963, filling less than half the 46 available beds. Severe budget cuts instigated administration change, and management of the Munroe Home transferred to UNMC in 1968 as The Munroe Pavilion.



Left: In the 1950s, children living at Hattie B. Munroe Home who were able-bodied would cross the street to attend Benson West Elementary School. For those with medical needs that prevented them from leaving the home, the Omaha school board provided a teacher to staff Hattie B.'s fully equipped classroom.

Above: The new J.P. Lord School began operating in 1959 to serve the needs of children with mental and physical disabilities.

The new Hattie B. Munroe Home was officially dedicated May 16, 1959.

The Children's Therapy Center and a preschool for children with hearing impairments run by the Omaha Hearing School were housed inside the new C. Louis Meyer Memorial building.

It later merged with the Meyer Therapy Center — renamed as the C. Louis Meyer Children's Rehabilitation Institute after UNMC took administrative control from Children's Hospital in 1968 — to form the Munroe-Meyer Institute in 1997, a growing institution that owes its historical foundation to the work of early Omaha orthopaedic surgeons Drs. John Prentiss Lord and Robert Schrock.

Dr. Chester Waters Jr. (1911-1968)

The fourth chairman in the history of UNMC's Department of Orthopaedic Surgery and Rehabilitation, Dr. Chester Waters Jr., served for the shortest duration of four years. He died just as the orthopaedic residency program was beginning to take shape.

Dr. Waters Jr. was the son of another successful Omaha surgeon, Grinnell College graduate Dr. Chester Waters Sr., who worked alongside many of the UNMC orthopaedic department's formative leaders at Bishop Clarkson Memorial Hospital. The senior Waters was colleague to Dr. A.C. Stokes in general surgery. The orthopaedic department at the time consisted of Dr. J.P. Lord, also president of the hospital, and Dr. Robert Schrock.

Chester Waters Jr., M.D.

The junior Waters graduated from the Nebraska Medical College in 1936, and he completed formal orthopaedic training at Duke University from 1938 to 1941. Dr. Waters then returned to Omaha and the medical college where his father was "professor of surgery," and joined the Department of Orthopaedics as an instructor in 1942.

He worked with Drs. Waters, Hood, Dinsmore and Pittner at their 209 S. 42nd St. office in Omaha, and rose to associate professor before eventually serving as Orthopaedic Department chairman from 1963 to 1968. He was elected president of the Nebraska Methodist Hospital medical staff in 1953 and was a member of the American Academy of Orthopaedic Surgeons, the College of Surgeons and the Clinical Orthopaedic Society.

Dr. Waters led the department up to a pivotal moment in its history. He died unexpectedly, Dec. 8, 1968, following his regular morning exercise. His death came on the cusp of the Nebraska Medical College's centennial observance of the establishment of the Omaha Medical College in 1869. Although the department's 1968-1969 annual report does not list his name among the faculty, he is named in the 1969 course catalog as an associate professor under chairman Dr. Thomas Hood.

Dr. Chester Waters Jr., left, at the J.P. Lord School in 1949.

1968: Health Sciences Consolidated at UNMC

According to John Schleicher, former head of collections at UNMC's McGoogan Library of Medicine, in October 1968, after many years of debate, the University of Nebraska Medical Center became a freestanding entity within the Nebraska System.

Prior to 1968, the medical campus in Omaha was administratively part of the University of Nebraska in Lincoln. In 1968, plans were made to add the municipal University of Omaha to create a new NU system, and the resulting administrative reorganization officially recognized the medical center as a semi-autonomous campus in that new system. To accomplish all of this, it took a special bill in the Legislature, as well as a vote of the citizens of Omaha.

In October 1968, the Board of Regents reorganized the university's structure to reflect the merger. A system administration was established, composed of semi-autonomous degree granting institutions: UNL, UNO and UNMC with UNK added in 1991. UNL Chancellor Clifford Hardin was appointed chief administrative officer of the new system. To administer each campus, the regents created three presidencies — titles changed to chancellor in 1971. College of Medicine Dean Cecil Wittson, M.D., was appointed to lead the new UNMC campus.

Chancellor Clifford Hardin

Dean Cecil L. Wittson

1960: New entrance along new addition for UNMC College of Medicine.

Left: 1968 UNMC Science Building.

Below: Southeast corner of New University Hospital (UNMC) in 1968.

PART II

1969-2019

The Beginning of an Academic Orthopaedic Surgery Department

2011: A year after arm surgery by Dr. Sean McGarry, a boy is able to play catch with his father.

The Beginning of the Modern Orthopaedic Era in Omaha

Merle Musselman, M.D.

"The Department of Orthopaedic Surgery and Rehabilitation has always strived to be a local and national leader in orthopaedic care. Above all, our mission is to advance the future of orthopaedic medicine by providing state-of-the-art patient care, innovative education and cutting-edge research."

— Kevin L. Garvin, M.D., "Framework for Growth," 2016 Biennial Report, Department of Orthopaedic Surgery and Rehabilitation

Until the mid-1960s, there was little movement toward developing an academic Department of Orthopaedic Surgery at the University of Nebraska. A brief attempt at sustaining a recognized residency training program failed beyond the two earliest trainees post-World War II, perhaps due to the absence of a salary line to accompany an academic appointment for a department chairman.

The volunteer work of community surgeons, whose primary and progressively demanding orthopaedic practices limited the amount of time available for pro bono work, was sufficient to staff the University Hospital and Douglas County Hospital only. "In-house" coverage was limited to general surgery residents assigned to an orthopaedic rotation. This arrangement, although adequate in the 1950s and early '60s, had become sub-standard by 1965.

Records of the precise series of events that led to the development of the modern department are limited to the memories of a decreasing number of individuals who were present and closely involved at the time. However, Dean Cecil L. Wittson and Dr. Merle Musselman, chairman of the department of surgery, undoubtedly played important roles.

Dr. Chester Waters Jr. was volunteer chairman, leading a group of individuals who donated time and skill to providing clinical orthopaedic care for patients admitted to the two hospitals.

The department chair's younger partner, Dr. L. Thomas Hood, would step forward to lead the residency program and succeed Waters as department chairman.

Dean Wittson recognized Dr. Hood as a talented, interested and willing individual who would agree to accept part-time employment as chairman and press forward with organization and development of the residency program.

Dr. Hood enlisted the assistance of Dr. Stanley M. Bach, first of the graduates of an aborted post-war residency program, and Dr. Dwight Burney Jr., partner of a former volunteer chairman, Dr. William Hamsa Sr.

The World-Herald, Jan. 21, 1968:

New Course For Doctors

N.U. Plans Residency In Orthopedics

A residency program in orthopedic surgery is planned to start in July at the University of Nebraska College of Medicine, Dean Cecil L. Wittson said Saturday.

There is no orthopedic residency program in Nebraska now, said Dr. Wittson.

Dr. Thomas Hood, chairman of the Department of Orthopedic Surgery, said he expects the new training program to be approved by the accrediting agency, the Council on Medical Education of the American Medical Association, this spring, subject to a site inspection later.

The children's section of orthopedic residency will be offered in the Lincoln Orthopedic Hospital, he said.

One student is scheduled to begin his residency July 1, and a second one in January, 1969, said Dr. Hood.

The Hood Era: 1968-1974

Dr. L. Thomas Hood ushered in the contemporary era of UNMC's Department of Orthopaedic Surgery and Rehabilitation as its chairman and founder of the Orthopaedic Residency Training Program.

A Midwestern leader in the field of joint arthroplasty, Dr. Hood was the first surgeon to perform a total joint replacement in Nebraska. He was born in Fort Crook, Nebraska, and graduated from the University of Nebraska in 1942. He entered the Nebraska College of Medicine in 1942 and met his future wife, Marjorie Johnson. Her father was one of the Medical College's leading volunteer members of the orthopaedic faculty. Dr. Herman Johnson made a profound impact on his future son-in-law's decision to specialize in orthopaedics.

In 1946, Dr. Hood graduated with his M.D. and married Marjorie. Following a one-year rotating internship at Immanuel Hospital, he entered the U.S. Army Air Forces for two years as a general medical officer. Upon completion of his military obligation in 1949, he was accepted as an orthopaedic resident at the Mayo Clinic in Rochester, Minnesota.

L. Thomas Hood, M.D.
(1922-2003)
Chairman, Department
of Orthopaedics, 1968-1974.

In 1952, Dr. Hood became a partner in his father-in-law's practice with Dr. Waters, a partnership that had originated with Drs. Lord and Schrock. With the senior partners involved as volunteer orthopaedic faculty of the Nebraska Medical College, Dr. Hood followed suit. They served economically disadvantaged patients at University Hospital and Douglas County Hospital. He became board-certified in 1955, maintaining a keen interest in orthopaedic innovation and education. The Orthopaedic Department promoted him to assistant professor in 1959.

Douglas County Hospital, 1965.

The World-Herald, June 11, 1968

Orthopedist Johnson Dies

Dr. Herman F. Johnson, 71, of 11936 Frances Street, an orthopedic surgeon, died Monday at an Omaha hospital. He had been ill for several months.

Dr. Johnson received his medical degree from the University of Iowa in 1922 and came to Omaha in 1924, when he entered practice with the late Drs. J. P. Lord and Robert D. Schrock.

Dr. Johnson was a professor of orthopedic surgery at the University of Nebraska College of Medicine from 1952 until 1963, when he was named professor emeritus.

He was on the staff of several Omaha hospitals.

Dr. Johnson was past president of the Clinical Orthopedic Society, which includes the eastern half of the United States, and past vice-president of the American Academy of Orthopedic Surgery.

He also was a fellow in the American College of Surgeons, a member of the American Orthopedic Association, the Pan-American Medical Association and the Omaha-Douglas County and Nebraska Medical Associations.

1968-69: A Department of Orthopaedics Annual Report photo: Orthopaedic staff and residents, left to right, back row: Dr. James Scott-Miller, Dr. L.Thomas Hood, Dr. Dwight Burney Jr., Dr. John Douthit, Dr. Stanley Bach, Dr. William Hamsa Sr. (in foreground at table). Residents: Dr. Max Jardon and Dr. Lowell Niebaum.

Dr. Hood studied in England at the side of orthopaedic surgeon Sir John Charnley, who worked in Wrightington, England.. Charnley was considered the father of the modern total hip arthroplasty. His low-friction arthroplasty designed in the early 1960s is identical, in principal, to the prostheses used today.

Upon returning to Omaha, Dr. Hood made use of the new procedure and shared his knowledge. According to departmental records, he said the experience in Europe became a career turning point, allowing him to introduce the surgical procedure to Nebraska. In the year of Dr. Hood's death, approximately 2,500 hip replacements were performed in hospitals across the state.

The Board of Regents appointed Dr. Hood associate professor and chairman of the Orthopaedic Department in November 1967. He was offered and accepted a contract which stipulated he was to be paid a salary of $1,000 per month and expected to devote 50% of his professional endeavors to this task.

Developing a New Residency Program

Dr. Hood, now chairman of the department, launched into the work of creating a new residency program by attending three national meetings of Orthopaedic Residency Chiefs and studying guidelines established by the Ad Hoc Committee for the American Academy of Orthopaedic Surgeons on Geographical Alignment of Orthopaedic Residents.

What emerged was a residency program, grounded at the University of Nebraska Medical Center, that was affiliated with the Veterans Administration Hospital and three local private hospitals — Bishop Clarkson, Nebraska Methodist and Immanuel. Nebraska State Orthopaedic Hospital in Lincoln also played a significant role with Dr. Fredrick F. Teal supervising residents during their training in pediatric orthopaedics.

Immanuel Hospital, 1972.

Bishop Clarkson Hospital, 1959.

The World-Herald, Aug. 11, 1968:

Loup City Seeks Cure For Loss of Its Doctors

By Tom Allan
World-Herald Staff Writer

Loup City, Neb.—This Sherman County seat of 15 hundred is in need of medical aid.

Citizens of this four-county hub are still in shock from the realization that on September 1 they'll be without their doctors.

Some fear that their modern 27-bed and fully accredited Sacred Heart Hospital might close.

The departure of one doctor last week and the scheduled leaving of the only remaining one in the county already has postponed plans for the letting of bids for a 200-thousand-dollar, 50-bed nursing home addition to the hospital.

Prescription for recovery is the finding of doctors.

There is optimism, however, among the members of the five-man Chamber of Commerce get-a-doctor committee that the crisis can be averted.

Prospects

Co-Chairman Jim Farnham, a druggist, said the optimism is based on prospect leads and an "encouraging" meeting in Lincoln with State Department of Health officials.

Sister Edwardine, administrator of the Sisters of St. Joseph Hospital, was equally optimistic.

"We hope neighboring doctors will serve until we get our own," she said. "I have already had one volunteer to help."

The Loup City malady is symptomatic of the troubles facing many communities throughout the Midlands. Medical school graduates prefer specialization and metropolitan medical centers to general practice and the long, lonely and arduous hour in rural communities.

This community's selling points are the hospital built in 1952, community support as proven in the 50 thousand dollars given the Sisters toward the nursing home addition, the availability of a modern clinic building and the trade area.

Short Notice

The concern arose from the fact citizens had only six weeks notice they were losing both doctors.

Dr. Max Jardon, 36, an Alma native and a 1957 University of Nebraska graduate, said he is leaving his seven-year-old general practice here September 1 to work a few months at Omaha's Clarkson Hospital before beginning a residency toward specialization in orthopedic surgery at University Hospital.

Dr. Roy Neal, 31, formerly of Cozad, came here in March then left July 31. Committeemen said they understood he was in the Omaha area helping in vacationing doctors offices. He could not be reached for comment.

Bob Jablonski, chamber president, described the yonger doctor as "one swell guy" and said his departure had been rumored.

The Sherman County Times reported that at a July 22 meeting Dr. Neal explained that when he came, there had been a mutual agreement that neither doctor would leave the other to practice alone. He claimed he felt it would be impossible for him to adequately serve the needs of so large a community alone.

Not Qualified

The recent University of Nebraska graduate was also reported in the Times to have stated:

"Young doctors are not being trained as general practitioners. The goal of medical teachers is medicine and surgery apart from each other. We are forced to do minor surgery and take care of emergencies but we are not trained for this area of medicine. Further training in surgery is necessary for specialty training.

Dr. Jardon said he is doing all he can to help get replacements and added:

"This is a real fine community and I have had wonderful relations with the people. This is an excellent hospital with fine equipment and facilities. It is fully accredited and the Sisters do a tremendous job. This would be an excellent place for thee doctors. The population depending on this hospital is 10 to 12 thousand."

The hospital has new X-ray equipment, an electrocardiogram telephone hookup with Omaha's St. Joseph's Hospital and has registered laboratory and x-ray technicians, as well as an associate medical librarian.

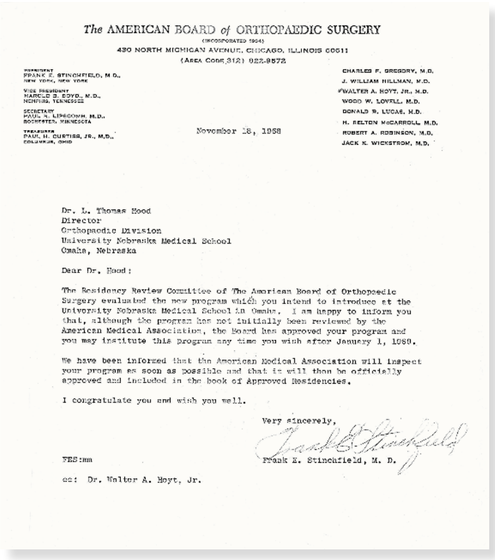
Besides Mssrs. Farnham and Jablonski, members of the special committee seeking doctors are Dick Padura, Don Schwaderer and Don Wagner.

Dr. O. Max Jardon, a general practitioner in Loup City, Nebraska, became the first resident to enroll in the new program. Concurrently, the department was aware of a second possible applicant: Dr. Lowell T. Niebaum, a native of Fremont, Nebraska, who had graduated from the University of Nebraska in 1958 and the University of Nebraska College of Medicine in 1962.

O. Max Jardon, M.D.

Lowell T. Niebaum, M.D.

Program trailblazers Drs. Jardon and Niebuam officially started their orthopaedic residencies on Jan. 1, 1969 — two months after the program received probationary certification by the American Board of Orthopaedic Surgery. A third resident, Dr. Dale G. Phelps, began his three-year residency on July 11, 1969.



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November 18, 1968

Dr. L. Thomas Hood
Director
Orthopaedic Division
University Nebraska Medical School
Omaha, Nebraska

Dear Dr. Hood:

The Residency Review Committee of The American Board of Orthopaedic Surgery evaluated the new program which you intend to introduce at the University Nebraska Medical School in Omaha. I am happy to inform you that, although the program has not initially been reviewed by the American Medical Association, the Board has approved your program and you may institute this program any time you wish after January 1, 1969.

We have been informed that the American Medical Association will inspect your program as soon as possible and that it will then be officially approved and included in the book of Approved Residencies.

I congratulate you and wish you well.

Very Sincerely,

Frank E. Stinchfield, M. D.

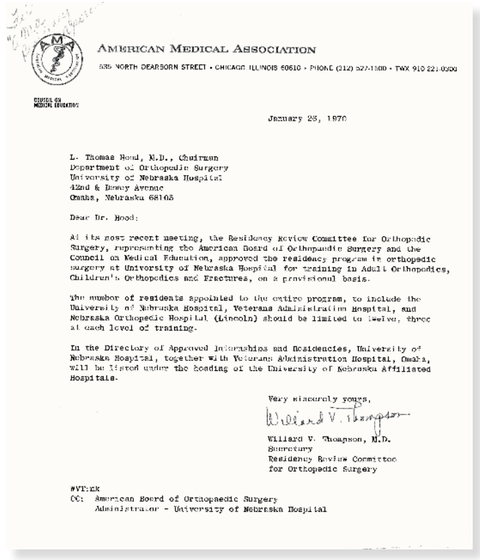
FES:mm

cc: Dr. Walter A. Hoyt, Jr.

Teaching seminars and conferences contributed to formal instruction of the residents with weekly clinical conferences in orthopaedics (Monday morning with participation of all staff members); weekly teaching seminars on related orthopaedic and basic science subjects with assigned individual staff members; weekly VA conference; bi-monthly basic science conference coordinated by Dr. Stanley M. Bach (who held a dual appointment in the Departments of Orthopaedics and Anatomy); monthly journal club with two staff members assigned to each journal for discussion; and monthly orthopaedic-pathology conferences held at Methodist Hospital (where all staff participate with Pathology presentation furnished by Dr. Jerry Schenkin).

"There really were no subspecialties then," Dr. Niebaum said. "As an orthopaedic surgery resident, you literally had to learn it all."

Dr. Niebaum, who earned his nickname "Zeke" as a young student at Fremont High School, began his residency in orthopaedics in January 1969. After finishing medical school in 1962, he enlisted in the Navy, where he served until 1967. After leaving the military, he was accepted into a one-year general surgery residency at what became the University of California, Irvine Medical Center.



AMERICAN MEDICAL ASSOCIATION
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COUNCIL ON MEDICAL EDUCATION

January 23, 1970

L. Thomas Hood, M.D., Chairman
Department of Orthopaedic Surgery
University of Nebraska Hospital
42nd & Dewey Avenue
Omaha, Nebraska 68105

Dear Dr. Hood:

At its most recent meeting, the Residency Review Committee for Orthopaedic Surgery, representing the American Board of Orthopaedic Surgery and the Council on Medical Education, approved the residency program in orthopaedic surgery at University of Nebraska Hospital for training in Adult Orthopaedics, Children's Orthopaedics and Fractures, on a provisional basis.

The number of residents appointed to the entire program, to include the University of Nebraska Hospital, Veterans Administration Hospital, and Nebraska Orthopaedic Hospital (Lincoln) should be limited to twelve, three at each level of training.

In the Directory of Approved Internships and Residencies, University of Nebraska Hospital, together with Veterans Administration Hospital, Omaha, will be listed under the heading of the University of Nebraska Affiliated Hospitals.

Very sincerely yours,

Willard V. Thompson, M.D.
Secretary
Residency Review Committee
for Orthopaedic Surgery

WVT:ek
CC: American Board of Orthopaedic Surgery
Administrator - University of Nebraska Hospital

As Dr. Niebaum puts it, he "drifted along" in the fall of 1968, looking for an orthopaedic residency. After checking in with faculty he knew from medical school, he was advised to contact Dr. Hood. At first, Dr. Hood told Dr. Niebaum that the program had already accepted Dr. O. Max Jardon as a first-year resident. But the two kept talking.

"Tom and I had just a wonderful conversation about what I'd been doing, and what they were planning to do here," Dr. Niebaum said.

At Dr. Hood's suggestion, Dr. Niebaum began his residency at the second-year level alongside first-year resident Dr. Jardon.

"I think some of the most memorable things for me were just the uncertainty of where to go. You know, on Day 1, who goes where?" Dr. Niebaum said. "I was actually assigned to Methodist Hospital where a number of private orthopaedists worked. My chief worked primarily there — that's where Tom Hood worked — and I think he wanted to keep an eye on one of us pretty closely during the first three months."

List of faculty from 1968-1969 and 1969-1970 annual reports

Chairman of Department:
L. Thomas Hood, M.D., Associate Professor

Omaha Staff

William R. Hamsa Sr., M.D., Professor
Stanley M. Bach, M.D., Associate Professor
Dwight W. Burney Jr., M.D., Associate Professor
Richard D. Smith, M.D., Associate Professor
James W. Dinsmore, M.D., Assistant Professor
David W. Minard, Assistant Professor
James R. Scott-Miller, M.D., Assistant Professor
Richard C. Pitner, M.D., Assistant Professor
William R. Hamsa Jr., M.D., Assistant Professor
Donald G. Kanefield, M.D., Instructor
David N. Kettleson, M.D., Instructor

Lincoln Staff and Outstate Staff

Frederick F. Teal, M.D., Professor
Frank P. Stone, M.D., Assistant Professor
Howard E. Mitchell, M.D., Assistant Professor
Frederick S. Webster, M.D., Clinical Instructor
Harold R. Horn, M.D., Clinical Instructor
Kenneth B. Ellis, M.D., Instructor (Kearney, NE)

Dr. Niebaum became one of the first orthopaedic residents to rotate through Veterans Hospital.

Dr. Niebaum and Dr. Jardon worked three-month rotations, with Dr. Niebaum eventually becoming one of the first UNMC residents to rotate through the Nebraska State Orthopaedic Hospital in Lincoln and the first resident to rotate through the VA hospital in Omaha.

"That worked out well for me," Dr. Niebaum said of his rotation through the VA hospital. "I was a veteran, and I saw a lot of veterans there that I thought I could help mentally as well. Because I was a Vietnam vet, and a lot of those guys were there (as patients at the hospital)."

The budding residency program fit into a larger context of growth for the Department of Orthopaedics — a department once dependent on clinical instruction from volunteer and part-time faculty. Along with the securing of residents, the hiring of full-time staff — including orthopaedic surgeon Dr. John D. Douthit as department vice chairman — "laid a strong foundation for future growth and development," read the 1968-1969 annual report. "We, therefore, look to the coming year for expansion and development of the program, and closer contact with the other departments of the Medical Center." The Departments of Surgery, Obstetrics and Gynecology, Pediatrics, Pathology and Internal Medicine, by this time, had all established their own formal residency programs.

"Rotation through the services of the affiliated hospitals furnishes the residents with a broad experience in orthopaedics as well as gradually increases orthopaedic responsibility."

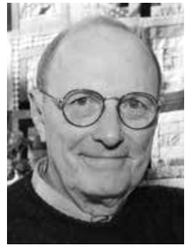
— Department of Orthopaedics' 1968-1969 annual report

This spirit of experimentation and building something brand new permeates all of Dr. Niebaum's memories of his orthopaedics residency. As the first resident through the program, he and Dr. Jardon paved the way for generations to follow. But being first presented its own challenges. Dr. Niebaum, for example, didn't have time to complete a research project during his residency.

"I didn't miss that. I got some other things that were maybe as important if not more," he said. "It was a time of, maybe a little trial and error. Maybe a little push to establish meetings and scientific projects, a journal club. Just to start up things like this that would go on forever."

Progress for the rising Department of Orthopaedics included a move to the College of Medicine's main hospital building in 1970, allowing closer and more consistent contact with the administrative, service and educational aspects of the Medical Center.

By July 1, 1971, the department — with its now increasing patient load — had nine residents in training and planned to make "further strides" in 1971-72 with the addition of full-time staff, including a full-time orthopaedic surgeon.



David Minard, M.D.

David N. Kettleson, M.D.

In addition, new specialty clinics included thrice weekly orthopaedic clinics; a University Hospital Amputee Clinic held monthly by Dr. David Minard; a twice-monthly Crippled Children's Clinic directed by attending surgeons Dr. Stanley Bach and Dr. Dwight Burney Jr.; a monthly Children's Rehabilitation Institute clinic directed by consulting orthopaedist Dr. James Scott-Miller; and a Scoliosis Clinic directed by Dr. David N. Kettleson. A monthly Total Hip Clinic, directed by Dr. Hood, and covering cup arthroplasty patients and total hip cases served as a teaching aid as well as provided data to the Federal Drug Administration on the then-experimental drug methyl methacrylate.

Faculty and residents traveled to conferences and seminars around the world, learning from peers and experts in the field. In late July and early August 1970, Dr. Hood traveled to England, where he witnessed the total hip reconstruction procedure pioneered by Sir John Charnley, and Switzerland, where he observed Dr. Maurice Müller, another hip replacement trailblazer. Dr. Hood brought the procedure to Nebraska.

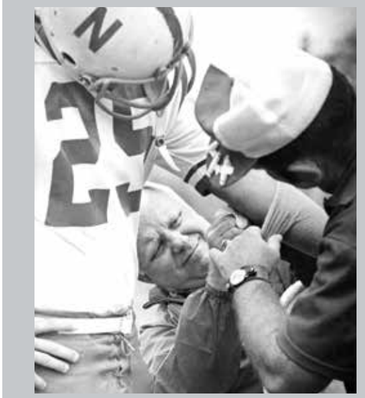
The department's expert faculty also weighed in on cutting-edge medicine closer to home. One topic likely piqued the interest of Husker football fans: the then-new use of artificial turf on football fields. News coverage at the time reported that synthetic turf led to injury rates up to 50% higher than playing on natural grass.

In 1971, the Huskers had been playing on artificial turf in Memorial Stadium for two years. Dr. Frank Stone, faculty member in the Orthopaedics Department and one of the Huskers' team physicians, spoke to the Omaha World-Herald about the issue.

Dr. Stone said he feels "a lot of the criticism about artificial turfs is not well-founded." He also pointed out that there is a difference in the various brands of man-made turf. "I think ours (AstroTurf, manufactured by Monsanto Co.) is as good as any. It seems to be padded a little more."

Dr. Frank P. Stone (1915-1983)

Longtime Husker physician Dr. Frank P. Stone treated players under for the University of Nebraska football team's two most storied coaches, Bob Devaney and Tom Osborne. Dr. Stone graduated from the University of Nebraska in 1939 and Nebraska College of Medicine in 1943. In 1957, he co-founded the Dr. H. Winnett Orr Memorial Scholarship Fund for freshmen at the Nebraska College of Medicine. He was vice president of the Lincoln-Lancaster County Board of Health in 1958 and president in 1959. In 1968, he was chief of medical staff at Lincoln General Hospital and was re-elected in 1970 and 1971. He served as president of the Nebraska Medical Association in 1972. The Frank P. Stone Professorship of Orthopaedic Surgery honors his legacy.



Dec. 26, 1971: Dr. Frank Stone and athletic trainer George Sullivan tend to #25 Dave Mason.

1971: Closing of the Nebraska Orthopaedic Hospital

The Nebraska Orthopaedic Hospital in Lincoln was one of the early clinical partners for the Orthopaedic Residency Program beginning at UNMC. The first graduate of the residency program, Dr. Lowell Niebaum, said that he suspects he was the last UNMC resident at the orthopaedic hospital. In 1971, the state-funded Orthopaedic Hospital closed.

The hospital had originally opened in 1905, thanks to campaigning from the likes of Dr. Lord and Dr. Orr, both of whom found employment at the institution which began at the Lincoln Home for the Friendless. Economic and political critiques of the hospital plagued the institution throughout its long history.

A Dec. 17, 1906, article in the Omaha World-Herald details the early drama only one year after the hospital's establishment: *"A campaign has been instituted to do away with the orthopaedic hospital and to distribute the crippled children among the general hospitals of the state, using them for clinical demonstrations and keeping them at the expense of the state."*

In the following day's edition, Dr. Lord criticized Lincoln's sensational newspapers for dragging out the controversy, which he attributed to a group of "jealous Lincoln medical men." Dr. Lord added, "There is no city so well situated for the work we are doing as Lincoln." However, Dr. Lord changed his tune for the Omaha newspaper in the subsequent year, according to a Feb. 23, 1907, article with the headline "Why Doctors Would Bring Orthopaedic Hospital to Omaha". The article stated, "Dr. Lord, superintendent of the institute, and one of the recognized surgical authorities of the state, thinks the removal would be most wise." His comment concurred with a proposal in the Legislature to relocate the Lincoln hospital to Omaha as a more efficient use of state resources.

Edwin Van Dusan of Alliance, Nebraska, gets his cast autographed by Tom Novak at the varsity-alumni game at Memorial Stadium. Edwin was one of the children at the Orthopaedic Hospital in Lincoln who were guests of the Lincoln Chamber of Commerce in 1951.

The formal proposal to the Legislature came from Dr. D.C. Bryant, dean of Creighton Medical College, and Dr. H. Gifford, associate dean of the University of Nebraska. Drs. Bryant and Gifford's communication stated:

"Our educational interests should be conserved, not dissipated. We are not moved by the greed for possessing an institution, but by a desire to serve our student body, and our profession of the future. The people and its cripples will profit by an institution, which not only relieves present patients, but serves to prevent in the largest possible way deformities in the children of the future by giving a practical education to the largest possible number of medical students in one of the highest specialized arts in surgery, the prevention, correction, and cure of deformity."

The Nebraska Orthopaedic Hospital continued to exist in Lincoln for many decades. Concerns regarding its community service and clinical learning may have reduced with the 1917 completion of the University Hospital in Omaha, where Dr. Lord was chief of orthopaedic staff. After Drs. Lord and Orr returned to Nebraska from World War I, a June 27, 1919, article in the Omaha World-Herald stated that Dr. Orr would assume the position of chief surgeon at the Orthopaedic Hospital in Lincoln — a position held by Dr. Lord with Dr. Orr serving as superintendent immediately prior to the war.

Dr. Orr died in 1956, and the state's orthopaedic hospital continued for little more than a decade. Public arguments to close the facility resurrected with the pro-Omaha position resembling comments from Dr. Lord and his allies a half-century prior.

An Omaha World-Herald editorial, "Only One Wish," published Dec. 21, 1961, weighed in on a controversial proposal to close the Nebraska Orthopaedic Hospital, citing a conspiracy theory published in a Lincoln newspaper. The editorial explained that a letter in a Lincoln newspaper argued that proposals to close the hospital were orchestrated by a "group of Omaha doctors" as part of a "nefarious scheme to benefit Children's Memorial Hospital in Omaha, or the University of Nebraska Hospital in Omaha, or both." The editorial said proposals to close the hospital were longstanding and had arisen several times in the hospital's history — including suggestions by a state legislative committee in 1950 and by Gov. Victor Anderson of Lincoln in 1956.

Coverage of the continuing inter-city orthopaedic rivalry continued. In a Jan. 6, 1962, article, "Orthopaedic Shift Backed," Dr. J. Perry Tollman, dean of the Nebraska Medical College, expressed desire for the Orthopaedic Hospital to relocate to the Omaha campus, with some reshuffling of bed space accommodations, pending the approval of the Legislature. The question of patient capacity became a lingering concern. In a March 20, 1962, article in The World-Herald, Dr. A.R. Sofio, an Omaha dentist and member of the Nebraska Health Board, chastised the Nebraska Orthopaedic Hospital for not supplying factual information on number or type of patients.

Dr. Sofio, part of a subcommittee studying the State Hospital in Lincoln and the Children's Medical Center in Omaha, said he believed that all of the Lincoln hospital's orthopaedic care and rehab cases could be treated at Children's Medical Center at "costs comparable to or less than what the State of Nebraska now pays for such services in inferior, dangerous and hazardous facilities." He also criticized Lincoln interests for making the hospital into an economic and political issue: "It is a shame to use broken, crippled little children to gain an economic or political advantage." The continuing controversy ended with the Lincoln hospital's closure in 1971.

Lingering Tensions Between Omaha and Lincoln

In an oral history interview, longtime UNMC professor Dr. John Stephens Latta, a former chair of the Department of Anatomy, explained to Bernice M. Hetzner, emeritus professor of library science, that the Orthopaedic Hospital was a source of lingering conflict between Drs. Lord and Orr.

Hetzner: Did there seem to be a controversy between Dr. Lord and Dr. H. Winnett Orr?

Latta: Yes, that's right.

Hetzner: Well, there's a little bit about it in the Orr files …

Latta: He wanted that (hospital) to be based in Omaha and Orr wanted it to be based in Lincoln where he was. Both of them thought that they were the biggest experts in the business and Orr got the job here, but as long as he got the job here, Orr wasn't about to take part in any teaching.

Hetzner: Oh, that's why he stayed away from the campus. I thought that it was because he and Poynter didn't get along.

Latta: Well, that's part of it.

Dr. Latta went on to explain how Dr. Orr had a falling out with Dr. C.W.M. Poynter, because the dean did not tap a friend and colleague who moved from Lincoln to Omaha for teaching responsibilities.

The First Residents Arrive

By July 1971, the Department of Orthopaedics had contracted to start one second-year resident and two more first-year residents. The newest residents were Dr. Richard F. Bergstrom, a University of Iowa graduate who served in the Army; Dr. Ronald Boulware, a graduate of the University of Texas Medical Branch who served in the Navy; and Dr. John D. Kaufman, a graduate of the College of Medicine.

New training for the residents included a monthly radiology conference and a sound-slide program in which residents learned about metabolic bone diseases and the treatment of common fractures and dislocations.

Residents and staff also completed the In-Training Examination compiled by the American Academy of Orthopaedic Surgeons, which the 1970-71 annual report noted, "has become a regular part of the training program of all residents in our department as a check on the progress of each resident, and as an aid in evaluating our program and its success in supplying the necessary experience and training to produce a well-qualified orthopaedic surgeon."

Corner of University Hospital (left) and Children's Memorial Hospital, 1972.

1972-73 Department of Orthopaedics Annual Report photo. From left, seated: Drs. Robert Staver, William Smith, Carl Schwartz and Oscar Jardon. Standing: Drs. James Kullbom, Robert Cochran III, Richard Wecker, John Kaufman, Ronald Boulware and Richard Bergstrom.

The results of the test, the report stated, indicated that the resident training program compared favorably with others throughout the country. Nebraska's orthopaedic residents scored as well as or better than 53% to 86% of those taking the exam.

The report also praised Dr. Jardon, who was named "Outstanding Orthopaedic Resident of 1970" following the publication of his paper "Hypophosphatasia in an Adult" in the October 1970 issue of the Journal of Bone and Joint Surgery. Dr. Jardon completed his residency in 1971 and became the department's first full-time faculty member. As a member of the Air Force Reserve, Dr. Jardon also strengthened the department's already robust military ties.

Dr. Jardon, who died in 2004, is very much alive in the memories of many of his colleagues at UNMC, including Dr. Niebaum. Dr. Jardon was one of the more colorful personalities in the early days of the residency program, Dr. Niebaum said.

"Max was maybe a little outspoken perhaps. I visualize him with a pipe in his mouth," said Dr. Niebaum. "I think a lot of people remember Max with some of the idiosyncrasies. I think, like, a little cloud of blue smoke would follow him around, because he had a vocabulary that included profanities."

Decades later, several former residents can still recall many of Dr. Jardon's "Max-isms."

By the time the department released its 1972-73 annual report, Dr. Jardon was the only full-time orthopaedist on the university staff. He "teaches physical diagnosis to first-year medical students, plans and coordinates orthopaedic lectures to physical therapy students and medical students and is responsible for the senior students on elective at University Hospital," the report stated.

University Hospital, 1972.

By June 1973, what was now the Department of Orthopaedic Surgery had moved to new offices on the second level of University Hospital. The space featured wide corridors and wider-than-usual doors to accommodate patients on crutches or in wheelchairs. The new offices also provided ready access to the Radiology Department, which was important, as most patients required X-rays.

The new location also added eight new examination rooms, which offered enough space to transfer patients from wheelchairs to exam tables. New rooms for minor surgeries and casting meant that scoliosis cast changes, pin removals, fracture reductions and other procedures no longer had to take place in normal operating rooms, which eased the pressure on the major surgical schedule.

Other new amenities, detailed in the report, included: "a bright and comfortable patient waiting room" shared with the dermatology clinic, over 1,000 square feet of non-clinical area divided into two staff offices, a Services for Crippled Children social work office, a residents' office and a clerical staff office. The Orthopaedic staff shared another 1,000 square feet in classrooms, consultation and conference rooms with the Dermatology departmental staff.

"These have eased difficulties in teaching tremendously, and the new departmental facilities have increased our efficiency in all areas," the report stated.

Adding to the department's new sheen, the affiliated VA Hospital that year agreed to a complete remodeling of an orthopaedic ward, expanding from 28 to 36 beds. The ward would feature new traction equipment, orthopaedic mattresses and new cast facilities. "These improvements should represent a fine asset to our residency and teaching programs," the report noted. "We feel that this evidences a fine working relationship between the Department of Orthopaedics and the staff and administration of Veterans Hospital."

The pediatrics department on the fifth floor of University Hospital included a classroom setting for school age patients. Christine, left, and Lori work at table as Miss Udes helps Pam with school lessons.

June 1973: Dr. Charles E. Edwards, left, and Dr. Philippe Shubik at the dedication of UNMC's Eppley Hall of Science. Dr. Edwards was the U.S. Health, Education and Welfare assistant secretary for health. Dr. Shubik was director of the Eppley Institute for Research in Cancer.

Robert M. Cochran II, M.D.

Around this time, a young medical student named Robert Cochran II witnessed Dr. Hood perform the first total hip replacement in Nebraska.

"The whole topic of joint replacement was very, very much in the news," said Dr. Cochran, who went on to graduate from the College of Medicine in 1971. The young Cochran had been considering specializing in obstetrics and gynecology but watching Dr. Hood's procedure "was actually the deciding factor that made me choose to go into orthopaedics," he said.

As a resident, Dr. Cochran was involved in a research project with Dr. Jardon on a genetic condition called malignant hyperthermia, which can cause a body to produce a severe fever in response to general anesthesia. Dr. Cochran had first become aware of the condition after operating at the state hospital in Lincoln on a young boy whose temperature skyrocketed during surgery. Though doctors worked on the patient all night, he eventually died.

Dr. Cochran and Dr. Jardon began researching pigs with the condition, and some doctors still remember seeing people walking the halls carrying pigs. Eventually, Dr. Cochran and Jardon discovered that dantrolene, a muscle relaxant, offered some protection to patients with the condition.

"I was always proud of that," Dr. Cochran said.

Looking back on his time as a resident, Dr. Cochran said he's grateful for the mentoring he received from Dr. Hood and the rest of the orthopaedics faculty.

"Those guys were really role models to me. They were really mentors. They taught me not only how to practice orthopaedics, but how to deal with patients," he said. "They taught me not so much the operations that I do or that I did during my career, but how to approach a problem. The basic knowledge that you need, not only of anatomy … but the body as a whole. You're not going to remember everything, but you need to know where to look it up, where to get that information. And you need to treat each patient as an individual."

Cochran stayed on as an assistant professor after completing his residency.

Dr. Hood was personally responsible for the first 12 people admitted to the residency program. Along with his academic involvements, he also maintained an active private practice in several Omaha area hospitals. Immanuel Hospital named him president of its medical staff in 1966.

He served as chairman of UNMC's Department of Orthopaedics until 1974. After more than two years of searching, with more than 30 candidates reviewed, the Orthopaedic Search Committee — consisting of Dr. Hood, Dr. Walter Hard, Dr. Robert Sellers, Dr. Yoshio Miyazaki and Dr. T.A. Mahowald — found a full-time chairman to succeed Dr. Hood.

The Department of Orthopaedics in 1974. Seated from left: Drs. Richard Bergstrom, Floyd Pohlman, John Connolly, John Kaufman, and Robert Staver. Back row: Drs. Ronald Boulware, Richard Wecker, Robert Cochran II, James Kullbom and Jack Brindley.

On Jan. 1, 1974, Dr. John Connolly of the Vanderbilt School of Medicine, became the newest chairman of the department.

"His references were of high order, and he impressed everyone with his friendly and cooperative attitude," the 1972-73 annual report said of the new chairman.

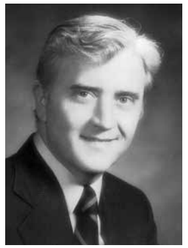
Dr. Hood retired in 1984. The UNMC College of Medicine honored him in 2002 with its Distinguished Alumni Award. He died of natural causes on Aug. 12, 2003. He was 81.

"He chaired the department and pioneered the residency program, all while working in a group private practice in Omaha," Dr. Walter Huurman said. "He was a strong presence in orthopaedics and a prominent person in the community."

The names of Dr. Hood and his wife, Marjorie, are displayed on the department's permanent Wall of Honor, recognizing those who have provided major support to the department.

An endowed chair in Dr. Hood's name for the department chair was made possible by the charitable donations of his widow, Marjorie Johnson Hood. In 2005, Dr. Kevin L. Garvin was named the L. Thomas Hood, M.D., Professor of Orthopaedic Surgery and Rehabilitation. That same year, Marjorie Hood honored her father's contributions to UNMC orthopaedics with an endowed chair for the resident program director. Dr. Matthew Mormino was awarded the first Herman Frank Johnson, M.D., Professorship.

The Connolly Era: 1974-1990



John Connolly, M.D.
(1936-2007)
Chairman, Department
of Orthopaedic Surgery,
1974-1990

Ronald Schwab, M.D.

While Dr. L. Thomas Hood is appropriately credited for being the first chair of UNMC's orthopaedic residency training program, friends and former colleagues say Dr. John Connolly vaulted it to the next level.

His appointment as the newest — and first full-time — chairman of orthopaedic surgery at UNMC was announced in the Aug. 13, 1973, edition of the Omaha World-Herald. The short piece, a roundup of several recently-filled administrative vacancies in the NU system, said Dr. Connolly, an assistant professor of orthopaedic surgery at Vanderbilt University, would receive a salary of $41,000.

Anne Connolly said her husband accepted the chairmanship, effective Jan. 1, 1974, because "he felt that he had the opportunity to build something here. He wanted to challenge himself."

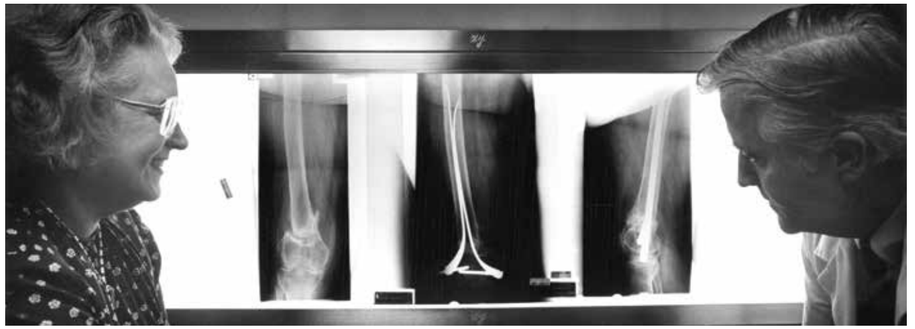
Born in Teaneck, New Jersey, in 1936, the young Connolly graduated from New York City's Regis High School in 1953 and later graduated cum laude from St. Peter's College in Jersey City, New Jersey, in 1957. He received a medical degree from the New Jersey College of Medicine, formerly the Seton Hall College of Medicine and Dentistry, in 1961. He completed his surgical training at the University of Miami's Jackson Memorial Hospital in Miami, Florida.

He served two years as a captain in the Air Force before accepting a faculty position at Vanderbilt. He stayed in the chairman's role at UNMC until 1990, when he left to accept a position as the academic chairman and program director of the Orthopaedics Residency Program at Orlando Regional Medical Center in Florida. Over his career, he authored more than 200 research articles and chapters and penned seven medical textbooks, according to a tribute published at the time of his death in 2007.

At an event celebrating the residency program's 50th anniversary, friends and former colleagues remembered Dr. Connolly as a dedicated administrator with the ambition and expertise to grow the department's residency program and research profile.

For Dr. Connolly, that meant working to aggressively recruit new residents and faculty. Dr. Ronald Schwab, a resident from 1975 through 1979, recalled what it was like working in the department during Connolly's early years at the helm.

"We had some very interesting personalities," Dr. Schwab said. "Dr. John Connolly, working with him, there were always challenges that he provided and new ideas that we were exposed to: electrical stimulation of fractures, stem cells… He had some early ideas on that, so we got exposed to his ideas and techniques."



October 1981: Mrs. Dorothy Botkin and Dr. John Connolly look at her leg X-rays. The one at left shows her leg before the last surgery, the middle and right X-rays show the front and side views after metal rods were inserted.

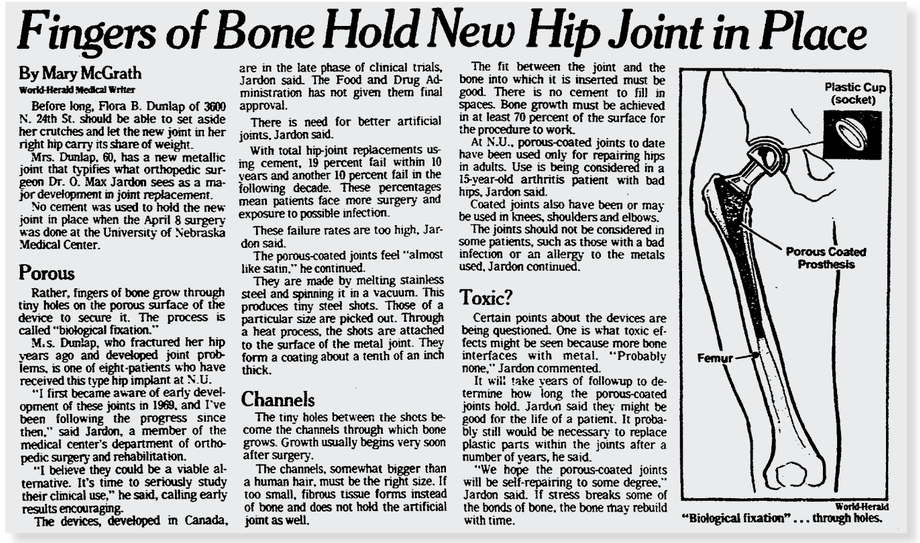
In the late 1970s, Dr. Walter Huurman was serving in the Navy, having completed a residency in California. He was on the hunt for a job in academic medicine when he took a call from a former mentor in Delaware who told him about the orthopaedic program at the University of Nebraska. "Don't be confused now," Dr. Huurman recalled his mentor saying. "It's the University of Nebraska Medical Center that's in Omaha, not Lincoln." The mentor said Dr. Connolly would be interested in speaking with Dr. Huurman.

"We got together, and I was hired as the third full-time attending, specifically to do pediatrics," Dr. Huurman recalled. "It was a very interesting time, because Bob Cochran was here, and Dr. Connolly and Dr. Jardon and myself. And for a few years, it was pretty much that way. Then we began to get people interested in the program. We went to three new residents per year. When that began, it became evident that Dr. Connolly was leading the program down the right path."

By the turn of the new decade, UNMC was making headlines locally for its research and experimental procedures. Dr. Connolly's research interests dealt primarily with the use of electrical stimulation to heal bone fractures. The technique, discovered through research at hospitals in the U.S. and Japan, initially used a pocket-sized 2.8-volt battery with electrodes that were implanted at the site of a fracture. The patient was instructed to wear the apparatus for 12 weeks, with the expectation that the continuous electrical current would stimulate the formation of blood vessels and promote bone growth.

A feature story in The World-Herald in October 1981 described the case of Dorothy Botkin, one of Dr. Connolly's patients, who shattered the bone in her leg 1.5 inches above the knee. After two unsuccessful surgeries, Botkin joined a clinical trial at UNMC and began receiving electrical stimulation therapy. After more than 2,000 hours of treatment, Botkin raved about the results: "Now I'm walking up to a mile and a half. I'm swimming. And last week I wallpapered," she told the newspaper. In the story, Dr. Connolly reported that the success rate for electrical stimulation therapy ranged from 40% to 76%, with the most success found in fractures of the long, inner bone of the leg.

Walter Huurman, M.D.



Fingers of Bone Hold New Hip Joint in Place

By Mary McGrath
World-Herald Medical Writer

Before long, Flora B. Dunlap of 3600 N. 24th St. should be able to set aside her crutches and let the new joint in her right hip carry its share of weight.

Mrs. Dunlap, 60, has a new metallic joint that typifies what orthopedic surgeon Dr. O. Max Jardon sees as a major development in joint replacement.

No cement was used to hold the new joint in place when the April 8 surgery was done at the University of Nebraska Medical Center.

Porous

Rather, fingers of bone grow through tiny holes on the porous surface of the device to secure it. The process is called "biological fixation."

Mrs. Dunlap, who fractured her hip years ago and developed joint problems, is one of eight patients who have received this type hip implant at N.U.

"I first became aware of early development of these joints in 1969, and I've been following the progress since then," said Jardon, a member of the medical center's department of orthopedic surgery and rehabilitation.

"I believe they could be a viable alternative. It's time to seriously study their clinical use," he said, calling early results encouraging.

The devices, developed in Canada, are in the late phase of clinical trials, Jardon said. The Food and Drug Administration has not given them final approval.

There is need for better artificial joints, Jardon said.

With total hip-joint replacements using cement, 19 percent fail within 10 years and another 10 percent fail in the following decade. These percentages mean patients face more surgery and exposure to possible infection.

These failure rates are too high, Jardon said.

The porous-coated joints feel "almost like satin," he continued.

They are made by melting stainless steel and spinning it in a vacuum. This produces tiny steel shots. Those of a particular size are picked out. Through a heat process, the shots are attached to the surface of the metal joint. They form a coating about a tenth of an inch thick.

Channels

The tiny holes between the shots become the channels through which bone grows. Growth usually begins very soon after surgery.

The channels, somewhat bigger than a human hair, must be the right size. If too small, fibrous tissue forms instead of bone and does not hold the artificial joint as well.

The fit between the joint and the bone into which it is inserted must be good. There is no cement to fill in spaces. Bone growth must be achieved in at least 70 percent of the surface for the procedure to work.

At N.U., porous-coated joints to date have been used only for repairing hips in adults. Use is being considered in a 15-year-old arthritis patient with bad hips, Jardon said.

Coated joints also have been or may be used in knees, shoulders and elbows.

The joints should not be considered in some patients, such as those with a bad infection or an allergy to the metals used, Jardon continued.

Toxic?

Certain points about the devices are being questioned. One is what toxic effects might be seen because more bone interfaces with metal. "Probably none," Jardon commented.

It will take years of followup to determine how long the porous-coated joints hold. Jardon said they might be good for the life of a patient. It probably still would be necessary to replace plastic parts within the joints after a number of years, he said.

"We hope the porous-coated joints will be self-repairing to some degree," Jardon said. If stress breaks some of the bonds of bone, the bone may rebuild with time.

"Biological fixation" . . . through holes.

June 22, 1982, World-Herald

In 1982, Dr. Jardon was featured in an Omaha World-Herald story about the success of a new technique for replacing hip joints. The procedure eschewed traditional cement in favor of a porous-coated prosthesis that secured itself by allowing fingers of bone to grow into the porous implant. The newspaper story followed 60-year-old Flora Dunlap, who became one of eight UNMC patients to receive the new implant.

"I first became aware of early development of these joints in 1969, and I've been following the progress since then," Dr. Jardon told the newspaper, stressing the need for better artificial joints. According to Jardon, 19% of total hip joint replacements using cement failed within 10 years, with another 10% failing in the next decade. The failure rates were too high, and they put patients through more surgery and possible exposure to infection, Dr. Jardon said. "I believe (the new joints) could be a viable alternative. It's time to seriously study their clinical use," he said.

The following year, in 1983, the research made headlines again when Minneapolis pacemaker manufacturer Medtronics Inc. awarded Dr. Connolly and two other UNMC doctors (Dr. Louis Lippiello, director of orthopaedic research, and Dr. Dennis Chakkalakal) $72,000 to study electrical stimulation therapy.

"Dr. Connolly was involved in many clinical and basic research projects, and each resident was usually involved with several projects at the same time," said Dr. David Peterson, a resident from 1982 to 1987. "Several residents, during my five years, worked with Dr. Lippiello and Dr. Chakkalakal for one year on basic research, usually involving animal studies in joint cartilage changes or fracture healing."

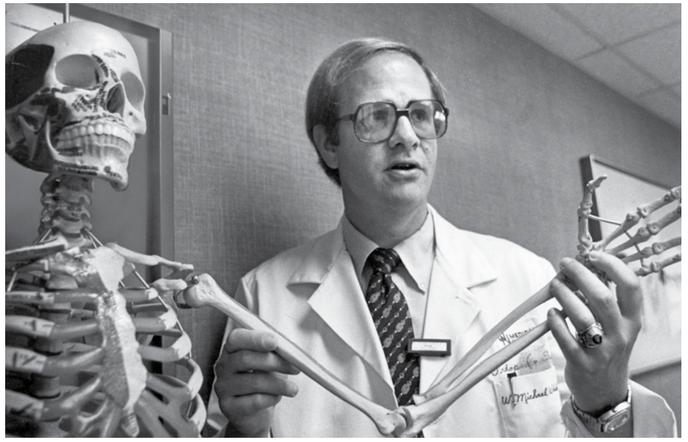
Dr. Peterson embarked on a 29-year career in orthopaedic surgery after completing his residency. He practiced at Fairchild Air Force Base in Spokane, Washington, until 1991 and finished his career at Salina Orthopaedic Clinic in Salina, Kansas.

Dr. Connolly, he said, was one of his major influences, along with Dr. W. Michael Walsh, a sports medicine orthopaedic surgeon. "Both men were strong proponents of closed, nonoperative treatment of fractures," Dr. Peterson said.

Dr. Walsh arrived at UNMC during the summer of 1980 after completing a fellowship in sports medicine at the Hughston Clinic in Columbus, Georgia. "His arrival was like a breath of fresh air," Dr. Peterson said. "We got to work with fiber optics and scopes for evaluating and treating knee, shoulder, elbow and ankle joints. Residents learned to triangulate the scope, treatment instruments and the television screen. We also had the opportunity to work the sidelines of high school and college sports and learn to evaluate and treat athletic injuries."

Louis Lippiello, Ph.D.

David Peterson, M.D.



W. Michael Walsh, M.D., in 1980.

During Dr. Peterson's time in residency, his other key influence — Dr. Connolly — completed and published the Third Edition of DePalma's Management of Fractures and Dislocation.

"All the residents were given a copy of his book and this helped our basic understanding of fracture healing, reduction and alignment," he said.

Dr. Connolly's outlook regarding the future of his chosen discipline can be seen in a 1985 opinion column he penned for Consultant, a medical journal which publishes peer-reviewed articles and features from medical practitioners.

1985 Grand Rounds: Drs. Louis Lippiello, John Connolly, Joseph Lane and F. Stig Jacobsen.

In the column, Dr. Connolly takes aim at several orthopaedic axioms, explaining how the previous 25 years of medical developments had rendered obsolete long-held practices. "When in doubt, take it out, particularly if it's a torn meniscus in the knee," went one old saying. Not so, wrote Dr. Connolly, who pointed out that recent discoveries had shown the meniscus serves several important functions.

"These examples represent just a few of the significant changes in our thinking about basic musculoskeletal problems over the past 25 years," Dr. Connolly wrote. "In anticipating the next 25 years, the one thing we can be certain about is change itself."

However, Dr. Connolly's outlook apparently did not extend to operative treatment of bone fractures, which was coming into vogue in the 1980s.

"The residents were constantly torn at conferences, when we were presenting fractures, and we wanted to be able to present the fractures that we had fixed," said Dr. Todd Kile, resident from 1988 to 1993. "But the chief at the time wasn't a fan, so you had to be ready to be criticized if you had a repaired fracture rather than put them in a cast."

As many former residents recall, Dr. Connolly expected excellence from those in his program. And he could be demanding.

"There was an area just behind the orthopaedic surgery department. There was a little office there where three desks were, and they were assigned to the fifth-year residents, and it was called 'The Bump,'" said Dr. Scott Smith, a resident from 1980 to 1985. "We had early morning conferences where we would share X-rays. Dr. Connolly would grind us about it. We called it 'Ream and Scream.' And so, after that, we would all go into The Bump, and we would sit there and cry on each other's shoulders because it was… scary."

Dr. Connolly, Dr. Smith said, expected the results of the residents' Orthopaedic In-Training Exams (OITE) to improve every year. If they didn't, the residents could expect to receive a letter in their mailbox from the chairman.

One year, around the time of his exam, Dr. Smith and other residents were playing softball with NU administrators. During the game, one man dislocated his finger. Dr. Smith, as the most seasoned resident playing, took the man to the emergency room and treated the injury. Soon afterward, he received a letter in his box from Dr. Connolly. "I opened the letter and it was Dr. Connolly inviting me to come to his office to see him that afternoon. So, I thought, 'It's over,'" Dr. Smith recalled.

When he arrived at the office, Dr. Connolly stood up and shook the resident's hand. "He said, 'I want to really congratulate you.' And I said, 'What for, Dr. Connolly?' And he said, 'You actually reduced the finger of one of the provosts of the university,'" Dr. Smith said. The provost had written a letter to Dr. Connolly about how Dr. Smith had taken great care of him.

"They asked (the provost) why he had a resident do it, and he said he was going to test to see how good the residents were," Dr. Smith said. "(Dr. Connolly) said 'You passed the test.'"

Dr. Lynn A. Crosby, a resident from 1984 to 1989, said the imposing Dr. Connolly was the main reason he ended up in academic medicine. Dr. Crosby joined the faculties of University of Nebraska Medical Center (Department of Orthopaedic Surgery and Rehabilitation) and Creighton University Medical Center (Division of Orthopaedic Surgery) after graduation.

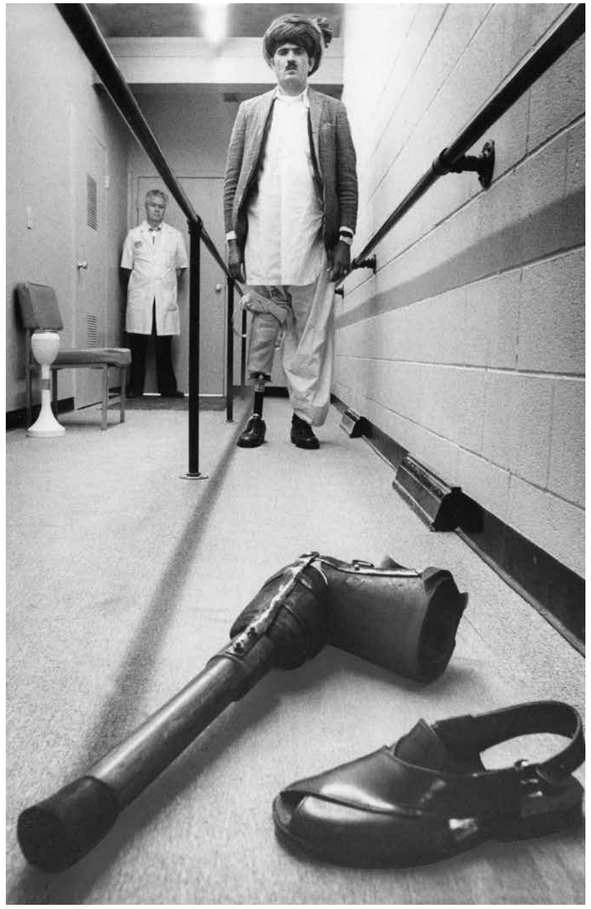
Mike McGuire, M.D.

"When I was set to graduate in 1989, Dr. Connolly took me aside and told me that I was going to go into academics and join Mike McGuire (then chief of orthopaedic surgery) at Creighton. Just to put this in perspective — he told me, not asked me, as I had other plans to return to my home state of North Dakota after finishing my training. Dr. Connolly was someone you did not say no to, and, as he had not signed my certificate, I agreed to his plan. As it turned out, joining Mike McGuire was a tremendous opportunity, which led me on a very interesting and fulfilling academic medicine career."

Dr. Connolly didn't let his careful attention to the education of his residents distract him from his own academic pursuits. His work on using electricity to heal difficult bone fractures took him around the world, particularly in the early- to mid-1980s. A few years after Dr. Huurman arrived at UNMC, Dr. Connolly spent six months abroad as a senior Fulbright Scholar at the University of Western Australia. Dr. Jardon, who died in 2004, served as interim chair during his absence.

Scott Smith, M.D.

Lynn A. Crosby, M.D.



In 1986, Dr. Connolly served as a trauma consultant during the Soviet-Afghan War, in which insurgent groups known as the mujahideen, backed by the U.S., fought a guerrilla campaign against the armies of the Soviet Union and the Democratic Republic of Afghanistan. Dr. Connolly's work would not be the department's only involvement in the conflict.

In 1985, an Afghan resistance fighter who was touring the U.S. to encourage support for the cause against the Soviets received a prosthetic leg from doctors in Omaha, courtesy of UNMC. As reported in the Jan. 18, 1985, edition of The World-Herald, the man, Nazar Khan, told the newspaper that he had lost his leg four years previously after a landmine exploded during a battle with Soviet forces near the Pakistan border.

A member of the UNMC staff, Abdullah Omar, who had served as minister of health in Afghanistan until a Soviet-backed coup toppled the government in 1978, had reached out to Dr. Connolly asking if anything could be done to help Khan. Dr. Connolly, in turn, contacted the Missouri Valley Orthotic and Prosthetic Center, which fitted Khan with an artificial leg, foot and special shoes to replace the wooden peg leg he had been using. UNMC donated the leg and staff time required for the fitting, which normally would have run about $1,500.

"The Russians were cutting my legs, and the Americans are repairing them," Khan told the newspaper through Omar, his translator.

1985: Nazar Khan, a commander of Afghan resistance fighters, tries out his new artificial leg as orthotic specialist Dave Burton looks on.

Beyond its involvement in geopolitics, the year 1985 would prove to be pivotal for the Department of Orthopaedic Surgery and Rehabilitation. That year UNMC officially partnered with Creighton University to create a joint orthopaedic residency program. Creighton had started its own program in 1979.

The venture solidified an already-established relationship between the two institutions, as orthopaedic residents at UNMC had already been rotating through Creighton's primary teaching hospital, St. Joseph Hospital. The program was set up through the Creighton-Nebraska Health Foundation, which already operated a joint program to train neurologists, according to the Sept.. 6, 1985, edition of The World-Herald. The agreement, Dr. Connolly told the newspaper, "will allow us to have just one orthopaedics training program in the state."

Robert Waldman, M.D., UNMC Medical Dean

Orthopaedic surgery, he said, is one of the most sought-after specialty fields. "There are a lot of things coming along."

A total of 20 doctors are in the five-year orthopaedic residency program. Of those, 15 are from Nebraska and five from Creighton. Participants in the next residency class, which will start in July, will be selected by one committee, rather than by each campus, the newspaper reported.

Dr. Connolly said the combined program would make it possible to consolidate administrative and educational activities.

The faculty consisted of four full-time physicians and two researchers at the time.

The agreement would lead to long-term savings for both schools, "by offering a better training program for the same cost," said Drs. Robert Waldman, medical dean at UNMC, and Richard O'Brien, vice president for health sciences and medical dean at Creighton. Funding for the program, Dr. Connolly told the newspaper, would come mainly from the hospitals where the residents worked.

Dr. Richard O'Brien became the 15th dean of Creighton University Medical School Nov. 1, 1982. He was a med student at Creighton from 1956 to 1960.

Dr. Connolly oversaw the merger of the two programs, realizing that both had the potential to complement each other's weaknesses. Creighton's program was lacking in basic science and research, while UNMC needed more trauma expertise.

"Until then, there had been a working relationship between Creighton and the university," Dr. Huurman said in 2007 at the time of Dr. Connolly's death. "John recognized the defects in each program and combined them to make a single, stronger program."

St. Joseph Hospital, 1970.

In the years after the merger, Dr. Connolly would come to absorb a number of additional responsibilities. By the time UNMC released its 1987-1988 annual report, he was serving as the chief attending at three of the program's eight affiliated institutions: University of Nebraska Hospital, St. Joseph Hospital and the Omaha VA hospital.

The report also included a detailed outline of the new, five-year Creighton-Nebraska Foundation Residency Training Program in Orthopaedic Surgery, a program "based on a graduated responsibility for the resident assigned to a variety of clinical services. Concurrent exposure to basic science lectures and seminars is also emphasized for a thorough understanding of clinical problems. Independent investigations of clinical and related basic science questions comprise the third essential component of the training program which allows the resident to mature into a competent and critically thinking orthopaedic surgeon."

The report concluded with a bolded sentence expressing a philosophy that, in many ways, encapsulates the spirit of orthopaedic medicine: "The true test of the specialist is one's ability to deal with the unexpected as well as the expected, the complicated as well as the simple, the banal as well as the exotic problems for which patients seek our services."

One thing absent from the report is how the residents during this time felt about each other. Today, many of them agree: there was a palpable spirit of brotherhood and camaraderie in the hospital corridors.

"I think there is sort of a military presence within," said Dr. Jeffrey Moore, a resident from 1987 to 1992 who served in the Air Force alongside his colleague, Dr. Roy Guse.

"The way it rotated all the time, we always had different groups of us working together," said Dr. Guse, a resident from 1985 to 1990. "The older residents worked with the younger residents, which was a mentoring process, but it also allowed you to develop some friendships and have some interesting interactions."

Residents regularly met for a journal club at one of the staff physicians' houses where they ate pizza and drank beer together and discussed academic articles. They also formed an intramural basketball team that, according to Dr. Guse, came close to winning, or won, a league championship. They celebrated with each other after taking their Orthopaedic-In-Training Exams. Even their spouses were friends: with their husbands working long hours, the residents' wives started an informal support group.

"There was this effort to make sure that we all were together," said Dr. Guse. The residents, he said, were always looking for opportunities "for us to all get together in a less-structured, much more cordial meeting where you didn't have the … attending faculty kind of looking over your shoulder and looking for you to slip up so they could somehow use it as a teaching moment."

In 1988, Dr. Connolly recruited a young surgeon, fresh off his education at the Hospital for Special Surgery in New York City, to be the first arthroplasty specialist on faculty. The surgeon, Dr. Kevin L. Garvin, had grown up in Iowa and was acquainted with Dr. Arlen Hanssen, program director at the Mayo Clinic, who had served as a resident at UNMC.

"I understood this part of the world pretty well, and when Dr. Hanssen reached out to me about a job here, I thought it was pretty good," said Dr. Garvin, the current chairman of the Department of Orthopaedic Surgery and Rehabilitation. "Then I came and interviewed, and I think the university was extremely supportive and enabled people to be successful. If you have a good idea, it's usually embraced and supported by people around this community. I saw Nebraska and the Medical Center as a special place and fantastic opportunity."

"I think the university was extremely supportive and enabled people to be successful. If you have a good idea, it's usually embraced and supported by people around this community. And I saw it as a special place and fantastic opportunity."

—Dr. Kevin L. Garvin, current chairman of the Department of Orthopaedic Surgery and Rehabilitation

At the turn of the new decade, Dr. Connolly left UNMC to accept a position at Orlando Regional Medical Center. In his absence, Dean Robert Waldman asked Dr. Garvin to serve as interim chair.

"It was a daunting task," Dr. Garvin said. "By far, I was one of the youngest chairs in the country — if not the youngest — because I had only been in practice for a year and a half."

Dr. Garvin served as interim chair until 1991, gaining "a bit of a taste and flavor of what it would take to do that job," a foreshadowing of the permanent position he would hold nine years later.

He praised Dr. Connolly's skills as an inquisitive and thorough educator.

"He would make the rounds with the residents and grill them about nuances of orthopaedics or relevant basic science that were translational in nature," Dr. Garvin said. "Dr. Connolly possessed an intellectual curiosity and was a great person to have as my first boss."

Dr. Connolly published a farewell and a look back on his 16 years at UNMC in the department's annual report for 1989-1990:

David Brown, M.D.

"The orthopaedic residency in Omaha was started initially under the part-time leadership of L. Thomas Hood, M.D., in 1967. He, with the help of Dwight Burney, M.D., Stanley M. Bach, M.D., and several other volunteer faculty developed a three-year orthopaedic program with a preliminary year or two of internship. Subsequent changes in requirements for board eligibility mandated that we develop an orthopaedic residency which included five years of training post-medical school. In addition, rapid changes in the specialty of orthopaedic surgery itself necessitated that we provide increased exposure to orthopaedic specialties that were maturing in the 1970s and 1980s.

"We were fortunate to recruit a number of faculty who added considerable depth to our resident training. The program steadily expanded from what was a six-to-eight resident, three-year program to a 22-resident training program in five or six years. Dr. Max Jardon was the first full-time faculty who continues to lend his important presence to the residency. Dr. Walt Huurman joined us in 1977 and steadily built up a highly respected pediatric orthopaedic program. W. Michael Walsh, M.D., moved to our program in 1980 from Hughston Clinic in Columbus, Georgia, and rapidly established an exemplary sports medicine service. The need to teach hand surgery and serve the university and community patients was met by Tom Ferlic, M.D. Tom's enthusiasm and curiosity as director of our hand clinic quickly created a service that became one of the more satisfactory resident rotations. The addition of Lou Lippiello, Ph.D., from Harvard to our faculty as well as Dennis Chakkalakal, Ph.D., from RPI and finally Basil Strates, M.D., Ph.D., from Ohio State provided considerable impetus to teaching basic science and developing research in the department.

2015: Dr. Paul Esposito examines 12-year-old Lexi as her mother Laurie Novak looks on, and 11-year-old Robby "Kid President" Novak waits his turn at Children's Hospital & Medical Center. The siblings have brittle bone disease.

"Over the past five years, all our basic orthopaedic and clinical specialties have steadily expanded and been strengthened by the addition of Paul Esposito, M.D., in pediatrics (1987); David Brown, M.D., in sports medicine (1988); Kevin Garvin, M.D., in adult reconstruction (1988). Also, the recruitment of Mike McGuire, M.D., chief at St. Joseph's Hospital and Creighton University (1988), and subsequently, Lynn Crosby, M.D. (1990), have provided us with unique teaching, research and clinical service in oncology and areas of sports medicine.

"At this point, it is clear that the residency program, after 16 years is flourishing with strong faculty and eager and talented residents. In particular, we are proud of the fact that the residents have been encouraged to ask and attempt to answer a variety of basic and clinical questions during their years here. This productivity has been encouraged by the faculty and has consistently led to high quality and an impressive quantity of resident research. At least five of our residents have received financial support from the Orthopaedic Research Education Foundation (OREF) or other agencies. Incidentally, that work has won awards nationally such as the AOA Resident Research Award (Roy J. Guse), American Fracture Association Award (Paul J. Duwelius), and the Mid-Central States Award (Jeffrey J. Tiedeman and Chris Kaga). An encouraging number of our residents have been stimulated by their research success at Nebraska to have chosen careers in the academic teaching of orthopaedics. These careers range from the northwest coast (Paul Duwelius at the University of Oregon) to the southeast coast (Larry Chidgey at the University of Florida) as well as in Omaha itself (Lynn Crosby at the Creighton-Nebraska program).

"A unique aspect of the residency program has been the union of two universities for purposes of teaching orthopaedics and training orthopaedic surgeons. This became an obvious need to many of us, given the constraints of a relatively small population base and a limited number of teaching facilities in the Omaha region. This union was accomplished over a period of a decade of progressively increasing cooperative efforts. The mutual advantage of this cooperative effort was recognized when the residency program was officially entitled the Creighton-Nebraska Universities Foundation Residency Training Program in Orthopaedic Surgery in 1985. The continued growth of this combined University Foundation program depends on individuals at both institutions recognizing that the whole is indeed greater than the sum of the parts. To date that union has been synergistic rather than additive. I sincerely hope that it remains that way in the future."

Back row from left:
James Hill
David Thull
Jeffrey Davick

Middle row from left:
Jeffrey Tiedeman
Robert Tait
Roy Guse
Scott McMullen
Thomas Walsh
Teri Formanek
Ted Yee
Todd Kile
Mark Goebel

Front row from left:
Deepak Chavda
Dennis Chakkalakal
Kevin O'Malley
Paul Esposito
John Connolly
Max Jardon
Kevin Garvin
Louis Lippiello
Brett Miller

A Time of Transition and Service: 1990-1991

Matthew Mormino, M.D.

Dr. Kevin L. Garvin served as interim chair of the Department of Orthopaedic Surgery and Rehabilitation from 1990 to 1991. He was one of the youngest chairs in the country during a tense time for the country.

"I had been chair for not very long when the Gulf War started," Dr. Garvin said.

With a strong military representation among the residents and faculty, many department members were called to serve during the conflict. Drs. Walter Huurman and Paul Esposito were called to active duty with the Navy, and Drs. Max Jardon, Scott Smith and Roy Guse served in the Air Force.

With a large portion of the staff overseas, Dr. Garvin spent many nights on call, said Dr. Matthew Mormino, professor in the Department of Orthopaedic Surgery and Rehabilitation and resident from 1991 to 1996.

"That war hit home here as well," Dr. Mormino said. "While they were gone, (Dr. Garvin) was here on call. While they were serving their country in the desert, he was here keeping things going on the homefront."

Dr. Garvin called it "a learning experience of sorts."

Dr. Smith, who provided combat medical care for casualties in Turkey, said, "I think the residency really prepared us. I didn't feel inadequate. I felt well-prepared to do that. In fact, it's another part of my career that I feel really good about — that I could serve my country and those that were giving their life or possibly their limbs for the country."

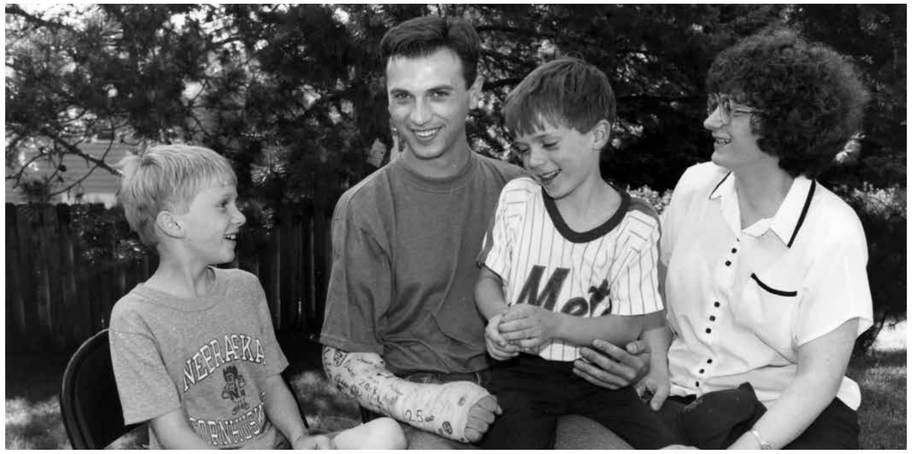
Anne Huurman and her father, Dr. Walter Huurman, who served during the Gulf War.

Other conflicts abroad also made their presence known at UNMC. In 1993, doctors treated Jozo Vrdoljak, a 25-year-old Croatian student who had lost the use of his right arm during the Bosnian War of 1992-1995. According to the May 27, 1993, edition of The World-Herald, Vrdoljak had been a student at the University of Subotica when the area was overtaken by Serbian forces. He returned to his hometown of Gradacac in northeastern Bosnia and took up arms against the Serbs. In an ensuing firefight, his right arm was blasted by machine gun fire.

Vrdoljak was brought to the United States by an Omaha couple who knew Dr. Garvin. Thinking the doctor might be interested in the reconstructive surgery Vrdoljak needed, they reached out.

Dr. Garvin, Dr. Rob Hollins, a plastic surgeon; and Dr. Thomas Ferlic, a hand microsurgeon, performed the operations at no charge.

1993: Jozo Vrdoljak, a Croatian medical evacuee from Bosnia, is hosted by Dr. Dan Halm and family while in Omaha for surgery. Dr. Halm's patient is sponsored by the Croatian Cultural Society of Omaha.



Training Tomorrow's Orthopaedic Experts Together

The cover of the Department of Orthopaedic Surgery and Rehabilitation's 1989-1990 annual report could not have been more clear: Creighton and UNMC were training tomorrow's orthopaedic experts together. The cover illustration depicted the international symbol of orthopaedics — Nicolas Andry's crooked sapling tied to a post — with the University of Nebraska's Herbie Husker and Creighton's Billy Bluejay tightening the ropes.

Illustration on the cover of the 1989-90 UNMC Creighton Annual Report.

Dr. Garvin, interim chair, laid out the department's priorities as it entered the new decade. For the most part, things looked good, he wrote. The residents had been scoring consistently in the 90th percentile on their In-Training Examinations. "Although it would be hard to improve upon these results, our goal is to maintain this high academic standard."

Clinical activity remained high. Dr. Garvin reported that the Pediatric Orthopaedic Service had been overwhelmed by a high volume of patients, and administrators hoped to add another specialist to the program. The department also looked to partner with the Sections of Gerontology and Rheumatology within the Department of Medicine to better serve the region's aging population suffering from arthritis and other musculoskeletal problems.

Additionally, the department had seen increased clinical activity in its Orthopaedic Oncology Section. "Again, this is an area of expertise within the university and with the addition of Dr. James Neff, there is no question that quality patient care will be provided," Dr. Garvin wrote. "He and Dr. (Michael) McGuire will undoubtedly have a fruitful relationship and provide a much-needed service."

The Creighton partnership, Dr. Garvin wrote, gave the department more resources to engage in service opportunities for local patients and those in the greater Nebraska and western Iowa community. "The combined residency training program with Creighton should grow and expand alongside interaction with the orthopaedic community at large and contribute to the overall expansion of knowledge."

By the time the 1989-90 report was released, the search for a new permanent chairman to succeed Dr. Connolly had almost concluded. By 1991, the decision had been made.

The Neff Era: 1991-2000

Dr. James R. Neff was a Kansas native who graduated from the University of Kansas Medical School in 1966. His orthopaedic residency at the University of Michigan was interrupted by a stint in the Navy, in which he served as a lieutenant commander aboard the USS George C. Marshall and was later at the U.S. Naval Submarine Base in Groton, Connecticut. He completed his residency, followed by a fellowship in musculoskeletal oncology at the University of Florida. He returned to the University of Kansas in 1975 and was later appointed professor of surgery. He served as UNMC chairman of the Department of Orthopaedics from 1991 until 2000.

James R. Neff, M.D.
(1940-2005)
Chair, Department of Orthopaedic Surgery and Rehabilitation, 1991-2000

His academic interests included limb preservation surgery and implant design, spine surgery, musculoskeletal pathology and molecular biology. He had trained in Vienna and was one of only a handful of surgeons in the United States capable of performing a rotationplasty, which saved patients with osteosarcoma from needing their legs amputated. He published more than 150 articles in scientific journals and wrote 14 books. For several years, he was named one of "America's Top Doctors."

He was also a tinkerer and kept a workshop in his basement. One of his inventions, a knee fusion device made for patients with failed knee surgeries known as the "Neff Nail," received wide use by orthopaedic surgeons. While chairman, The World-Herald reported Dr. Neff had designed custom titanium devices meant to serve as replacement parts in a patient's damaged pelvis.

When he died in July 2005, colleagues praised his skills as a surgeon…"He was really brilliant — probably the best surgeon to come through Nebraska in any field," said Dr. Walter Huurman, now a professor emeritus of orthopaedic surgery at UNMC.

"He was a true leader in every sense of the word. He was someone we all looked to for advice in times of need. He embodied what academic medical centers are all about — patient care, education and research," said Dr. Garvin, who succeeded Dr. Neff.

Dr. Huurman, who worked with Dr. Neff for 14 years, said he was always impressed with how Dr. Neff looked after and nurtured the resident orthopaedic surgeons under his charge. "When Jim was chairman, he was responsible for the education of 40 residents — that's a sizable group of individuals," Dr. Huurman said.

"Jim always took the time to learn as much about the residents as he could," he said. "When the residents left, they took with them Jim's concern for his patients as well as great admiration for his abilities. He was as superior a surgeon as anybody they'll ever come in contact with."

Michael Clare, M.D.

Dr. Michael Clare was one of the many residents impacted by Dr. Neff. He was in the program from 1996-2001.

"In my opinion, Dr. Neff put the (residency) program on the map, and Dr. Garvin has taken the program to world-class level, as good as any in the country. Much like how Nebraska is considered a flyover state, underestimated by many on the coasts, the UNMC orthopaedic program is similarly underestimated nationally. But the true marker of a residency program is reflected in the quality of residents it trains, and ours has produced some incredible surgeons over the years," Dr. Clare said.

After his residency, Dr. Clare completed a foot and ankle/lower extremity trauma fellowship in Tampa, Florida, joined the UNMC orthopaedic department from 2002-2005, and was then recruited back to Tampa where he was involved with training of fellows from 2005-2018. He is now in a private orthopaedic group in Sarasota/Bradenton, Florida.

Dr. Clare said he learned from Dr. Neff how to thoroughly understand 3-dimensional anatomy, creatively think outside the box, and develop research ideas.

"Dr. Neff was the greatest soft tissue surgeon I have ever seen," Dr. Clare said.

Another key influence — Dr. Matthew Mormino — taught him how to mentally prepare for surgery: "By performing the case in your mind over and over, step by step, and having alternate plans if the original plan doesn't work. He always used to say, 'You do the case in your head over and over, so that when you get to the operating room, it becomes a simple technical exercise.' I still use those same techniques to this day, and taught those techniques to the fellows I trained."

From Dr. Garvin, Dr. Clare said he learned "how to be a true professional, and properly treat your patients with meticulous attention to detail." He continued, "We had immense respect for our attending surgeons, and we worked hard for them, but they pushed us and provided an unbelievable experience for us while being approachable, reasonable guys — the type of people that at the end of the day, you could go have a beer with. There aren't a lot of orthopaedic residency programs that have that type of work environment."

What many didn't know is that, for much of his time leading the department, Dr. Neff was confronting his own medical challenges. For 12 years before his death, he had privately battled prostate cancer, sometimes waking at 4 a.m. to receive his radiation treatments before preparing for his surgeries later that morning.

"That was like him," his wife, Dr. Julia Bridge, told The World-Herald. "He was most concerned about his love of his patients and what he could do for them."

By June 1991, Dr. Neff's work was making headlines in the local paper. That month, The World-Herald wrote about 9-year-old osteosarcoma patient Marsha Laning. Marsha, from Independence, Missouri, had come to UNMC to receive the rotationplasty Dr. Neff was known for.

A large tumor and surrounding tissue were removed from Marsha's upper right leg. The lower leg, ankle and foot were then attached to the remaining portion of the upper leg. The ankle substituted for a knee joint, while the foot became a platform for an artificial leg to be fitted. The nerves and blood vessels were functioning, the newspaper reported.

Rod Markin, M.D., Ph.D., president and CEO of University Medical Associates and associate dean of UNMC's College of Medicine, said of Dr, Neff: "He's one of those people who didn't make a lot of noise but did a marvelous job for his patients. He was very innovative with limb-sparing surgical procedures, but more than that, I will always remember him for being a very caring, compassionate physician."

1991: Marsha Laning and Dr. James Neff. Her repositioned ankle substitutes for the knee joint, so her foot can be the platform for an artificial leg.

A Prodigious Researcher

Dr. Neff, a prodigious researcher, was involved in more than a dozen grants during his tenure.

J. Graham Sharp, Ph.D., professor, UNMC Genetics, Cell Biology & Anatomy, observed: "Dr. Neff always had the best interests of his patients on his mind. When there were problems such as difficulties in the healing of large bone defects created as a necessity of cancer surgeries, he approached us with ideas for research. Consequently, we began to try and improve the repair and healing of bone by adding cells to artificial matrix products. Dr. Neff was instrumental in obtaining funding from various manufacturers and encouraging this research."

"Throughout his years at UNMC, Dr. Neff exemplified the highest level of commitment to the standards of excellence in patient care and medical education. Dedicated to scholarship and the advancement of patient care, Dr. Neff provided strong leadership for the Department of Orthopaedic Surgery and the College of Medicine. He was a loyal friend, a congenial colleague and a true gentleman."

— Irene Klintberg, Ph.D., executive associate dean in the College of Medicine

"Dr. Neff was a world-class pioneering surgeon and one of the most creative people I have ever met. … He was a giant in the field in every way."

— Harold M. Maurer, M.D, UNMC Chancellor Emeritus

Dr. Neff made 149 presentations at scientific meetings, published more than 150 articles in scientific journals and authored 14 books or book chapters. He also was a member of the International Society for Limb Salvage, a group of premier thinkers, visionaries and miracle workers.

It was Dr. Neff who led the department through the medical center's merger in 1996/1997 with Clarkson Hospital — a move that created Nebraska Medicine. With Clarkson Hospital's founding in 1869, Nebraska Medicine (originally Nebraska Health System and then Nebraska Medical Center) became the oldest medical center in the state.

Dr. Neff stepped down as department chair in 2000 but continued teaching until shortly before his death in 2005. His successor, a fixture in the department for more than a decade, was positioned for a seamless transition. Dr. Garvin had even held the head job, on an interim basis, 10 years earlier.

The James R. Neff, M.D., Musculoskeletal Oncology Chair

The James R. Neff, M.D., Chair of Musculoskeletal Oncology Fund was established through the University of Nebraska Foundation. It is a permanent endowment for the purpose of advancing research, education and clinical work in the area of musculoskeletal oncology at UNMC.

In 2017, Sean McGarry, M.D., an associate professor in the Department of Orthopaedic Surgery and Rehabilitation, was named the inaugural holder of the James R. Neff, M.D., Musculoskeletal Oncology Chair.

During 2005, while completing his research fellowship and serving as an instructor at the University of Florida, Dr. McGarry was called into service at UNMC following the death of Dr. Neff. He traveled to Omaha each month for eight months so that people in the region would have a specialist at UNMC that could treat their musculoskeletal oncology problems.

Dr. McGarry has become an expert in the field of musculoskeletal oncology and is widely known for his focus on limb salvage. He has written 20 journal articles and five book chapters dealing with orthopaedic oncology, produced 10 online education materials and presented more than 20 talks on regional, national and international platforms.

In July 2010, UNMC's Dr. Sean McGarry performed a nine-hour operation to save the arm of 10-year-old Chase Caspersen. By April 2011, Chase, from Boelus, was able to play catch. Top: McGarry checks on the progress during a visit to the Nebraska Medical Center in May 2011.

The Garvin Era: 2000-Present

Kevin L. Garvin, M.D.
Professor and Chair,
Department of Orthopaedic
Surgery and Rehabilitation,
2000-present

"Dr. Garvin ushered in a period of growth that continues to this day, with a larger and larger faculty, with a greater imprint throughout both this community and in the state."

— Dr. Matthew Mormino

Dr. Kevin L. Garvin grew up in the small town of Akron in northwest Iowa. He attended the University of South Dakota and moved on, after graduation, to the Medical College of Wisconsin. He planned on becoming a family physician, but participation in the Medical Education and Community Outreach program changed his trajectory.

"A friend's father was a business manager of an orthopaedic group nearby so, after my freshman year of medical school, I spent the summer working with these five or six orthopaedic surgeons. It was a lot of fun, and they were happy. I think a seed was planted then."

After graduating from medical school, Dr. Garvin completed a residency in orthopaedic surgery at the University of Arkansas and then was accepted to the highly respected Hospital for Special Surgery in New York City as a fellow in Adult Reconstruction, Hip Disease.

Now fellowship-trained and exploring his professional options, Dr. Garvin was "strongly encouraged" by a medical school classmate and orthopaedic resident at Nebraska to take a look at UNMC. The resident noted that there was a "wonderful opportunity" for an arthroplasty surgeon in the region and especially an academic arthroplasty surgeon.

"It was a great opportunity," Dr. Garvin said. "All I had to do was convince my wife. Growing up in Edinburgh, Scotland, her only stipulation was to live by a coast. Here, we have the coast of the Missouri River."

Dr. Garvin interviewed with Department Chair Dr. John Connolly and joined the Department of Orthopaedic Surgery and Rehabilitation in 1988.

"I was very fortunate to have several great educators and mentors along the way."

Among them: Dr. Carl L. Nelson, chair of Orthopaedic Surgery at the University of Arkansas; world-renowned arthroplasty surgeon Dr. William Harris at Massachusetts General Hospital, who contributed to the management of patients afflicted with hip disease and was a founding member of The Hip Society; and Iowan Dr. Richard Johnston, "a great clinician, role model and friend."

Mentors at the Hospital for Special Surgery included Drs. John Insall and Chit Ranawat, pioneers in total knee arthroplasty in the 1960s and 1970s, as well as Drs. Eduardo Salvati, Paul M. Pellicci and the Surgeon-in-Chief Dr. Phil Wilson Jr.

"They were exceptional surgeons and nationally and internationally recognized for their leadership and contributions to orthopaedics, particularly arthroplasty," Dr. Garvin said.

His affiliation with each helped shape his own leadership style.

"What I learned most from them, particularly those who were chairs of departments, is to maintain high character values of integrity and hard work and to lead by example. I was also reminded that it is best to lead by building consensus rather than through a dictatorship. The mentors who did this the best were exceptional communicators who surrounded themselves with skilled and talented partners and created a nurturing environment to enable the success of others."

From left: Dr. Fares Sayegh, Dr. Kevin Garvin, Dr. Eduardo E. Salvati, Dr. James Neff and Dr. Anastasios V. Korompilias in June 1999. Dr. Salvati was a visiting professor from the Hospital for Special Surgery Weil Medical Center, New York City. Dr. Korompilias and Dr. Sayegh were traveling orthopaedic fellows from the Hellenic Orthopaedic Association.

Dr. Garvin began to hone his leadership skills in 1990 — less than two years into his career at UNMC — when he was tapped to serve as interim chair of the Department of Orthopaedics and Rehabilitation. He held that role for a year, until the appointment of Dr. James R. Neff.

In 2000, when Dr. Neff stepped down, Dr. Garvin stepped up and circled back to the head job, only now on a permanent basis.

"I admire the saying, 'We stand so tall and can see so far because we stand on the shoulders of giants.' For Dr. Hood to say, 'I'll go to the Med Center and start this residency program,' for Dr. Connolly to be the first academic chair and for Dr. Neff to add to the legacy and take his place — those are big steps," Dr. Garvin said. "In 50 years, we've only had four chairs. That's amazing in itself."

Several leaders in orthopaedic surgery helped make the specialty strong in Nebraska. Drs. Winnett Orr and James Thomson were early leaders in orthopaedic surgery. Additionally, it required a strong commitment and perseverance for Drs. Hood, Connolly and Neff to stay and build the department, Dr. Garvin noted.

"Our residency training program is a competitive, challenging program that equips residents with the very best tools and training. By investing in education, we are not only creating tomorrow's top orthopaedic surgeons, but also cultivating promising educators who will teach for generations to come. Over the course of five years, our residents train in all nine orthopaedic specialties with rotations at Nebraska Medicine and other practices throughout the Omaha community."

— Kevin L. Garvin, M.D., "Framework for Growth," 2016 Report, Department of Orthopaedic Surgery and Rehabilitation

"Each chairman has raised the bar. Nebraska and the department have been very fortunate to have thoughtful leadership."

Paul Johnson, M.D.

Dr. Matthew Mormino, resident program director, credits Dr. Garvin with broadening the scope of the residency program and encouraging the department to look outward to the surrounding community.

"Dr. Garvin ushered in a period of growth that continues to this day, with a greater number of faculty, with a larger imprint throughout both this community and in the state. Along with that, the expansion of the number of residents that we train," Dr. Mormino said.

Dr. Paul Johnson, a resident from 2012 to 2017, compared the residency program to a top — perfectly balanced.

"People don't appreciate that concept when they're trying to pick a residency program. People will look at the number of cases that they do or maybe if one subspecialty is really well-known. Med students will think that's a strong point. I don't know if our program necessarily has a strong point. It's strong in many areas. You wouldn't look at it and say, 'Oh that's a trauma program or that's a sports program or a spine program' — because it's so well balanced. … That is exactly what you want."

Chris Cornett, M.D.

Johnson was impressed that most people in the program were, like him, married with children. (All three of his kids were born during his residency years.)

"I remember interviewing for one program where they had 60 residents and none were married. If you look at the ages of people going into this, that is more than a statistical anomaly. You have to say that's highly concerning," Dr. Johnson said. "We got to have something resembling a home life and a family life during that time, but we were also so well-trained that, afterward, we could go onto anything we wanted."

Dr. Johnson went on to a spine fellowship at the University of Pittsburgh after his residency — a popular path.

"Seven guys in a row did the exact same fellowship. I was the third one," he said.

Currently a private practice spine surgeon in a Milwaukee suburb, Dr. Johnson was profoundly impacted by all the surgeons with whom he trained. He singled out Dr. Chris Cornett as someone who "disproportionately influenced me. … He helped me get into my fellowship, which helped shape my practice."

During the five years of his residency, the surgeons and fellow residents were like temporary family.

"People who haven't done a surgical residency cannot appreciate the amount of time you spend with these people," he said. "Sometimes, you're just really exhausted and tired, and you just want a break and you're in some high-stress situation and everyone's kind of at each other's throats. Then, you get some rest and everything is good again. Even though you might get frustrated with these people sometimes, you really do appreciate them and what they're doing for you."

Dr. Jason Browdy, who graduated from the residency program in 2003, noted that he would continue with "a little piece" of all of the surgeons who have guided and taught him. He credited the department's sense of family with being "an excellent example for (wife) Megan and me."

Dr. Joshua Urban, another 2003 residency grad, said he was "proud to be part of this program. The faculty gave me guidance in what will be my life's work."

In mid-2000, the residency program updated its curriculum to address six core competencies outlined by the Accreditation Council for Graduate Medical Education: patient care, interpersonal and communication skills, professionalism, medical knowledge, systems-based practice and practice-based learning and improvement.

The 2006-2007 biennial report noted the program was meeting 80-hour work week requirements, and the addition of new attending staff had "improved an already excellent residency training program."

For Dr. Garvin, the continued viability and success of the program almost takes care of itself "if you can create an environment of intellectual curiosity and stimulate the residents who are always very eager."

In 2004, after four years as chairman of the Department of Orthopaedic Surgery and Rehabilitation, Dr. Garvin revived publication of the department's comprehensive annual report. The last had been published in 1990.

2002-03 Annual Report

Jason Browdy, M.D.

Joshua Urban, M.D.

Christina M. Hixson

Philanthropists Boost Orthopaedic Department

The new millennium witnessed unprecedented support from patients who had received orthopaedic care. One of the early benefactors was Christina M. Hixson of the Lied Foundation Trust, who made a game-changing donation in the mid-1990s.

Dr. Garvin recalls the day vividly. His patient, fully recovered from a recent surgery, came to his office and posed a question: "I have a gift. Would it be OK if I gave it to you?"

"I was in the middle of the clinic, seeing patients, and I was totally overwhelmed," Dr. Garvin said of the philanthropic gesture of gratitude. "It was huge because it allowed the department to have money for research and to support research for a long period of time."

It would prove to be a decade of several important research projects, beginning in 1990, with Dr. Garvin's and Dr. Louis Lippiello's collaboration with UNMC's College of Pharmacy to create pharmaceuticals that could be implanted at the site of an injury, an infection or a tumor. The study focused, in part, on osteomyelitis and involved animal trials coordinated through the orthopaedics department.

Also notable: In 1993, Dr. Lippiello received a $75,000 grant from the Nebraska Chapter of the Arthritis Foundation for research on osteoarthritis and the benefits of adding essential fatty acids to diet to delay the effects of the degenerative bone disease.

The Gift of a Lifetime

A new building designed as the primary entrance to the medical center opened in 1993. It had 266,500 square feet on five floors and accommodated six operating rooms, outpatient clinics for all UNMC programs and a gift shop. It also gave the orthopaedic department a new home for its academic offices and clinical facilities.

In 1998, the building was officially named the Durham Outpatient Center. That same year, Charles "Chuck" and Margre Durham gave generously to UNMC in gratitude for treatment Chuck had received a few years earlier.

Dr. Garvin recalls that Monday morning in late 1994 when he made a routine call to Charles Durham to check on his progress after a total knee replacement. Margre answered the phone and said, "I am so happy you called because Chuck isn't himself. He is not feeling well and is confused." A recommended trip to the ER confirmed that a heart attack was in progress.

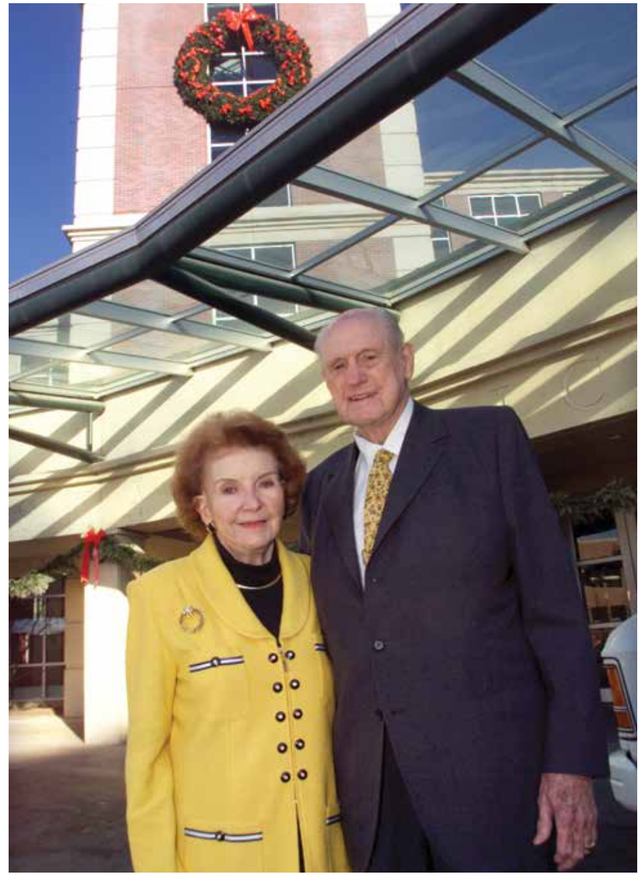
Charles Durham considered UNMC "one of the best medical facilities in the United States" and donated untold millions of dollars of support to it for education and research during his lifetime.

In a Lincoln Journal-Star interview, he touted the medical center, saying, "I have been a patient there, and on one occasion, I believe they actually saved my life."

Durham — the university's single largest donor — lived to age 90. He died in 2008, 14 years after the heart incident. Margre Durham died in 1999.

The Durhams declined to publicly disclose the amount of their 1998 gift — but at this writing it remains the largest ever to benefit UNMC's College of Medicine. It also ranks among the most generous to the Medical Center, sharing company with a $15 million gift from Christina M. Hixson and the Lied Foundation Trust, and an anonymous $10 million gift designated for the Lied Transplant Center.

The Durham gift established an endowment fund with the University of Nebraska Foundation to support education and research programs in the medical college in prostate cancer, arthritis and minimally invasive surgery. At the dedication of the Durham Outpatient Center, the Durhams were further honored for their gift, which also established the Charles W. and Margre H. Excellence in Medicine Fund.



The outpatient building at the UNMC is named for Charles and Margre Durham.

The Durham Research Center I and II in 2019. Charles "Chuck" Durham sculpture by John Lajba.

Other Grateful Donors

"My very first of many great experiences at UNMC involved the relatively small but highly respected Department of Orthopaedic Surgery. When Dr. Garvin arrived on the scene, he worked passionately and steadfastly to build the distinguished and celebrated department in existence today. Over the years it has been a joy for us to help him achieve some of his orthopaedic dreams."

— Ruth Scott, Omaha philanthropist

"I'm bionic. I've had both hips and knees replaced as well as rotator cuff surgery. Dr. Garvin has been the surgeon for most of these surgeries. I have referred a lot of people to him over the years. To me, he's the go-to guy in Omaha for orthopaedic surgery. He's a splendid doctor and a very good friend."

— Marian Andersen, wife of the late Harold W. Andersen, longtime publisher of the Omaha World-Herald. In 2012, the Andersens endowed the Harold and Marian Andersen Lectureship for Orthopaedic Surgery.

Dr. Robert Volz: Pioneering surgeon

Distinguished Alum, UNMC Class of 1957

A shared passion for developing techniques and devices to advance orthopaedic medicine brought two pioneering surgeons together in the late 1950s and kept them connected throughout their careers. Both, through association, would leave indelible marks on UNMC's Department of Orthopaedic Surgery and Rehabilitation.

Dr. Robert Volz, M.D., graduated in 1957 from UNMC's College of Medicine. He was completing his orthopaedic specialty training at the University of Kansas Medical Center when he met the late Dr. James Neff. Their camaraderie would be the catalyst for Volz's longstanding relationship with the orthopaedics department which Neff would chair from 1991 to 2000.

After completing his training at KU, Dr. Volz went on to practice for several years in Colorado, where he was head of Orthopaedic Service at Denver Children's Hospital.

Robert Volz, M.D.

In 1973, Dr. Leonard Peltier, M.D., Ph.D., recruited Dr. Volz to join him at the University of Arizona Health Sciences Center in Tucson. Dr. Peltier, a Lincoln native like Volz, had been chair of the orthopaedic residency program at KU for 15 years. He had founded the orthopaedic program at AHSC just two years earlier and sought Dr. Volz to establish a program in total joint surgery at AHSC. Dr. Volz accepted and was appointed professor and chairman in 1985.

While at AHSC, Dr. Volz designed some of the earliest joints used in the United States, including the first artificial wrist, as well as an artificial elbow implant and a knee implant. The American Hospital Association declared the artificial wrist as one of the nation's 10 most important medical advances of 1976. The artificial knee has been used by surgeons in more than 40 countries worldwide. Retired since 1992, he has served on several not-for-profit human resource agencies, lobbied for free medical clinics for the medically uninsured in Wyoming and volunteered in several foreign countries.

Recognizing the presence of a strong orthopaedic residency program at UNMC and sharing Dr. Neff's passion for research, Dr. Volz established the Robert G. Volz, M.D., Research Fund for clinical and educational initiatives. In 2012, he furthered his legacy of support by endowing a Chair of Biomechanics for scholarly research and creative activities.

Dr. Volz received a Distinguished Alumnus Award in 2007.

"I am extremely appreciative of the education I received from the University of Nebraska College of Medicine. As loyal alums, I think it is our obligation to pay back the institutions to which we credit our careers."

— Dr. Robert Volz, M.D.

At the Forefront of Orthopaedic Technology

When people think of great things that Nebraska is known for, the usual names come to mind: Berkshire Hathaway (synonymous with Warren Buffett), Conagra Foods, Union Pacific, Mutual of Omaha, and of course, the Huskers, to name a few.

What people might not know is that Omaha is home to one of the world's largest, most active and best-equipped biomechanics laboratories for next-generation orthopaedic implants for knees, hips, shoulders, spine and ankles.

Biomechanics laboratory, where implant testing is done.

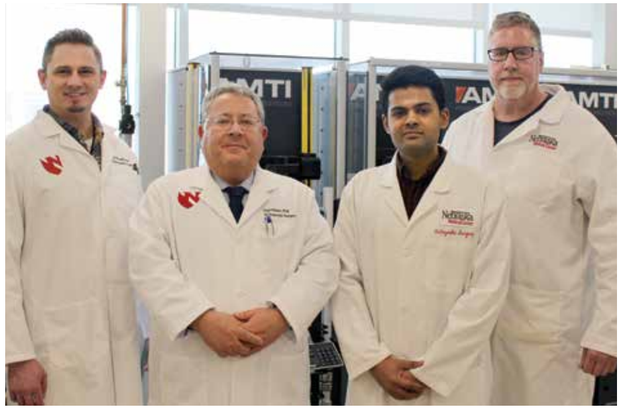
UNMC's Hani Haider, Ph.D., and his team of researchers, engineers and technicians work with surgeons guided by Dr. Kevin Garvin in the Department of Orthopaedic Surgery and Rehabilitation to not only physically test orthopaedic implants, but also to design better ways to implant them into the body.

"Not many university labs, let alone medical school orthopaedic departments, have the capacity to conceive, design, build, rapid-prototype and test their own technology with sophisticated innovative mechanical components, electronic microprocessor-driven circuitry and wireless communications," Dr. Haider said.

Cutting-edge in-vitro testing of orthopaedic implants is performed in the lab with a suite of knee simulators and various other innovative testing machines. Many of the devices were designed by Dr. Haider, particularly the patented Instron-Stanmore Knee Simulator, which mimics the wear and tear of knee implants, replicating with great fidelity the myriad of instantaneous forces, torques, motions and rotations that a knee undergoes in the body, simulating prolonged periods of clinical use.

"By creating better, longer-lasting implants, we will significantly increase the quality of life for patients undergoing joint replacement surgery and drastically reduce the number of revisions being performed annually," said Dr. Garvin.

The lab has grown to be one of the largest implant testing facilities in the nation and the world — pioneering new testing methods, characterizing and ensuring the safety of joint implants, and actively helping to set international standards for implant testing.



Joel Weisenberger, Dr. Haider, Arvind Natarajan and David Lusk in the biomechanics laboratory.

Navigated freehand bone-cutting technology, also born in the department's lab, is changing the way orthopaedic surgeons perform total joint arthroplasty (TJA). A U.S. patent in October 2013 cleared the way for clinical trials and commercialization through Nebraska-based startup company TrakSurgical Inc.

The technology allows various implants to be "mocked up" graphically to optimize choice of size, fit and alignment of the implant, taking into account the patient's particular anatomy for bone conservation, soft-tissue restraint and other biomechanical considerations.

During surgery, the handheld saw/drill interacts dynamically with the preprogrammed software. An adjustable wireless microcomputer touch screen provides meaningful graphical feedback, with guided tracking technology similar to a global positioning system (GPS), and also optionally slows or stops the instrument if the surgeon deviates from his/her designated error threshold.

This navigated freehand bone cutting enables a more accurate and radically simpler operation with 15% greater efficiency of cutting; ensures better implant alignment; is less traumatic to a patient's bone and soft tissue; reduces infection risk and recovery time; and is, therefore, far less costly than other systems of TJA.

Research: One Crucial Leg of the Three-Legged Stool

In academic medicine, clinical care and education make up the two legs of the metaphoric and mission-focused "three-legged stool." Research is that crucial third leg.

As a clinician, if you do the clinical leg then you can help one patient at a time. That denominator is only as big as the number of patients you treat. If you want to increase that reach, you become an educator, and all the people you educate can then go on and provide care for many more people.

Finally, suppose you do cutting-edge research, innovative research that affects our specialty in a very meaningful way. The change is so much more significant because now, instead of your direct clinical care or educational footprint, you have made an impact by your research that is life-changing with an international influence.

Only by successfully integrating each of the three legs can we give patients the best possible care, educate the next generation of orthopaedic surgeons and develop top-notch procedures and techniques for the future.

— Kevin L. Garvin, M.D.,
"Framework for Growth," 2016 Report,
Department of Orthopaedic Surgery
and Rehabilitation

Grants and contracts with scores of companies, FDA recognition for excellence, research awards, patents, publications, and profound national and international links, the Biomechanics and Advanced Surgical Technologies Laboratory in the UNMC Department of Orthopaedic Surgery is firmly one of Nebraska's gems lending pride to all current and alumni orthopaedic faculty and residents who helped make it happen.

Testing done in the biomechanics lab is helping to set worldwide standards in knee replacement systems.

A multimillion dollar grant from the U.S. Navy helped move the technology from a very elementary but award-winning proof-of-concept to a multi-channel wireless model, and readied it for clinical application.

In December 2017, 10 implant reviewers from the FDA's Center for Devices and Radiological Health (CDRH) visited the lab for two days to learn about the implant testing techniques.

John Goode, a senior reviewer with the FDA group and chair of the International Organization for Standardization, described the work of the biomechanics lab as "top of the bar."

He told the press, "There are very few labs in the world that provide to us the education, knowledge and learning (we need)… and this is one of them."

In December 2004, the Nano-Biotechnology Laboratory within the Orthopaedics Surgery Department began developing nanocrystalline coatings meant to reduce the wear of metal orthopaedic implants. The lab, led by Dr. Fereydoon Namavar, had purchased an ion-beam-assisted deposition (IBAD) system, which would be crucial to improving cohesion of the coating to the metal. The potential impact was significant, with more than 500,000 joint replacement procedures performed each year.

Hani Haider, Ph.D.

Director, Orthopaedics Biomechanics and Advanced Surgical Technologies Laboratory

Hani Haider, Ph.D., was the principal mechanical and software engineer who produced the Instron-Stanmore Knee Simulator and was instrumental in the development of the International Standards Organization (ISO) method for testing of knee replacement systems. Dr. Haider also was the main inventor of the award-winning navigated freehand bone-cutting technology for joint replacement.

Dr. Hani Haider and Andres Barrera in the biomechanics lab.

Since his arrival at UNMC in 2000, the lab has secured more than 90 research and testing contracts from more than 32 orthopaedic companies in the U.S., Europe and Japan, and more than $10 million in federal research funding.

Dr. Haider has earned wide-ranging influence as a member of various international committees and scientific boards, including the Biomedical Engineering Committee of the American Academy of Orthopaedic Surgeons. He also holds the ASTM International Manny Horowitz Award which "recognizes the most honored member" of the committee on Medical and Surgical Materials and Devices in the general interest category who has contributed to the standards development and/or related activities.

In 2018, Dr. Haider was elected chair of United States Technical Advisory Group (TAG) and Head of the U.S. Delegation for the International Standards Organization (ISO) Technical Committee on Implants for Surgery, and also named chair of the ASTM International Division II Committee on Orthopaedic Devices.

Over the years, Dr. Haider has been invited to speak in various parts of the world. In fall 2018, he had a particularly arduous agenda of seven trips in nine weeks, four of which were overseas.

Giving Back to the Community

It's not every day that an orthopaedic surgery department can boast of winning an award related to the U.S. Olympics. That's exactly what happened in conjunction with the 2008 U.S. Olympic Swim Trials in Omaha.

2008 U.S. Olympic Swim Trials

The Omaha Sports Commission presented UNMC Physicians and the Department of Orthopaedic Surgery and Rehabilitation a citation for "providing exceptional care and service" to 1,250 athletes, coaches and trainers during the two-week qualifying meet at then-named CenturyLink Center Omaha.

Dr. Kevin Garvin, chair of Orthopaedic Surgery and a member of the Omaha Sports Commission, oversaw medical coverage of the trials at the request of Harold Cliff, chief operating officer of the 2008 event.

"The medical community really pulled together for this event and not only offered superior medical services at no cost, but also a welcoming attitude and the Midwestern hospitality of which we are proud," Dr. Garvin said.

UNMC physicians provided free medical and support services in several specialties, including orthopaedics, primary care (family practice and internal medicine) and emergency medicine. The Medical Center also provided physical therapy, pharmacy and massage services, among others.

In addition to the award from the Omaha Sports Commission and warm accolades from those who participated in the trials, the qualifying event for the Beijing Olympics was named "Best Amateur Multi-Sport or Multi-Discipline Event" by SportsTravel Magazine.

Officials from USA Swimming and the Omaha Sports Commission were successful in bringing the U.S. Olympic Team Trials — Swimming back to Omaha in 2012, 2016 and 2021 (after cancellation of the 2020 trials because of the coronavirus pandemic).

UNMC physicians continued their pro bono commitment, citing a desire to give back to the community and raise awareness of medical careers.

Survivors of the earthquake in Haiti await medical treatment.

Impacts Beyond the Border

On Jan. 12, 2010, physicians in the department responded to the disastrous 7.0 magnitude earthquake that ravaged Haiti. Orthopaedic surgeons Drs. Miguel Daccarett and Sean McGarry traveled to Haiti to help treat survivors. Just weeks after the earthquake, Dr. Daccarett was sent as part of a 13-member team of health care professionals deployed to Port-au-Prince through UNMC and Medi-Share. During his first week, he and the team performed more than 30 operations on 19 patients.

Dr. Kevin Garvin and Dr. Curtis Hartman with a patient who underwent a hip revision in Guatemala during Operation Walk 2010.

In one of his most memorable cases, Dr. Daccarett treated a 17-year-old girl who had been the only survivor in her high school after the building collapsed. She had suffered a broken pelvis and arm. Dr. Daccarett performed surgery with no surgical lights, no blood, no nurses and no surgical technician.

"We were using Home Depot head lamps," he said. "You learn to improvise quickly, and everyone helps in whatever capacity they can, no matter what their job or title in the real world."

Miguel Daccarett, M.D.

In the fall of 2010, Operation Walk-Nebraska & Operation Walk-Canada teamed up in Antigua, Guatemala, to provide free hip and knee replacements to impoverished patients with debilitating joint disease.

‘The Gravity of What We Do‘

The idea of being mindful of what patients need in their most vulnerable moments has been instilled in the residents as well. Dr. Lucas Burton, resident from 2007 to 2012, remembers some of the more serious trauma cases that he saw during his time at UNMC.

Lucas Burton, M.D.

“We train at a very busy center, and we see very severe trauma and various severe disease processes. And a lot of the time, being a resident, you’re the first person to see it,” he said. “To see the patient who’s been in a farm accident, and he’s missing his hand. Or the patient who’s been in an automobile accident with the fracture that’s going to change their life. … Some of those memories really remind me of the gravity of what we do, and how people’s lives are impacted by the work that we do.”

Still, Dr. Burton recalled several lighter moments from his time as a resident. In one case, after a delay getting results from the CT scanner during one Saturday shift, he ventured over, only to see a crowd of people gathered near the scanner. A gorilla had broken its jaw in a fight at the Henry Doorly Zoo & Aquarium and was, at that moment, sedated and receiving CT scans.

Dr. Burton also recalled the fellowship between residents. During Dr. Burton’s time at UNMC, the residents pooled their lunch cards and used extra points to buy sweets and candy, which they then stored in a cabinet called the “treasure chest.” “We took quite a bit of pride in stocking that for several years,” Dr. Burton said.

Dr. David Peterson, a resident from 1982-1987 — the Dr. Connolly era — remembers the stairs. “Dr. Connolly liked to climb the stairs rather than ride the elevator. We would follow him on rounds up and down the staircase. This was a great way to burn calories. I incorporated this as a habit when I made rounds during my career.”

A Legacy in the Making

Since 2016, the Department of Orthopaedic Surgery and Rehabilitation has more than doubled in size. In addition to his work as chair — growing the department through recruiting and philanthropy — Dr. Kevin L. Garvin’s career includes a number of personal highlights, including:

- Selection to the American British Canadian (ABC) Traveling Fellowship. “I was thrilled to be one of five orthopaedic surgeons selected from the United States to spend six weeks traveling to academic medical centers throughout the English-speaking countries of Great Britain, Australia and New Zealand. This is an extremely competitive fellowship and a once-in-a-lifetime opportunity,” he said.
- Involvement in the American Academy of Orthopaedic Surgeons. Dr. Garvin chaired the Committee on Infections, served as a member of the Board of Councilors and Board of Specialty Societies, as well as many others. “My involvement with the academy is consistent with my research beginning with residency and has continued throughout my orthopaedic career. It includes not only the evaluation and management of patients with prosthetic joint infection but also seeking ways to prevent infection,” he said.
- Election in 2009 to the AOA Council of Orthopaedic Residency Directors (CORD).
- Involvement as a board member of The Hip Society and The Knee Society and subsequent election as president of The Hip Society in 2017-2018.
- 2018 election to the American Board of Orthopaedic Surgery (ABOS). The only other Nebraskan to hold this position was Dr. Robert Schrock in 1941.
- Dr. Garvin is especially humbled to have played a small role in helping 25 orthopaedic residents successfully match and complete an adult reconstruction fellowship. Many have emerged as leaders in the field as well.

Dr. Garvin and his wife, Janette, with Dr. William H. Harris, founding member of The Hip Society in Omaha in 2017.

The Hip Society, celebrating its 50th anniversary in Omaha, 2017.

"When I joined the orthopaedic faculty at UNMC there were only three other members of the department and John Connolly was the chair. Over the past 30 years, it has been an honor to watch the department grow into a well-balanced, nationally recognized center of orthopaedic clinical care, teaching and research, under the leadership of Dr. James Neff, and Dr. Kevin Garvin. I continue to have the privilege of working with some of the finest orthopaedic surgeons and pediatric specialists in the world."

— Paul Esposito, M.D.
Professor, Orthopaedic Surgery

Dr. Michael Clare, a resident from 1996 to 2001, described residency as "a grind" — but this "guy who could do imitations" also found time for some fun.

"During my fourth year of residency, the department purchased a new computer for the residents' work room, and it came with a microphone. We figured out how to use it, and I made sound bytes, imitating many of the faculty, that we saved on the department hard drive," Dr. Clare recalled.

"We then downloaded those sound bytes onto Dr Mormino's computer, such that when he arrived to work the next morning, every time he hit a button or moved the mouse on his computer, a sound byte would go off. It drove him crazy — and we were promptly summoned to his office to remove them. But it made for a good laugh..."

Mingled in with those lighter moments are a number of poignant patient stories, further underlining the profoundly human element of orthopaedic surgery.

One story followed 15-year-old Frank Hiffernan, who had broken his arm in a basketball game. In treating the break, doctors discovered an aggressive osteosarcoma of the proximal humerus. Dr. McGarry was able to save the teen's arm from amputation — all the more important, as Frank had been playing guitar since he was 7.

"All of the nerves to the hand were next to the tumorous bone, so, in surgery, I was peeling back all of the layers to save as much as possible. Now, watching him play guitar, I get tears in my eyes — knowing how close he was to not being able to do that," Dr. McGarry said.

Another patient, Harper Guin, was diagnosed with osteogenesis imperfecta while in the womb. Her parents, Stephanie and Stephen Guin of Lee's Summit, Missouri, were given the option of terminating the pregnancy. Instead, they drove to Omaha and met with a team of experts that included Dr. Paul Esposito.

Dr. Esposito advised treating Harper with biophosphonate to increase bone density and reduce the occurrence of breaks. Harper was born in September 2011. Three months later, Dr. Esposito performed surgery on both of her femurs because of severe bowing and fracture risk.

In April 2012, she took her first steps.

"We're so lucky that we have connected with Omaha and Dr. Esposito," Harper's mother, Stephanie, said. "I hope he's figuring out a way to make a lot more of him."

In October 2019, the Department of Orthopaedic Surgery and Rehabilitation celebrated the 50th anniversary of the residency program with a weekend of events attended by more than 150 people, including alumni, family and friends.

"The 50-year celebration was a remarkable milestone," said Dr. Garvin. "It was magnificent to have so many people return for the event and enjoy the comradery and embellished stories and witness the growth of the department."

The weekend included sessions recounting the early years of the program and advances in orthopaedic surgery over the last five decades. Alumni presented their most memorable cases and shared lessons learned since residency.

Today, former residents are practicing in 34 states.

"The residency program has grown from the first residents, Dr. Lowell Niebaum and Dr. Max Jardon, to now nearly 200 residents," Dr. Garvin said. "It is such a joy to be involved in the education of the residents and to watch them represent our department in such an exceptional manner."

The department welcomed its 200th resident in 2020.

Attendees of the 50th anniversary celebration of the department in October 2019.

As he looks to the future of the department — the next 50 years — Dr. Garvin predicts ongoing improvements in patient care, an even more robust research profile and a residency training program that continues to yield the brightest young orthopaedic surgeons. He also anticipates a steady and continued increase in global name recognition for the University of Nebraska Medical Center.

"I think all of us foresee the day when the name is recognized and branded globally with high-level medical education, research and care — that takes time. Reputations don't happen and branding doesn't happen overnight."

Dr. J. Tracy Watson, visiting professor, and residents at the Resident Research Forum in 2014. Above, residents in a lecture.

Educating Orthopaedic Surgeons of Tomorrow

The UNMC Department of Orthopaedic Surgery and Rehabilitation's residency program is designed to provide a broad foundation in the subspecialties of orthopaedic surgery. Clinical and surgical skills are honed through affiliations with Nebraska Medical Center, Bellevue Medical Center, Veterans Affairs Medical Center, Children's Hospital & Medical Center, CHI/Bergan Mercy/Lakeside Hospital, CHI Health St. Elizabeth Hospital-Lincoln and Nebraska Orthopaedic Hospital.

The combined program, directed by Matthew Mormino, M.D., is fully accredited by the Residency Review Committee of the Accreditation Council for Graduate Medical Education (ACGME) – a distinction earned in January 2009. The six core competencies in the residency curriculum and rotations are:

- Patient care
- Interpersonal and communication skills
- Professionalism
- Medical knowledge
- Systems based practice
- Practice-based learning and improvement

Residents are involved in daily patient care as well as research activities during their intensive training. As part of Nebraska Medicine, the University Hospital is a Level I Trauma Center, and orthopaedic surgery residents play an integral role on the hospital trauma team.

Of all the men and women who have completed their orthopaedic surgical training through the Nebraska program, more than half are practicing in the state or the Midwest. The remaining physicians are practicing around the country and overseas. Doctors throughout the region regard UNMC as a source of continuing education where they can learn the latest techniques for diagnosis, treatment and prevention of bone and joint diseases.

Lives in Motion

Advances in orthopaedic medicine have had a profound impact on patients' lives, especially in the past 50 years.

Here's a sampling of remarkable outcomes in nine specialty areas:

Adult Reconstruction

Hand & Upper Extremity

Musculoskeletal Oncology

Pediatric

Shoulder & Elbow

Sports Medicine

Foot & Ankle

Trauma

Spine

The Gift of a Lifetime

Jill Stephenson was 9 years old in 1992 when she was diagnosed with osteosarcoma and underwent rotationplasty at UNMC under Dr. James Neff.

The 12-hour surgery, in which Jill's ankle joint became her right knee joint, was the third-ever performed at the medical center. The only other option was to amputate the leg at the thigh and fit Jill with an artificial leg with a mechanical knee joint.

In a post-surgery interview with the Omaha World-Herald, Jill said the best Christmas gift she'd receive that year was not having to return to the hospital on Dec. 26.

December 1992: Dr. James Neff with patient Jill Stephenson.

Dr. Neff and the surgical team removed Jill's bone tumor and surrounding tissue just above the knee. Next, the lower part of her leg was detached, reversed so the foot pointed backward and reattached to the upper leg. A major nerve running the length of the leg was left intact so that the reattached portion of the leg and foot would have feeling and motion.

A biomechanical lower leg and foot, engineered in the biomechanics lab at UNMC, was designed to extend as Jill grew into adulthood.

At the time, Jill was among fewer than 100 people in the United States to have undergo rotationplasty. She decided on it after listening to a videotaped lecture by Dr. Neff.

"It showed all the things people could do — swim, ride bicycles and run. You couldn't even tell the difference."

The youngster returned to Harvey Oaks Elementary School and even played softball that summer.

Dr. Neff, she said, was her hero. The orthopaedic surgeon celebrated his patient's recovery with a Soap Box Derby car, which Jill dubbed the Neffmobile.

Over the course of her yearlong treatment, Jill, who became a dental hygienist, wrote a book called "A Change of Plans," which she dedicated to Dr. Neff.

August 2000: Jill Stephenson, a soon-to-be-college freshman at UNL, wrote and illustrated a book when she was 10 years old that dealt with the cancer experience that left her with one prosthetic leg.

In it, she noted, "Dr. Neff means everything to me. He saved my life the best way he could by doing the rotationplasty surgery, which lets me do more of the things I enjoy. He is gentle, kind, nice — dedicated to kids. I can tell he cares … He always tells me the truth … He makes cancer seem not so bad after all."

Adult Reconstruction

Adult reconstruction surgeons at the University of Nebraska Medical Center specialize in the surgical treatment of bone and joint disorders and play an important role in the development of joint arthroplasties, corrective osteotomies, implants, biomaterials, bone, cartilage, and soft tissue research. Post-traumatic, inflammatory and degenerative problems of all joints, including the knee, hip, elbow and shoulder, are successfully treated hundreds of times a year.

Surgeons perform joint-sparing procedures such as tibial, femoral and acetabular osteotomies. Surgeons consult with and receive assistance from the departments of Internal Medicine, Radiology, Physiatry, and other medical and surgical subspecialties. Hundreds of total knee and total hip replacements are conducted each year, with a strong emphasis on the complex revision cases.

The clinical joint replacement activity is supported by a strong biomechanics laboratory which is growing into a leading international simulation and testing research facility for total joint replacement implants.


Kevin Garvin, M.D., Chair


Curtis Hartman, M.D.


Beau Kildow, M.D.


Beau Konigsberg, M.D.

New Hip, New Courses of Activity

Omahan Mark Goodall enjoys being active. Disc golf and world travel are among his favorite pursuits.

In autumn 2015, he was playing disc golf at Hummel Park when he kicked a stick in his path. His foot hooked a tree root instead and Goodall took an ugly spill. He didn't immediately seek medical attention, but knee and hip pain eventually led him to a sports medicine doctor.

Pain during a trip to Paris in October 2017 convinced Goodall to consult Dr. Beau Konigsberg. The adult reconstruction surgeon diagnosed an arthritic right hip with a flexion contracture and extremely limited internal and external rotation.

Goodall underwent successful hip replacement surgery the next month. He was able to walk the day of the surgery and left the hospital the following day, thanks to UNMC's Rapid Recovery Program utilizing a specialized anesthetic block and preoperative orthopaedics education.

Goodall quickly progressed to walking without pain. Too soon to play on the hilly Hummel Park disc golf course, he brought the course to himself by throwing discs at baskets on his lawn. He also returned to his hobby of found-object assemblages and volunteers as a collaborating artist with Girl Scouts of Nebraska.

Renewed Vitality

Susan Miller-Harsin was 8½ months pregnant in March 1994. She, her husband and their two sons had recently moved from Omaha to a country home in Blair, Nebraska. Two-year-old Josh tumbled down the stairs to the basement one morning. In a rush to console him, Susan fell.

Throughout her pregnancy, Susan had hip pain that was dismissed by her prenatal care providers. Whether an impending stress fracture caused her fall, or the trip caused the break is unknown; but Susan was rendered motionless at the foot of the stairs. Zach, 4, was able to call 9-1-1 for help. Susan was taken to Memorial Community Hospital in Blair, and later a hospital in Omaha, because the now distressed baby was in a hurry to send her into labor. Doctors calmed the baby in utero and an orthopaedic surgeon pinned her femoral neck fracture — placing several screws across the bone. She delivered Drew by caesarian section two weeks later, and spent time caring for her three young boys from a wheelchair.

Six months passed and Susan returned to her orthopaedic surgeon complaining of pain. Her concerns were again rebuffed, and it was suggested that she return in a year to have her hip replaced. Susan was frustrated. A friend referred her to Dr. Kevin L. Garvin in December 1994. He identified a nonunion where the femoral neck had failed to heal. Susan was also suffering from avascular necrosis in the ball of her hip (a lack of blood supply to the bone tissue that ultimately causes collapse and arthritis). Knowing that she would ultimately need a total hip arthroplasty and that many doctors would choose to perform one immediately, Dr. Garvin knew that prosthetic materials weren't ideal, and believed it was best to help her keep her own parts as long as possible.

In January 1995, he performed a femoral osteotomy to help the nonunion heal and a revascularization procedure for her avascular hip bone to postpone total hip replacement and improve her condition. The surgery was successful and Susan resumed an active lifestyle for nearly 10 years, but when walking up a flight of stairs felt daunting, she knew it was time to return to Dr. Garvin.

On Feb. 6, 2004, Dr. Garvin replaced her hip using a newly developed highly crosslinked polyethylene implant. At the time, Dr. Garvin had three material options for the hip replacement, including metal-on-metal, ceramic-on-ceramic and highly crosslinked polyethylene — a biomaterial introduced in 1999. He felt that the latter was the best fit for Susan's youth and activity. Today, she has no pain and is as busy as ever — horseback riding, managing her equine therapy business, bike riding and swimming.

"My husband is an athlete. My kids are athletes. That's our world. I wouldn't have been able to participate in their world the way I do now if it weren't for Dr. Garvin."

— Susan Miller-Harsin

Hand & Upper Extremity

Treatment is usually started with non-operative modalities such as medications, splints, injections and/or therapy. However, if required, surgical treatment may be recommended with alternatives ranging from arthroscopy over nerve release, joint replacement, fracture fixation and ligament and tendon repair or reconstruction. Through close collaboration with an occupational or physical therapist, results of both non-operative and operative modalities will be closely monitored and final results optimized.

- Carpal and cubital tunnel syndrome
- Tennis elbow
- Joint pain and stiffness
- Fractures and dislocations of the hand, wrist, forearm, elbow and shoulder
- Trigger finger
- Tendon and nerve injuries
- Arthritis (degenerative, rheumatoid, post-traumatic)


Daniel Firestone, M.D.


Joseph Morgan, M.D.


Philipp Streubel, M.D.

In the Right Hands

Angela Perez was your typical 5-year-old. She loved playing with toys, swimming, dancing and watching cartoons.

One night, the youngster was playing with a relative when she took a tumble carrying a glass of water and cut her hand. Emergency department staff performed irrigation and debridement to clean the wound but were concerned when they noticed the child couldn't move her pinky finger, so she was kept overnight for evaluation.

Angela's initial surgeon was worried about the extent of the laceration, and referred Angela to Dr. Philipp Streubel at UNMC. He operated almost 72 hours after her initial injury. Because of the small size of Angela's hand, the six-hour surgery was considered a high-complexity case. Dr. Streubel's ultimate goal was to reconnect each tendon strand correctly so that Angela could regain full function of her hand and fingers. In addition, nerve repairs were performed under a surgical microscope.

About a year after her surgery, Angela had regained full sensation to all of her digits and recovered motor function of both the median and ulnar nerves. Save for a minor loss of flexion of the little finger, her hand was good as new, and she was back to doing the things she loved.

Dr. Streubel's bicultural background and his proficiency in Spanish played a big role in ensuring Angela had the optimal care and experience, which undoubtedly contributed to her positive outcome.

"It has been such a blessing to see her handwriting improve season-to-season. She will always be a very special patient to me."

— Dr. Joseph Morgan

One Victory at a Time

On an October evening in 2016, Sharon Robino was settling in to watch TV at home outside Valley, Nebraska, when she tripped over a box and tumbled to the floor. Her 3-year old English shepherd rushed to her, but to Sharon's surprise, he launched into an attack.

Sharon's husband, Pat, heard the commotion and intervened. The Valley-Waterloo rescue squad rushed Sharon to UNMC, where Dr. Joseph Morgan, a hand and upper extremity surgeon, was on duty. In addition to injuries to her face and scalp, Sharon had fractures in both the radius and ulna of both forearms, plus the left fifth metacarpal. Both forearms also sustained severe soft tissue injuries.

Sharon's right forearm did not heal well after the initial surgery and there was a large soft tissue defect that was complicated by an infection. This required multiple debridements to remove the affected tissue and flap coverage. Because of the complexity of the case, Dr. Morgan requested the assistance of Dr. Shannon Wong, a plastic surgeon at UNMC.

While Dr. Morgan placed a bone graft from Sharon's hip to her fractures, Dr. Wong did a gracilis flap, in which a muscle from Sharon's leg was harvested with an artery and sewn into one of the arteries in her forearm. In the six months that followed, Sharon traveled between the Douglas County Rehabilitation Center in Omaha and UNMC for a series of surgeries. Afterward, she received therapy at Nye Health Services in nearby Fremont. About a year after the attack, Sharon was able to return to her Valley home and continue weekly therapy.

Especially remarkable is the progress in her penmanship. Just two months after her injury, Sharon sent Dr. Morgan a signed Christmas card. It was the first time since her injury that she had written her name. Several months later, Sharon surprised Dr. Morgan with an Easter card that showed yet more improvement in her handwriting. Holiday messages to Dr. Morgan have grown longer each year.

Orthopaedic Oncology

Orthopaedic Oncology strives to provide expert interdisciplinary care for a variety of benign and malignant bone and soft tissue malignancies and tumor-like conditions. A team of surgeons, radiologists, pathologists, medical and radiation oncologists, and allied health professionals at UNMC's Fred & Pamela Buffett Cancer Center render individualized care of the highest quality.

Bone and soft tissue tumors in all areas of the axial and appendicular skeleton are addressed. The department emphasizes a modern approach to preservation of skeletal function, and often uses bone allografts and custom prosthetic implants.

Sean McGarry, M.D.

Best Possible Bad Luck

Hannah Nelson and a friend were racing up a flight of stairs when Hannah reacted in pain to being bumped in the leg. An X-ray revealed a significant tumor in the 11-year-old's left distal tibia (lower leg near the ankle). The next day, Hannah went to Children's Hospital & Medical Center and was referred to UNMC orthopaedic oncologist Sean McGarry, M.D.

A biopsy confirmed osteosarcoma, a rare and aggressive bone cancer. In 90% to 95% of cases, limb-salvage surgery is possible. The location of Hannah's tumor, however, necessitated amputation of the leg below the knee.

"There are no good reconstructive alternatives for an ankle," explained Dr. McGarry, an expert in cancers of the extremities.

Hannah's surgery was performed in June 2014. Six weeks later, she was fitted with a prosthetic. By winter, she had finished her chemotherapy and was still getting used to her prosthetic when she fractured her distal metaphyseal femur. Dr. McGarry performed an open reduction and an internal fixation, in which a plate and screws were used to fix the fracture. The hardware was removed in June 2016, and Hannah continues to do well.

A Twist of Fate

Makenna Placzek could hardly dream of going a day without dancing. During her junior year of high school, a crippling stress fracture associated with a calcaneal (heel bone) cyst gave her a terrible scare.

Most bone cysts like Makenna's are discovered incidentally because the neoformations expand and weaken the bone, making it susceptible to fractures that warrant an X-ray or MRI. They occur in approximately 1.5 per million people, usually in the second decade of life.

When Makenna badly twisted her ankle for a second time in December 2012, her doctor in Grand Island, Nebraska, discovered a cyst "the size of an egg." Makenna saw Dr. Sean McGarry soon afterward.

In February 2013, he took Makenna to the operating room for a biopsy. Because he and the pathologist were able to confirm that the active aneurysmal cyst was non-cancerous, he removed it immediately.

Dr. McGarry performed a curettage to exteriorize the tumor and scrape it out, used a high-speed burr to take another few layers of bone and prevent regrowth, applied Argon plasma coagulation to cauterize the area, and finished with allograft (cadaver bone graft).

Makenna went home on crutches the day of surgery and was able to put weight on her foot 10 weeks later. Together, she and Dr. McGarry succeeded in meeting her goal to reach full activity by the time of dance camp that summer.

In all, Makenna missed roughly seven months of dance, but built up her strength and joined the dance team at the University of Nebraska at Omaha in 2014. Inspired by her own experiences with post-operative physical therapy, she planned to pursue a career in exercise science.

With Dr. McGarry's help, Makenna was strong enough to return to dance camp 7 months after her ankle surgery.

Pediatric

The specialty-trained pediatric orthopaedic surgeons at UNMC are dedicated to the care of all musculoskeletal problems in infants, children, and adolescents. These physicians treat limb and spine deformities (club feet, scoliosis, hip dislocations, for example); gait abnormalities; bone and joint infections; and fractures and dislocations of the arms, legs and spine.

A full range of supportive care such as physical therapy and medical specialty care ensures the highest level of treatment for complex problems. Children with spina bifida, cerebral palsy, muscular dystrophy and other congenital and developmental problems receive coordinated care in pediatric orthopaedics.


Paul Esposito, M.D.


Susan Scherl, M.D.


Matthew Halanski, M.D.


Brian Hasley, M.D.


Ryan Koeler, M.D.


Nickolas Nahm, M.D.


Maegen Wallace, M.D.

Standing Tall, Moving Well

Like many 14-year-olds, Ian Hemmett and his twin brother, Nolan, are always on the go. It's hard to believe that there was a time when doctors — and the teens' parents, Lori and Michael — weren't sure if Ian would ever run, bike or play sports.

Ian and Nolan were born prematurely at 31 weeks. About two weeks later in the NICU, Ian started showing signs of pain in his hip. "We would lift his legs for a diaper change and he would scream," Lori said.

Tests revealed a methicillin-resistant Staphylococcus infection in Ian's left hip and an elbow. Strong IV antibiotics and emergency surgery to drain his left hip rid the infection, but signaled the start of a long road ahead for the newborn.

At 3 months old, an ultrasound revealed a hip abnormality. Ian's surgeon consulted closely with a neonatologist and with Walter Huurman, M.D., a senior pediatric orthopaedic surgeon at Children's Hospital & Medical Center, and a professor of orthopaedic surgery at UNMC at the time. They decided to try a Pavlik harness, commonly used to treat infant hip dysplasia.

After six months in the harness, a CT arthrogram confirmed significant abnormality of the growth of the infant's upper femur.

"One thing I've learned is that I can't ever use my condition as an excuse, because that's going to get me nowhere."

— Ian Hemmett

"The results were worrisome for significant ongoing deformity of the hips," said Paul Esposito, M.D., professor of pediatric orthopaedics at UNMC, and clinical service chief of pediatric orthopaedics at Children's.

Dr. Esposito took over Ian's case upon Dr. Huurman's retirement and continued to monitor Ian's growth. At 2 years old, an arthrogram showed that Ian's infection had affected the growth potential of his upper femur. This manifested in a 2-centimeter difference in leg length by the time he turned 4. Ian had intermittent pain and started to develop a contracture in his left Achilles tendon from trying to stand on his toes to equalize his leg length, despite using a lift in his shoe.

Around age 7, Dr. Esposito performed a pelvic osteotomy of Ian's left hip, with the goal of deepening the hip socket to gain length in his leg. He also performed an osteotomy with custom instrumentation with wires, in order to correct the deformity of his upper femur and gain additional length.

Besides a procedure to remove some of the hardware when Ian was in fifth grade, he continued with life like any active teenager. Today he only has a 1.5 cm difference in leg length, which requires only a small lift in his shoe, and enjoys excellent motion. While Ian is likely to require more treatment — and a potential hip replacement surgery — he most likely will do well into middle age.

Shoulder & Elbow

The Shoulder and Elbow Service provides comprehensive evaluation and management for a wide range of shoulder and elbow problems, including arthritis, dislocation or instability, fractures, rotator cuff tears and tendon tears, joint stiffness, and complications due to unsuccessful previous surgery.

The team consists of a shoulder and elbow specialty-trained physician, orthopaedic surgery residents, therapists, and nurses who use a multi-disciplinary approach to care for patients in the Omaha area and throughout the Midwest. At UNMC patients also have access to world-class experts who can assist in the formulation of diagnoses and treatment plans.

Non-surgical and surgical treatment options are considered. Surgery may be performed in arthroscopic or open fashion depending on the problem. Treatment may range from exercises to reconstructive surgery. The goal is to maximize joint function. The entire team is an integral part of rehabilitation with or without surgery.


Matthew Teusink, M.D.


Philipp Streubel, M.D.


Edward Fehringer, M.D.

Rotator Cuff Repair Kept Him on the Job

The simple task of getting dressed used to be downright miserable for Brian Onken. His shoulders caused him so much pain that even raising his arms above his head caused discomfort, loss of grip reflex and shooting pain. An electrician, Onken began to struggle on the job because of his ailing shoulders.

Onken, 55, spends most days at work standing on a ladder with his arms above his head installing and maintaining electrical wiring or equipment. While he fought through the pain at work, the battle was draining.

Onken had sought relief from his shoulder pain in the past. He started getting corticosteroid injections in 2009. He alternated between the right and left shoulders, and each shot would last about a year before he needed another one.

After six years of injections in both shoulders, Onken started looking for a more aggressive approach. He found it in July 2015, in UNMC shoulder and elbow surgeon Matthew Teusink, M.D. "He came across as someone you can trust and have confidence in," Onken said.

Upon performing a physical exam and an MRI of the left shoulder, Dr. Teusink identified the cause of the pain to be a rotator cuff tendon tear and thickening and inflammation of the biceps tendon. He noted that while Onken had good range of motion, his pain was still cause for concern.

"Most of the time, these patients have pain and shoulder weakness," Dr. Teusink said. "A rotator cuff tear can make it difficult to sleep at night. In Brian's case, it was difficult for him to do his job as an electrician."

In August 2015, Dr. Teusink took Onken to the operating room for a left shoulder arthroscopic rotator cuff repair and a subpectoral biceps tenodesis, where the biceps tendon is detached from the shoulder joint in order to remove the diseased portion of the tendon. The tendon is then reattached to the humerus bone, just below the shoulder. Another MRI showed similar findings in his right shoulder; three months later, Dr. Teusink performed the same procedure on it.

"Dr. Teusink came across as someone you can trust and have confidence in."

— Brian Onken

For these procedures, Dr. Teusink opted to use a small all-suture anchor to reattach the biceps tendon because it makes a smaller hole in the bone. In theory, this technique helps reduce the risk of future fractures, which have been reported after using some larger fixation devices.

Onken spent the first six weeks after each surgery in a sling with minimal activity. The next 12 weeks were dedicated to regaining motion in the shoulder and strengthening exercises.

Approximately six months after his first surgery (left shoulder) and three months after the second (right shoulder,) Onken returned to work at Miller Electric Company. Ironically, after several weeks of light-duty work he was assigned to UNMC's Lauritzen Outpatient Center, the new home of the Department of Orthopaedic Surgery and Rehabilitation.

While Onken had sufficient strength in his shoulders for day-to-day activities, he continued with his personal rehab exercises to build his body strength.

Rotator cuff repairs are Dr. Teusink's most common surgery; he does about 100 cases annually. He also dedicates time to teaching orthopaedic residents and conducting research on how to improve these types of shoulder surgeries. Currently, Dr. Teusink is collaborating with fellow researchers at UNMC to develop nanofiber scaffolds to improve healing in rotator cuff repairs by placing stem cells and growth factors at the repair site.

Sports Medicine

Both competitive and recreational athletes can occasionally have injuries or illnesses that limit their optimal performance. The purpose of sports medicine is to treat sports-related injuries and help athletes return to their sport as quickly as possible.

The sports medicine physicians at the UNMC Department of Orthopaedic Surgery deal with a variety of ailments including strains and sprains, ligament or cartilage injury of the major joints such as the knee, shoulder and ankle, instability of the major joints and running injuries.

Katie Freeman, M.D.

Ryan Koehler, M.D.

Philipp Streubel, M.D.

Matthew Tao, M.D.

Matthew Teusink, M.D.

Transplant Recovery: A Team Sport

When Kristopher Kodat crossed the stage to graduate from Bellevue West High School in May 2018, he did so with a crutch, a brace and a new lease on life — one month after being the first meniscus transplant patient at UNMC.

Increasingly severe knee pain had transformed Kris from an active teen who loved playing basketball to a high school student struggling with normal day-to-day activities. Constant pain plagued the lateral side of his knee. Sports were out of the question; even regular activities led to catching, locking and swelling in his knee.

The first time Kris experienced anything unusual with his knee was after a soccer injury in sixth grade. He was told he had tendonitis and also learned that he had a discoid meniscus instead of the more normal C-shape.

The menisci serve as shock absorbers in the knee and help the joint move well. Having a discoid meniscus meant that Kris had more meniscal tissue than normal. This extra tissue is abnormal in nature and can often cause issues, including unpredictable healing. In Kris' case, he began having more frequent trouble with running and sports. During these activities, the knee would frequently cause pain and mechanical sensations.

As a high school sophomore, Kris began experiencing more regular and severe pain. At one point, while visiting his brother in Idaho, he found that he could not walk on his right leg. An emergency room visit left him with the possible diagnosis of a torn meniscus. Upon returning to Omaha, an MRI revealed that Kris' meniscus had actually flipped on itself.

Kris had his first surgery to repair the tear in October 2016. Unfortunately, he suffered another injury after that and was diagnosed with a repeat meniscal tear. He had a revision repair in May 2017 but did not progress well after the second surgery. Issues like this can be common in the setting of discoid menisci, as the tissue is abnormal and unpredictable.

As Kris continued to experience issues over the summer, his doctor referred him to Matthew Tao, M.D., a sports medicine surgeon at UNMC who specializes in knee and shoulder issues.

At the time, Kris was functionally meniscal deficient, meaning that his residual meniscus tissue was no longer performing normally. A meniscus transplant was the best option.

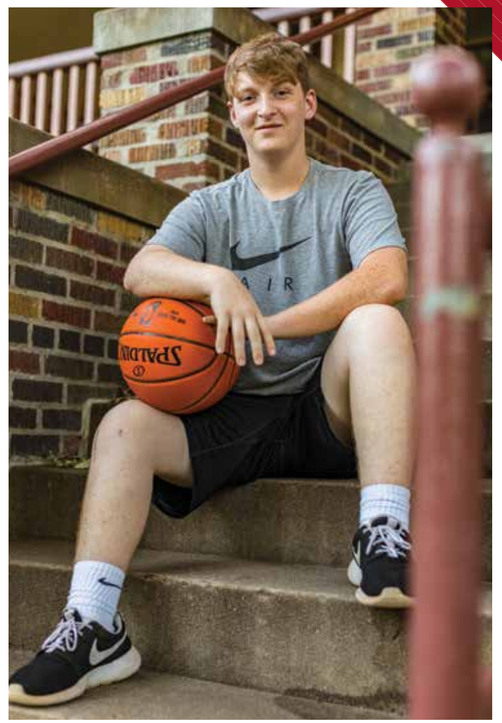
In April 2018, Kris and his family got the call that a graft was available. As with other transplants, meniscal grafts are cadaveric tissue that come from organ donors and are meticulously sized to match a given patient's knee. During surgery, the graft is secured down to the bone on each end, and the tissue is sutured to the lining of the knee capsule.

"One of the things I love about this place is that we embrace the idea that recovery is a team sport," Dr. Tao said. "Kris is at the center of the huddle, but we try to assemble a great group of people around him. He has worked incredibly hard in and out of therapy to get his strength back and regain a functional knee. I'm very pleased with his progress and the fact that he is essentially asymptomatic at this point."

Today, Kris is able to navigate the University of Nebraska at Omaha campus without pain, a limp or locking in his knee. He is studying criminal justice and hopes to become a law enforcement officer and eventually work as a detective.

"I love sports medicine for the potential to be life-changing in the overall quality of life."

— Dr. Matthew Tao



Foot & Ankle

Using an integrated team approach, physicians treat foot deformities resulting from fractures or other trauma with conservative management techniques or with surgical reconstruction.

- Foot and ankle trauma
- Hammertoes
- Bunions
- Flat feet
- Great toe arthritis
- Plantar fasciitis
- Sports injury of the foot and ankle
- Ankle instability
- Arthritis of the foot and ankle including ankle arthroplasty
- Foot, ankle and lower extremity deformity
- Charcot deformity

First the Twist, Then the Snap

Lauren Petit had spent her lunch break walking the Columban Fathers' grounds just hours before the temperature dropped, and never imagined that black ice would send her airborne on the way to her car that Friday evening in November 2013. Nonetheless, when she looked down, her foot was lodged under the tire and clearly pointed in the wrong direction. Ill at the sight of her mangled leg and panic-stricken that nobody could hear her cries, she phoned her husband for help. Soon, a co-worker found her and directed first responders to her location.

Petit was taken by ambulance to the nearest medical facility, where an X-ray clearly indicated spiral fractures of the tibia and fibula (shin and calf bones). Unfortunately, no orthopaedic surgeon was on-call, so she was told she might be sent home for the night.

Alexander Sawatzke, M.D. replaced Lori K. Reed, M.D. as the department's foot and ankle specialist in 2019.

Her husband, a former X-ray technician in the U.S. Air Force, recognized the severity of the injury and insisted that she be transferred for surgical attention. The University of Nebraska Medical Center admitted Petit into the care of Lori K. Reed, M.D.

"Once I got to UNMC, everything fell into place," Petit said with a sigh of relief. "From the minute I got there, I was amazed at how kind everyone was, from Dr. Reed, to the residents, to the staff. Even the woman who cleaned my room was obviously proud to be a part of the Med Center. It was such a good experience."

A computerized axial tomography (CAT) scan revealed that, in addition to the "tib-fib" fractures, Petit had sustained another tibial fracture extending from the ankle joint.

The chief resident performed an initial reduction to align the tibia and fibula that evening. Dr. Reed operated on Saturday, inserting an intramedullary nail inside the canal to hold the tibia in place and four screws to stabilize the leg.

"I have never seen such exceptional orthopaedic results," Chris Petit, Lauren's husband, wrote in a letter to the department.

By Monday, Petit was home. Seven weeks later she was up, moving and eager to resume her routine. Physical therapy several times per week has helped her get back in shape, back to work and back to her therapeutic daily power-walks.

In June 2020, Lauren said in a note to the department: "I can't believe it's been nearly 6½ years since that big event. Even now, I marvel at how lucky I was that day despite my injury. So many things could have gone terribly wrong. But in the end, thanks to Bellevue's response team, I eventually found myself at UNMC where all was made right by the orthopaedic team on duty.

"Please let the folks in the Orthopaedic Department know how grateful I still am to them. They did a phenomenal job putting my broken leg back together. The proof of their good work is the fact that on most days I walk nearly two miles around my very hilly neighborhood.

"My bionic leg has held up well over the years, though my ankle's range of motion is not quite what it used to be and kneeling on the ground when gardening … Well, it's just better to sit on a stool instead. All the same, not bad for a 62-year-old lady."

"Once I got to UNMC, everything fell into place."

— Lauren Petit

Trauma

Nebraska Medicine, the hospital partner of the University of Nebraska Medical Center, offers a Level 1 Trauma Center and provides 24/7 trauma coverage for Omaha and the surrounding area. Nebraska Medicine is the only state-designated Comprehensive Trauma Center in Nebraska serving both pediatric and adult patients.

The trauma specialty team evaluates and treats fractures and dislocations, both common and complex. Poly-traumatized patients and those with long-bone and pelvic trauma benefit from a full array of emergency services, diagnostic imaging, and consultation with a variety of subspecialty medical and surgical services.

Trauma team physicians use techniques of internal, intramedullary and external fixation, as well as microvascular techniques for the repair of fractured and damaged joints and soft-tissues. An outpatient clinic is also available for long-term follow-up.


Matthew Mormino, M.D.


Sara Putnam, M.D.


Justin Siebler, M.D.

Motivated by Progress and Trust


Ginger Lostroh

Ginger Lostroh was stepping out of her car one day when it slipped out of "park" and into "reverse." She became wedged between the car and a light pole, with her foot at her hip. Lostroh suffered a complex tibia-fibula fracture with substantial soft tissue loss. Dr. Michael Clare, a foot and ankle surgeon with the department at the time, consulted with his partner Dr. Matthew Mormino. They faced a tough decision: try to save the leg, or amputate it and move Lostroh toward rehabilitation with a prosthesis. Prior to this, Lostroh was at peak fitness — playing tennis and competing in triathlons.

Lostroh underwent a series of surgeries during a monthlong hospitalization to stabilize the bone with a metal rod from the knee to the ankle. With the bone stabilized, she set out to regain strength with two years of daily physical therapy. Though stabilized, Lostroh's bone took more work to heal. After the initial surgery, Dr. Clare and Dr. Mormino decided to replace the existing rod with a larger one. Over time, Lostroh returned to life as usual, largely due to her own resolve. Roughly 18 months into intensive physical therapy, she was able to put weight on her leg, and play tennis. "Ginger was determined to live her life and accept that her leg was going to slow her down a bit, but not much," said Dr. Mormino.

Dr. Mormino assumed Lostroh's care when Dr. Clare left in 2005. Dr. Mormino treated Lostroh with a surgery to expose the fracture site and graft with bone morphogenetic proteins (BMP) — a product naturally found in bones that helps stimulate healing. The BMP procedure was successful, but didn't result in a union. Over the course of six years, Lastroh had radiograph appointments every three months. "I was never in doubt that she was going to have a good result, but I knew it was going to take time. Ginger took that leap of faith in me — with me — and we were right," Dr. Mormino said, believing that it came down to a trusting relationship.

Ball-and-Socket Success

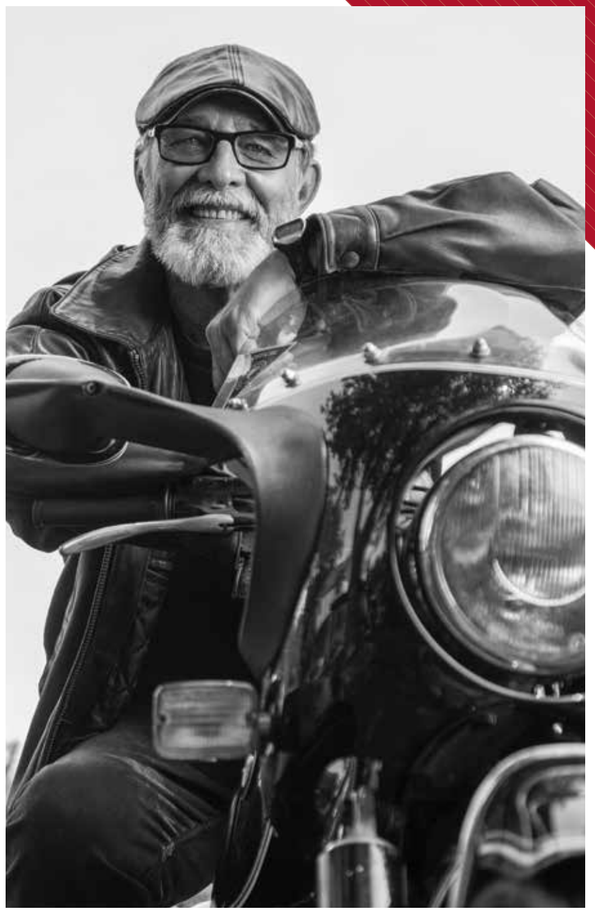
In October 2015, Tom Yilk was doing 65 mph on U.S. Highway 6 outside of Hastings, Nebraska, when he lost control of his motorcycle. The impact left him with a shattered shoulder blade and collarbone, fractured ribs and a punctured lung. Yilk was life-flighted from an area hospital to UNMC, where he was seen by Dr. Justin Siebler, chief of orthopaedic trauma surgery. The location and severity of Yilk's shoulder fracture was cause for concern.

"The shoulder is a ball-and-socket joint," Dr. Siebler explained. "Tom had fractured the glenoid, or the socket portion of the joint. With any type of fracture in the joint, we are concerned about the shoulder being unstable and we want to try to decrease the risk for post-traumatic arthritis."

Coupled with Yilk's slightly displaced clavicle, Dr. Siebler decided surgery was the best course. He performed an open reduction internal fixation, in which he first repositioned the bones in their normal alignment, and then held them together by attaching metal plates with special screws to the outer surface of the bone. Dr. Siebler estimated that by addressing only the scapula fracture, the clavicle would eventually restore itself, and Yilk, 68 at the time, would have a relatively pain-free, functioning shoulder for the rest of his life.

"Putting me in rehab after one week was one of the things that made me get going faster."

— Tom Yilk



Spine Surgery

The Spine Service at the Department of Orthopaedic Surgery and Rehabilitation is committed to providing patients with the highest quality health care, and offers the latest in innovative treatments and medical advances. The team understands how debilitating back and neck pain can be. It can limit your activities and reduce your quality of life. "Our goal is to ease your pain and restore motion, so that you can get back to doing the things you enjoy."

The team includes specialty-trained spine surgeons, orthopaedic surgery residents, physical therapists and nurses, who provide coordinated care through all stages of treatment.

"We provide comprehensive evaluation and treatment for a wide range of conditions involving all aspects of the spine — cervical, thoracic and lumbar. Our adult spine surgeon specializes in degenerative conditions/arthritis, spinal stenosis, myelopathy, spondylolisthesis, disc herniations, instability, scoliosis, tumors, and trauma."


Chris Cornett, M.D.


Brian Hasley, M.D.


Scott Vincent, M.D.

A Curved Spine, Corrected

Linda Trout has spent much of her life in a library. She started her career at the McGoogan Library of Medicine at UNMC, and eventually turned her sights to the Omaha Public Library, where she worked for 30 years. She and her husband traveled regularly. There was another constant in her life: debilitating back and leg pain.

Trout was diagnosed with rheumatoid arthritis at age 32. The chronic inflammatory disorder affects the lining of the joints and causes swelling, bone erosion and joint deformity. Her symptoms were pronounced by age 40, and at 53 she underwent a hip replacement. Shortly after that procedure in 2002, she fell and broke her leg and was referred to Dr. Kevin L. Garvin for hip revision surgery.

Several years later, Trout developed intense pain in her legs and lower back, which left her unable to stand or walk for extended periods. She searched for relief, including water therapy, physical therapy, medications and injections. In 2011, she sought help, again from Dr. Garvin, who suspected a spine injury or condition and referred her to Dr. Chris Cornett.

Fresh off a spine surgery fellowship, Dr. Cornett was joining the department as a specialist in complex spinal conditions. Dr. Cornett diagnosed Trout with lumbar scoliosis, or curvature in the lower spine. She had also developed lumbar spinal stenosis (pinched nerves) from her arthritis. While her rheumatologist was able to manage the pain in Trout's hands and other joints, her back would benefit from surgical intervention. Dr. Cornett's goal was threefold: provide pain relief, reduce spinal deformity and keep her walking.

In May 2012, Dr. Cornett performed a lateral interbody fusion, a minimally invasive procedure used to correct the curve of her spine by inserting spacers through a small incision through her side. He was able to correct her curve from 51 degrees to about 10 degrees.

"The surgeries have made a big difference in allowing me to do the things I want to do."

— Linda Trout

The next day, Dr. Cornett performed a multi-level laminectomy and an instrumented fusion to relieve pressure on his patient's nerves, fusing her L1-L5 vertebrae and inserting rods and screws to provide additional spinal stability.

Trout returned to work six weeks later. For the next three years she lived pain-free with no restricted range of motion. But in 2015, pain returned to her lower back and leg. Trout had developed spondylolisthesis — a condition in which one vertebra slips forward over the bone below it — yet another result of her rheumatoid arthritis.

Dr. Cornett performed a laminectomy and a transforaminal lumbar interbody fusion in a second major surgery. This procedure involved fusing a long, solid piece of bone in the pelvic area that doesn't allow for any movement of the individual vertebrae.

Trout continues with therapy, intermittent pain management and follow-up appointments about twice a year.

"I have occasional pain, but not at the level I did six years ago," she said.

Giving Back In Significant Ways

The Department of Orthopaedic Surgery and Rehabilitation's Wall of Honor permanently recognizes the remarkable individuals and organizations whose generosity has benefited departmental research, education and patient care. Installed in 2003, the tribute features brushed metal plaques with etched portraits of donors who have given $100,000 or more in support of the department's mission. Their philanthropy is further acknowledged here.

Indebted to Loyal Philanthropists

Dr. Garvin's greatest source of pride is the growth of the Department of Orthopaedic Surgery and Rehabilitation, something that would not have been possible without the support of the community.

"In the late 1990s, our state support was tremendous but it wasn't sufficient to support sustained growth of the department," he said. "I had the good fortune of taking care of individuals who were very philanthropic."

People like Wall of Honor designees Harold and Marian Andersen, Charles Durham, Christina M. Hixson, Ruth and Bill Scott, Eileen and Dr. Wayne Ryan and Susie Buffett, among others. "These individuals and families are great supporters and continue to be supportive of the department's research and education," Dr. Garvin said.

As an example of ongoing support, in 2007, the Scotts contributed to the opening of the Nebraska Arthritis Outcomes Research Center on the third floor of UNMC's Poynter Hall. The center, headed by Dr. James O'Dell and Dr. Garvin, would involve eight to 10 doctors and researchers on a full- or part-time basis. The Scotts' philanthropy supported their salaries and access to national research databases.

In 2014, UNMC Physicians, Nebraska Medical Center and Bellevue Medical Center came together as Nebraska Medicine. That same year, a gift from the Scotts would enable the department to make an important move from the Durham Outpatient Center to the fourth floor of the new Lauritzen Outpatient Center at 4041 Leavenworth St.

In addition to office space for faculty, residents, academic support and research staff, the orthopaedics surgery department gained 28 cutting-edge exam rooms, an Orthopaedics Biomechanics and Advanced Surgical Technologies Laboratory, three conference rooms and a 75-seat auditorium.

Dr. Garvin recalled the conversation with Ruth Scott that led to the department finally operating in an optimal environment to serve to its tripartite mission of patient care, education and research.

"(She) asked if she could endow a chair in my name. I must've had some look that wasn't as excited or as happy as she thought. She said, 'Well is there something else?' And I said, 'Well, Ruth, if you really want to help the department, they're building a new outpatient center, and we're in a very small area now. We need room to grow.' After a brief conversation and a moment of silence, Ruth said, 'Let me talk to Bill.' And the rest is history."

Bill and Ruth Scott, left, Warren Buffett, and his daughter, Susie Buffett, at UNMC's Sorrell Center where Scott and his wife, Ruth, received the University of Nebraska Regents Medal in 2009.

The Lauritzen Outpatient Center, 2020.

Ruth and Bill Scott

Ruth and Bill Scott contribute to community health, vitality and advancement in quiet, but extraordinary ways. Over the past two decades, the Scotts have made multiple gifts to UNMC, including lead gifts on several new buildings for the Colleges of Medicine, Nursing, Public Health and Pharmacy. In particular, the Scotts have generously supported the Department of Orthopaedic Surgery and Rehabilitation with an all-new Nebraska Arthritis Center for Outcomes Research as well as the establishment of an orthopaedic surgery research laboratory. When the Lauritzen Outpatient Center opened on the UNMC campus in late 2016, the Scotts provided funding for orthopaedic research and education spaces on the fourth floor, along with a new UNMC telemedicine center. "We believe so strongly in UNMC's leadership and that of Dr. Kevin Garvin and the Department of Orthopaedic Surgery and Rehabilitation," said Ruth Scott. "Our family has personally benefited from their expertise, and we want to help ensure this quality of care continues through extraordinary research and education. We also support Dr. (Jeffrey P.) Gold's vision for advancing telemedicine and the tremendous benefits it will bring to Nebraskans across the state." The couple are both graduates of the University of Nebraska-Lincoln. Bill Scott is a former vice president of Berkshire Hathaway. Ruth Scott is a bridge instructor and founder of the Omaha Bridge Studio.

July 2007: Ribbon cutting for the Nebraska Arthritis Outcomes Research Center. From left: UNMC Chancellor Harold Maurer, Dr. Kevin Garvin, James O'Dell and Ruth and Bill Scott.

Charles W. and Margre H. Durham

In April 2008, the entire UNMC campus took time out to remember Charles "Chuck" Durham, a visionary leader and tireless supporter of the medical center and the entire Omaha community. Durham and his late wife, Margre, donated millions to support UNMC's vision of building a nationally recognized research program. The single largest donor to the University of Nebraska in lifetime giving, their gifts provided support for two 10-story research towers on the UNMC campus and established funds to benefit arthritis, prostate cancer and non-invasive surgery. In 2003, the $77 million Durham Research Center opened, providing a first-class facility for scientists to perform cutting-edge research. (A second tower, named the Research Center of Excellence II, opened in 2009). The Charles W. and Margre H. Durham Excellence in Medicine Fund, established in 1998, includes funding for the Department of Orthopaedic Surgery and Rehabilitation as a result of Durham's treatment for knee arthritis and eventual knee replacement in 1996. The gift supports vital research in the biomechanics and nanobiotechnology laboratories. In the fall of 2003, Chuck Durham was quoted as saying, "It is an honor to be associated with a medical center that has a vision to be world-class, to improve the health of all the people of Nebraska and beyond, advance medical knowledge through research and educate outstanding health professionals and scientists." He served as chairman of the board and CEO of Durham Resources, an investment company. Previously he was chairman and CEO of HDR Inc., an engineering and architectural firm.

Dr. L. Thomas and Marjorie Hood

Marjorie Hood wanted to make sure that her late husband, Dr. L. Thomas Hood, and father, Dr. Herman Frank Johnson, were remembered for their contributions to the field of orthopaedics, while also supporting the mission of the Department of Orthopaedic Surgery that they both helped to build. Dr. Johnson, a 1922 graduate of the University of Iowa College of Medicine, became an assistant professor of both Orthopaedic Surgery and General Surgery at the Nebraska College of Medicine. He also was a senior partner in the orthopaedic practice of Lord, Schrock and Johnson. Dr. Hood graduated from UNMC in 1946. During his years at UNMC he also worked part time at Lord, Schrock and Johnson. Being exposed to Dr. Johnson's expertise and extensive knowledge, Dr. Hood decided to specialize in orthopaedic surgery. In 1968, Dr. Hood became the first chair of the Department of Orthopaedic Surgery and Rehabilitation at UNMC. During his tenure (1968-1974), he pioneered the residency program in orthopaedics. In 1970, upon returning from Europe to study hip arthroplasty, he performed the first hip replacement in Nebraska. Mrs. Hood established professorships in honor of each to foster high standards of patient care, education and research and, in turn, perpetually inspire orthopaedic surgeons to maintain the department's mission and standard of excellence.

Dr. James R. Neff and Dr. Julia A. Bridge

During the nine years the late Dr. James R. Neff served as chair of the Department of Orthopaedic Surgery (1991-2000), he was responsible for the development of a biomechanics laboratory. Prior to his death, he and his wife, Dr. Julia Bridge, gave a valuable in-kind gift of equipment for the lab in the Scott Technology Transfer and Incubation Center. "I've always been interested in biomechanics," Dr. Neff had said. He designed the Neff Femoro-Tibial Nail, a system of modular implants used in tumor reconstruction. A graduate of the University of Kansas Medical School, Dr. Neff completed his orthopaedic training at the University of Michigan, served in the Navy, and completed a musculoskeletal fellowship at the University of Florida. The vertical milling machine, engine lathe, drill press, hand tools, and many parts and accessories made it easier to customize fixtures for multiple projects in the department's world-class laboratory. "I feel indebted to the faculty and residents of the department," Dr. Neff had said. "Donating my equipment will enhance the capabilities of the laboratory; it was a natural fit." Dr. Bridge, a cytogeneticist and pathologist, was a courtesy professor in the Department of Orthopaedic Surgery.

Harold and Marian Andersen

Harold and Marian Andersen became longtime supporters of the Department of Orthopaedic Surgery and Rehabilitation and the University of Nebraska as alumni, patients and donors. In 2012, the couple established the Harold and Marian Andersen Lectureship for Orthopaedic Surgery. The lectureship allows the department to bring a non-orthopaedic speaker to its resident graduation ceremonies each year. Harold Andersen was president, chief executive officer and publisher of the Omaha World-Herald from 1966 to 1989. Marian Andersen was the first woman to head the Heartland Chapter of the American Red Cross. She served as vice chairman of the American Red Cross Board of Governors and served on the board of the Public Broadcasting System. In their tradition of humanitarian service, the Harold and Marian Andersen Lectureship seeks to inspire broad interests, enriching experiences and ongoing community outreach. Harold Andersen was the inaugural speaker in 2012.

Dr. Roy and Leslie Guse

Roy Guse, M.D., and his wife, Leslie, have a permanent place on the Wall of Honor for their support of research. The Roy and Leslie Guse Family Fund supports the Department of Orthopaedic Surgery and Rehabilitation in general, while the Roy and Leslie Guse Orthopaedic Research Fund is a permanent endowment in support of researchers in the department. In making the gift, Dr. Guse cited gratitude for his own residency and the chance given to him by Dr. John Connolly, who headed the department at the time. The experience allowed him to fulfill his dream as an orthopaedic surgeon. The 1990 alum said that without his five-year residency, "I would have had to choose a different and certainly less-satisfying career path." Research played an important role in Dr. Guse's residency training. He came to UNMC as a second-year research resident after completing a yearlong internship at Mount Sinai Medical Center and a medical degree from the Medical College of Wisconsin. At the time, UNMC's residency program allocated one spot each year to a resident who primarily focused on research during the traditional third year. Dr. Guse has been part of an orthopaedic surgery practice in Lufkin, Texas, for nearly 40 years. He specializes in adult reconstructive surgery of the hip and knee.

Dr. Wayne and Eileen Ryan

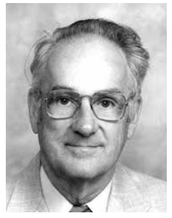
Dr. Wayne and Eileen Ryan were first added to the department's Wall of Honor in the spring of 2004, in recognition of a generous donation toward various research activities within the department. Dr. Ryan was a former faculty member in the Departments of Biochemistry, and Obstetrics and Gynecology, and also gained a campus-wide perspective as Dean for Research at UNMC's College of Medicine. A professor emeritus of Ob/Gyn, Dr. Ryan is also founder of Streck Laboratories, a leader in the innovation, research and manufacturing of hematology, chemistry, immunology and histology products for the clinical laboratory. "As a long-time faculty member and now emeritus professor, I feel a great deal of pride in what has been accomplished at UNMC," Dr. Ryan said. "As our corporation grew, I found I could support more and more research." It was a decision based on need. "UNMC faculty members told me how their research suffered from lack of funds, the same problem I had experienced as a faculty member," he said. A second donation toward research was received in 2005.

Christina M. Hixson

Christine M. Hixson likes to plant seeds of support and watch what grows. Her far-reaching legacy of giving dates to 1980, when she became the sole trustee of the Lied Foundation Trust upon the death of entrepreneur Ernst Lied, with whom she had worked for 40 years. Hixson's philanthropic support of the Department of Orthopaedic Surgery and Rehabilitation is rooted in first-hand experience — after two hip and two knee replacements by Dr. Kevin Garvin. In turn, her financial gifts have produced more than two decades of breakthroughs in research and education — and have ensured that more world-class advancements will be achieved at UNMC. In the fall of 2001, the Christina M. Hixson Endowed Research Fund for Orthopaedic Surgery and Rehabilitation was established at the NU Foundation, through the Lied Foundation Trust. The fund is a permanent endowment from which a portion of the annual earnings support various research projects essential to advancement of orthopaedic medicine. Resulting studies have generated interest in, and additional funding for, the department's biomechanics laboratory. In 2012, a second substantial gift provided ongoing research and orthopaedic resident education. "The department would not be where it is today without the philanthropic vision of remarkable foundations and trustees like Christina Hixson," said Dr. Garvin, who first met Hixson in the 1990s as an arthritis patient.

Dr. John F. Connolly

The Connolly Orthopaedic Surgery and Rehabilitation Fund was established by John Connolly, M.D., who served as chair of the Department of Orthopaedic Surgery from 1974 to 1990. He and his wife, Anne, were living in Orlando, Florida, where he was head of Orthopaedic Surgery at the Orlando Medical Center, when he was added to the Wall of Honor. "I believe the old saying, 'You make a living by what you get; and you make a life by what you give,' " said Dr. Connolly. As a former department chair, he knows private gifts provide vital resources beyond fluctuating annual budgets. Each year, the department presents the John F. Connolly Award for Outstanding Research to a graduating resident. "Research was fulfilling in my life, and this fund will be used to help residents and others conduct research and solve problems, which in turn benefits our entire field," he said.



Dr. Richard A. Pettee

Dr. Richard A. Pettee was an Army Air Corps veteran who attended the University of Nebraska on the G.I. Bill, graduated with a medical degree in 1951 and completed his orthopaedic surgery residency in 1956 at the University of Minnesota. He met his future wife, Kathryn, during his internship at Chas T. Miller Hospital in St. Paul, Minnesota. The Pettees settled in Richland, Washington, in 1956, where Dr. Pettee established the Tri-Cities' first orthopaedic practice (later joined by Dr. Louis Field in 1963). He retired from practice in 1992. In June 2011, Kadlec Regional Medical Center dedicated a surgical waiting room in Dr. Pettee's honor for his longtime work in health care for Tri-Citians. Dr. Pettee was a member of the American Academy of Orthopaedic Surgery, the North Pacific Orthopaedic Society, and other medical organizations. The Dr. Richard and Kathryn Pettee Orthopaedic Excellence Fund at UNMC supports academic research in surgery and rehabilitation.

Dr. Robert G. Volz

Robert Volz, M.D., is a distinguished alum of the UNMC College of Medicine and a long-time friend of the Department of Orthopaedic Surgery and Rehabilitation. In 2012, the pioneering orthopaedic surgeon and designer of artificial joints endowed funding for a department Chair of Biomechanics, including an annual salary stipend and support for scholarly research and creative activities. Earlier, Dr. Volz established the Robert G. Volz, M.D., Research Fund providing annual funding for research and educational initiatives to bolster the orthopaedic residency program. Both future gifts will be funded through Dr. Volz's estate. "I am extremely appreciative of the education I received," Dr. Volz said. "As loyal alums, I think it is our obligation to pay back the institutions to which we credit our careers." Dr. Volz formed a lasting friendship – rooted in passion for the advancement of the field of orthopaedics – with the late Dr. James Neff, UNMC department chair from 1991-2000. Dr. Volz retired in 1992 from the University of Arizona College of Medicine, where he founded the Orthopaedic Research Laboratory and designed some of the earliest artificial joints, including the first artificial wrist and innovative total elbow and knee prostheses.

Dr. Jackson J. Bence

Earnings from the endowed Jackson Bence, M.D., Education and Research Fund support educational activities and research projects of the department. The late Dr. Jackson Bence was an active and devoted volunteer faculty member. A Navy veteran and 1958 Nebraska College of Medicine graduate, he practiced general surgery in Grand Island, Nebraska, for seven years before returning to UNMC for his orthopaedic residency training. In 1984, Dr. Bence and his wife, Carrie, moved to Lincoln where he joined the staff of the Veterans Administration Hospital. For many years, Dr. Bence supervised orthopaedic residents at the V.A. Hospitals in Lincoln and Omaha. He once said, "I love teaching residents because I learn too." Dr. Bence died in 2004. He was 75. Earnings from the principle of this fund provide perpetual support for departmental research and education.

Susan Buffett (The Sherwood Foundation)

Susie Buffett is a life-long champion of children and families. She has also supported the Department of Orthopaedic Surgery, furthering its education and research mission. Buffett chairs the Sherwood Foundation and the Buffett Early Childhood Fund. The Sherwood Foundation focuses on improving public education and alleviating poverty, primarily in Nebraska. The Buffett Early Childhood Fund works to improve early childhood education for youngsters growing up in low-income families. The Fund is particularly active in developing and supporting the network of Educare Schools located in Nebraska and across the country.

Momentum for the Next Century

Kevin L. Garvin, M.D.

THE 100-YEAR HISTORY OF ORTHOPAEDICS in Nebraska is a treasure-trove of pride, marked by surgeons who set down roots and dedicated themselves to making lasting impacts. Researching and writing this book has been both exciting and rewarding. Special thanks to the Omaha World-Herald, our publishing partner, for bringing our vision to life and, in the process, helping us celebrate a century of service.

Orthopaedic surgery's beginnings in Nebraska can be traced to several key individuals who were undoubtedly inspired by Nicolas Andry's definition of orthopaedics or orthopaidea: the rearing of children. Dr. John Prentiss Lord, the first chairman of the Department of Orthopaedic Surgery at the University of Nebraska from 1919 to 1931, devoted his life's work to the Munroe-Meyer Institute and the caring for children with musculoskeletal disabilities.

Dr. H. Winnett Orr, Dr. Robert Schrock and Dr. James E.M. Thomson were early pioneers who played significant roles establishing orthopaedic surgery in Nebraska and leaving an indelible mark nationally and internationally by their influence. Each served as president of the American Academy of Orthopaedic Surgery.

In 1969, orthopaedic surgery in Nebraska changed as formal training of residents began under the direction of Dr. L. Thomas Hood. The residency was further developed and expanded with the first full-time chairman, Dr. John F. Connolly, who was followed by Dr. James R. Neff.

The growth in the residency from three residents per year under the direction of Dr. Connolly to the current five residents per year has paralleled the growth of the department to nearly 30 full-time orthopaedic surgeons and 25 residents. The department's expansion, primarily over the last two decades, was accelerated by generous and thoughtful philanthropic support of friends of the department and grateful patients. The contributions of these distinguished individuals are recognized on our department's Wall of Honor. Our faculty's approach to patient care, inspired research and commitment to educating the best and brightest students are further testaments to this world-class department.

The future of orthopaedic surgery in Nebraska is secure. Clinical service has achieved nearly double-digit growth in each of the last several years; research success is at an all-time high with four National Institutes of Health grants and the new Davis Global Center with accredited advanced clinical surgical simulation having profound effects on resident education.

Need will continue to drive more growth. Musculoskeletal conditions are the foremost contributor to disability throughout North America. The four most common are carpel tunnel syndrome, tendinitis, rotator cuff disease and low back strain.

More than one-half of individuals age 18 and older and 3 out of 4 individuals age 65 and older suffer from one of these burdening diseases. They are without question the most common burden on Nebraskans, as well.

More than 7 million Americans are currently living with either a total hip or total knee replacement. The states with the highest prevalence (nearly 3%) include Nebraska, North Dakota, Iowa and Wisconsin and each has a prevalence that doubles the national average of 1.52%.

The prevalence of joint replacement is similar to the prevalence of stroke and myocardial infarction and much higher than the prevalence of heart failure. Based on our aging population, an estimated 11 million will undergo joint replacement each year. Additionally, 70% of this population will live up to four decades, emphasizing the need for continued clinical and radiographic surveillance.

The Department of Orthopaedic Surgery is well-positioned to stay at the forefront of and reach new milestones in research, medical education and clinical care. The commitment of UNMC and Nebraska Medicine to assist the department in its mission, coupled with the dedication of our faculty, will write the story of orthopaedic medicine in Nebraska for the next 100 years.

Kevin L. Garvin

Kevin L. Garvin, M.D.
Professor and Chair
L. Thomas Hood, M.D., Professor of Orthopaedic Surgery and Rehabilitation

Orthopaedic Residents


Lowell Niebaum
NV 1971


Dale Phelps**
1972


Oscar Jardon**
1972


William Smith*
NE 1973


Carl Schwartz
OR 1973


Richard Bergstrom
NE 1974


Ronald Boulware
TX 1974


John Kaufman
CA 1974


Robert Staver
OR 1974


James Kullbom
SD 1975


Robert Cochran II
NE 1975


Richard Wecker
WY 1975


Floyd Pohlman*
HI 1976


Jack Brindley
IA 1977


Neil Halbridge*
CA 1978


Eric Bugna*
CA 1978


William Boulden
IA 1978


John Yeakley*
NE 1979


Jasper Williams
WI 1979


Ronald Schwab
NE 1979


Barry Turner
NE 1980


Samar Ray
NE 1980


Alois Proett
WI 1980


Joel Adams
ME 1981


Edward Simodynes**
1981


Donald Walla
NE 1982


Ram Pankaj
IL 1982


Gurpal Bhuller*
VA 1982


Randall Neumann
NE 1983


Gary Porubsky*
LA 1983

*Unable to contact **Deceased


Gregg Taylor
WI 1983


Mark Buchman
NE 1984


Michael Schmidt
KS 1984


Christeen Kaga
NC 1984


Mark Secor
KY 1984


Scott Smith
UT 1985


Robert Hansen*
UT 1985


John Kelbel
IN 1985


Joseph Yao
AR 1986


Thomas Eastman
TX 1986

Larry Chidgey
FL 1986

F. Stig Jacobsen*
MN 1986

Lewis Oster Jr.*
CO 1987

Kirk Green
IA 1987

Paul Duwelius
OR 1987

David Peterson
NE 1987

Marcia Beckman-Nelsen* *1988*

Richard Shindell
AZ 1988

Gregory Hansen**
1988

Jeffrey Farber
IA 1988

Jan Davis
CO 1989

Lynn Crosby
NE 1989

Samuel Smith
CO 1989

Robert Dehne
TX 1989

Bryan Bredthauer
NE 1990

Kevin O'Malley
NE 1990

Michael Sicuranza
PA 1990

Roy Guse
TX 1990

Douglas Beard
CO 1991

Teri Formanek
IA 1991

*Unable to contact **Deceased

Orthopaedic Residents, continued


Bret Miller
IL 1991


Mark Goebel
NE 1991


Thomas Walsh
MN 1992


Jeffrey Moore
AK 1992


David Thull
AZ 1992


Jeffrey Tiedeman
NE 1992


Todd Kile
AZ 1993


Jeffrey Davick
IA 1993


Eric Gordon
MO 1993


Scott Beck
FL 1994


Ted Yee
CA 1994


Scott McMullen
NE 1994


James Hill
IL 1994


Robert Tait
NV 1994


Deepak Chavda
TX 1995


Robert Mileski
AZ 1995


Vern Prochaska
NE 1995


Clay Frank
WI 1995


John Miyano
WA 1996


Matthew Mormino
NE 1996


Julian Arroyo
WA 1996


Jeffrey Rodgers
IA 1996


Keith Hughes
NE 1997


Steven Kumagai
NE 1997


David Castro
CA 1997


Khiem Dao
CA 1997


John McClellan III
NE 1998


Charles Burt
NE 1998


Michael Sochacki
AZ 1998


Brett Fischer
NE 1998

*Unable to contact **Deceased


Jeffrey Zacharias
MI 1999


Stanley Bowling
KS 1999


Daniel Hoeffel
MN 1999


Erik Otterberg
NE 1999


Brian Brigman
NC 2000


Eric Watson
SD 2000


Edward Fehringer
NE 2000


John Schneider
WI 2000


Armodios Hatzidakis
CO 2001


Craig Mahoney
IA 2001

Michael Clare
FL 2001

Aaron Askew
OR 2001

Michael Thompson
NE 2002

James Ballard
OR 2002

David Inda
NE 2002

Douglas McInnis
ID 2002

Kristoffer Breien
MN 2003

Joshua Urban
NE 2003

Jason Browdy
MO 2003

John Sojka
KS 2003

Stephen Hansen
ID 2004

Brian Hasley
NE 2004

Richard Davis
ID 2004

Lori Reed
MS 2004

Anthony Lauder
WA 2005

Scott Humphrey
ID 2005

Edward Prince
UT 2005

Ivan Tarkin
PA 2005

Charles Rosipal
NE 2006

Daniel Mulconrey
IL 2006

*Unable to contact **Deceased

Orthopaedic Residents, continued


Mark Dietrich
NE 2006


Steven Volin
NE 2006


Kathleen Grier
NE 2006


Scott Swanson
NE 2007


David Buck
NE 2007


Kimberly Turman
NE 2007


Beau Konigsberg
NE 2007


Curtis Hartman
NE 2008


Randon Johnson
IL 2008


Leonard Kibuule
TX 2008


Michael Hawks
FL 2008


Erica Burns
WA 2009


Casey Johnston
SD 2009


Brian Kleiber
MO 2009


Justin Siebler
NE 2009


Kurt Bormann
MO 2010


Ryan Arnold
NE 2010


Michael Shevlin
ID 2010


Gustavo Cordero
CA 2010


Michael Carlson
UT 2011


Jason Erpelding
ND 2011


Michael Dee
UT 2011


Daniel Firestone
NE 2011


Ryan Hess
MN 2012


Nicholas Aberle II
KS 2012


Lucas Burton
TN 2012


Brian Vernon
UT 2012


Jeremy Toomey
ID 2013


Nolan May
NE 2013


Ann Knierim
ID 2013

*Unable to contact **Deceased


Eric Samuelson
NE 2013


Khalid Azzam
IN 2014


David Minges
MO 2014


Kevin Lindgren
MN 2014


Brent Hood
NE 2015


Andrew Taiber
IA 2015


Gregory Dammann
IL 2015


Todd Gaddie
NE 2015


Paul Nielsen
NE 2016


Scott Vincent
NE 2016

Kaitlin Neary
ID 2016

Paul Hong
CA 2016

Eric Bonness
NE 2017

Courtney Grimsrud
CO 2017

Paul Johnson
WI 2017

Andrew Kirkpatrick
WI 2017

Noah Porter
NE 2018

Benjamin Ogden
UT 2018

Sayfe Jassim
NE 2018

Lenoid Grossman
CO 2018

Todd Gilbert
UT 2019

Erik Bowman
CO 2019

Tyler Larson
MN 2019

Ryan Miller
CA 2019

Emmett Gannon
PA 2020

Darin Larson
WV 2020

Evan Larson
PA 2020

Joshua Locker
MO 2020

Daniel Sveom
VA 2020

*Unable to contact **Deceased

Grants

Federal: $10,637,062

2004-2021

NIH/NIA: Assays of Stem Cell Function in Clinical Aging Research

American Geriatric Society: Assessing the prevalence of rotator cuff tears in men and women 65 years of age and older

NRI: Design of nanoceramic materials with enhanced wettability and reduced brittleness

Otis Glebe Foundation: Navigated Freehand Bone Cutting for Knee Replacement

NIH: Stem Cell Quality Assays, Correlation with Aging/Health

Kerry Prosthesis Fund: Development of the Munroe-Meyer Institute Multi-disciplinary Clinic Serving Pediatric Patients Who Require a Prosthetic Device due to Anatomical Loss as a result of Trauma, Disease, or Congenital Conditions

Department of Defense: Material Science Smart Coatings

United States Navel Health Research Institute: Simplified Orthopaedic Surgery

DHHS/NIH/NIAMS: Early Detection and Intervention of Orthopaedic Implant Loosening Using Polymer Theranostics

NIH: 3D Bioprinting of Biomimetic Constructs for Rotator Cuff Augmentation

DHHS/NIH: Novel Biomaterials Enabled Cell and Therapeutic-Free Strategies for Endogenous Repair of Large Cranial Bone Defects

DHHS/NIH: Osteoarthritis After ACL Injury: Establishing Cumulative Joint Loading As a Preventative Target

Industry: $6,236,512

2004-2021

Biomet: Collaborative research with Biomet Manufacturing Corp. to investigate the longevity of a new mobile bearing total knee replacement system being designed by Biomet

DePuy Products: Investigating the feasibility of freehand navigated bone cutting for total knee replacement surgery

Biomet: A study of the laxity and constraint of the Biomet vanguard anterior-stabilized (AS) knee replacement system

Aastrom Biosciences: ODG-1 autologous bone marrow cells for the treatment of appendicular skeletal fracture non-union

Zimmer: A multi-center, prospective clinical outcomes study to obtain data on Zimmer revision or primary hip arthroplasty devices for primary and revision total arthroplasty of the hip joint in patients with large boney defects of the acetabulum or proximal femur

Advanced Total Ankles: An experimental investigation on the biomechanics of the advanced total ankle replacement system

Zimmer: Zimmer minimally invasive solutions satellite institution agreement

Advanced Orthopaedics Implants: Pin-on-Disk wear testing of a novel ceramic material for use in total joint prostheses

Zimmer: Minimally invasive solutions primary hip arthroplasty outcome study

Howmedica Osteonics: Study to Investigate the Wettability of Different Coatings for Orthopaedic Implants

Biomet: Collaborative Research with Biomet Inc. to Investigate the Longevity of a TiNbN hard Coating on Vanguard PS knee femoral components

Biomet: In-vitro Wear Durability Study of the Biomet Ceramic-on-Metal Total Hip Replacement System

Biomet: Evaluation of a New Highly Crosslinked UHMWPE Stabilized with Vitamin E for Posterior-Stabilized Total Knee Replacements

Exactech: Effect of Posterior Slope on Wear of Bearings

SpineMedica: Pre-Durability Study of Cervical Spine TDR Prototypes

Exactech: Wear Testing of Total Knee Replacement Implants. Cutting-Edge Know-How and Support; from the University to the Implant Manufacturing Industry to Help Patients

Arthrex: Determining the Fatigue Strength of Novel Femoral and Tibial Unicompartmental Cartilage Replacement Knee Components

Exactech: Evaluation of the effects of posterior slope installation on the wear of DCM UHMWPE TKR bearings

Eska Implants: Titanium, Polyethylene Hip Replacement

Arthrex: Design and Implementation of Novel Testing Methodology for Durability of Novel Partial Tibiofemoral Cartilage Replacement Components

Arthrex: Phase II: Determining the Fatigue Strength of Novel Partial Femoral and Tibial Uni-Compartmental Cartilage Replacement Knee Components

Gruppo Bioimplanti: Simulator Study of the Wear of Posterior Stabilized Fibial Bearings

Renovis Surgical Technologies: Characterization of CIMA and E-CIMA UHMWPE as a Bearing Against CoCr Femoral Hip Components Under Abrasive Conditions

Renovis Surgical Technologies: Modularity Strength Tests of the A200 CR Knee System

Exponent: In-vitro Wear Durability Study of the Stelkast Knee Systems, Comparing Two Bearing Material Types

Exponent: Simulator Wear Study of Metallic-on-Plastic and Ceramic-on-Plastic Total Hip Replacement Systems from Japan

Biomet: Strength and Longevity of Vitamin E Highly Cross Linked Polyethylene of a Revision TKR System (E1 vs. PS+)

ETC: Characterization of the Wear of Aged vs. Un-Aged Polyethylene; A Pin on Disc Study

Biomet: Simulator Study of the Wear of Large Size Vanguard SSK Constrained ArCom Tibial Bearings

Arthrex Inc.: WO2011-001 Friction Characteristics of Two Polyurethane Materials Against Canine Cartilage

Biomet: Knee Simulator Test to Determine Wear Properties of Prelude Knee

Ortho Development: Pin-on-Disk Screening Wear Test of Four Types of UHMWPE

Ortho Development: Wear Testing of 2 Types of UHMWPE Using Force-Controlled Knee Simulators per ISO 14243-1

Exponent: Testing Total Knee Replacement Systems Under Simulated High Abrasion Conditions: Testing the Stelkast PS System for 2 Million Cycles

Arthrex: Battery of Tests to Characterize the Arthrex TKR System: Contact Area & Stress, Constraint and Range of Motion, and Modular Interlock Strength

Arthrex: Wear Tests for the Arthrex CR, CR-CS and PS THR Components

U of Tokyo: In-vitro Wear Evaluation of Total Knee Replacement Systems with MPC Coated Polyethylene

Biomet: Structural Integrity and Overall Survivability Testing of a Novel Hinged Total Knee Replacement System by Biomet

Arthrex: Prolonged Simulator Wear Study of Metallic-on-Plastic Total Hip Replacement Systems from Arthrex

Arthrex: Prolonged Simulator Wear Study of Metallic-on-Plastic Total Hip Replacement Systems under Abrasive Conditions

Arthrex: Knee Simulator Wear Study of an Arthrex PS TKR Design Comparing Two Bearing Materials

Exponent: In-vitro wear durability study of the Stelkast knee systems, comparing two bearing material types under abrasive conditions

Exponent: Simulator wear study of ceramic-on-plastic total hip replacement systems from Japan comparing differently processed polymer bearing

Biomet: Extension of a study for the wear of a prototype hinged total knee replacement system

Lima Corp: Simulator wear study of duo-mobility total hip replacement systems

Biomet: Simulator Study of the Wear of Biomet Hinged Total Knee Replacement Bearing Components

Arthrex: In-vitro Durability Study of the Arthrex PS Knee System in Abrasive and Non-abrasive Conditions and Femoral Scratching Test

Amedica: Comparative Testing of Ceramic Femoral Heads for Total Hip Arthroplasty (Amedica Phase I)

Arthrex: In-vitro Wear Durability Study of the iBalance Unicondylar Knee System with Vitamin E stabilized Highly Cross-Lined Bearings

Anthrax: Modular Interlock Evaluation of a Unicompartmental Knee Replacement

Arthrex: Pin-on-Disk UHMWPE Wear Comparison Between Titanium vs. Cobalt-Chrome Orthopaedic Metal Alloys

Arthrex: In-vitro Study on the Initial Fixation and Micromotion of an Uncemented TKR Baseplate

Optimotion: Constraint and Range of Motion Tests of the Optimotion CR TKA

Optimotion: Further Constraint Testing of Modified Designs of the Optimotion Total Knee Replacement Systems

Arthrex: Pin-on-Disk UHMWPE Wear Comparison Between Titanium vs. Cobalt-Chrome Metal Alloyd Under Abrasive Conditions

Optimotion: In-vitro Wear Durability Study of Two Sizes of OptiMotion Total Knee Replacement Systems

Arthex: Battery of three types of mechanical tests of a new PS Total Knee Replacement System

Arthrex: Two simulator wear tests of a new PS Total Knee Replacement System under normal and highly abrasive conditions

Optimotion: Studying uncemented tibial tray Micromotion, bearing interlock strength and constraint of the OptiMotion Total Knee Replacement System

Optimotion: Knee simulator wear study of a middle size posterior stabilized OptiMotion Total Knee Replacement System

Exponent: Wear study of conventional and highly Crosslinked vitamin E stabilized UHMWPE against polished and intentionally scratched CoCr metal femoral hip components

Optimotion: Knee simulator wear study of a Size 7 Poly Insert Implants on Size 8 Femoral Implants of the OptiMotion Total Knee Replacement System

TDA: Pin-on-disk wear testing of novel carbon fiber re-enforced UHMWPE for use as bearings for total joint replacements

Implanet: Contact area, stress, range of motion, constraint, interlock strength and wear testing of a total knee replacement system by Implanet

Monogram: Initial fixation and micromotion of the uncemented tibial baseplate of the Monogram Orthopaedics Knee System

Implanet: Patellar Constraint and Contact Area Tests for the Implanet Madison Knee System

DMT: Characterization of the Double Medical Total Hip Replacement system: an In-vitro wear study

Arthrex: Strength and fatigue evaluation of the posterior stabilizing post of a constrained Total Knee Replacement system

Globus: A battery of hip clean and highly abrasive wear, and impingement, test studies with Globus Medical

Globus Medical: Two Extra Impingement studies on Globus Medical Total Hip Replacement systems

DMT: In-vitro Wear Durability Study of UHMWPE Tibial Bearings from the Double Medical Total Knee Replacement System

TDA Research: Implant specimen preparation and in-vitro wear durability study of a carbon fiber reinforced Total Knee Replacement system by TDA Research

Arthrex: Pin-on-disk UHMWPE wear comparison studies with two types of Titanium orthopaedic metal alloys

Exponent: Characterization of UHMWPE wear in Dual Mobility Total Hip Replacements under normal and abrasive conditions

Beijing Chunlizhengda: Prototype of Dr. Haider's External Tool Tracking System

Optimotion: In-vitro Wear Durability Study of the Optimotion Total Knee Replacement System with Left Femoral Components Paired with Right Tibial Components

Clinical Trials: $1,329,052

2004-2021

Pfizer: Descriptive Analysis of the Effect of Surgeries on Human Immune Status

PQORI: Comparative Effectiveness of Pulmonary Embolism Prevention after Hip and Knee Replacement

University: $60,000

2004-2021

Wear of Total Knee-Joint Prosthesesa

Other: $1,348,128

2004-2021

Tohoku University: Wear Characterization of Metal-on-metal Total Hip Replacement Components with Differing Carbon Content

UNMC Cardiology: AngioTeacher Interactive Education Software

TRAK Surgical: Work Order No. 1

NYUM: Experimental Study of Wear Durability of a Novel Unicompartmental Knee Replacement Design, Comparing Standard & Reverse Material Bearing Couples

ROTC: Registry for Orthopaedic TraumaB in Children

NYUM: Wear of Total Knee-Joint Prostheses

PEPPER: Comparative Effectiveness of Pulmonary Embolism Prevention after Hip and Knee Replacement

Brittle Bone Disorders Consortium of the Rare Disease Clinical Research Network

Brittle Bone Disorders Consortium

Registry for Orthopaedic Trauma in Children (ROTC)

Dr. Kevin L. Garvin hosted
The Hip Society in Omaha for its
50th anniversary in October 2017.

Hani Haider, Ph.D., President,
International Society for Technology
in Arthroplasty (ISTA)

Orthopaedic Offices Held

National/International Orthopaedic Surgery Associations and Boards

Year	Organization
	American Orthopaedic Association, est., 1887
1937	H. Winnett Orr, President
1984	Wayne Southwick, MD, Vice President
1995	Kevin L. Garvin, MD, American-British-Canadian Traveling Fellow
2003	Wayne Southwick, MD, Diversity Award
2009	Kevin L. Garvin, MD, Board Member, Council of Orthopaedic Residency Coordinators (CORD)
2010	Susan A. Scherl, MD, Austrian-Swiss-German Traveling Fellow
	American Academy of Orthopaedic Surgeons, est., 1933
1933	H. Winnett Orr, MD, Founding member
1940	Robert Schrock, MD, President
1946	J.E.M. Thomson, MD, President
1998	Kevin L. Garvin, MD, Chair, Committee on Infection
2010	Hani Haider, PhD, Consultant, Biomedical Engineering Committee
	American Board of Orthopaedic Surgery, est., 1934
1941	Robert Schrock, MD, Board Member
2018	Kevin L. Garvin, MD, Board Member

Specialty Societies/Associations

Year	Organization
	The Hip Society, est. 1968
2017	Kevin L. Garvin, MD, President
	Pediatric Society of North America, est. 1984
1994	Walter W. Huurman, MD, Member, Board of Directors
2000	Paul W. Esposito, MD, Chair, Trauma Committee
2002	Susan A. Scherl, MD, Chair, Bylaws Committee
2009	Susan A. Scherl, MD, Chair, Education Committee
2015	Susan A. Scherl, Program Chair
2020	Matthew A. Halanski, Chair, Membership Committee
	American Academy of Pediatrics, Section on Orthopaedics est. 1976
1987	Walter W. Huurman, MD, Chair
1994	Walter W. Huurman, MD, Recipient, Distinguished Service Award
2017	Paul Esposito, MD, Recipient, Distinguished Service Award
	US Bone and Joint Decade
2009	Paul W. Esposito, MD, Board Member
	Musculoskeletal Transplant Foundation (MTF), est. 1987
2002	Brian E. Brigman, MD, Member, Board of Trustees
2004	James R. Neff, MD, Chair, Board of Trustees
2006	Sean V. McGarry, MD, Member, Board of Trustees
	Musculoskeletal Tumor Society (MSTS), est. 1977
1977	James R. Neff, MD, Co-founder
1984	James R. Neff, MD, President
2018	Brian E. Brigman, MD, Chair, Membership Committee
	The Knee Society, est. 1983
2012	Kevin L. Garvin, MD, Chair, Research Committee
2017	Kevin L. Garvin, MD, Chair, Membership Committee
	Musculoskeletal Infection Society, est. 1989
1995	Kevin L. Garvin, MD, Member, Executive Committee
2020	Angela Hewlett, MD, President, Executive Board

Specialty Societies/Associations, continued

Year	Organization
	American Society for Testing and Materials (ASTM International)
2002	Hani Haider, PhD, Co-chair, Knee Wear Testing Standards Committee
2011	Hani Haider, PhD, Director, Review and Information Technology
2018	Hani Haider, PhD, Chair, F04.93 US TAG/ISO/TC 150 Committee
2018	Hani Haider, PhD, Chair, Orthopaedic Devices F04.02 Division II Committee
	International Society for Technology in Arthroplasty (ISTA)
2008	Hani Haider, PhD, Program Chair
2009	Hani Haider, PhD, Chair, Education Committee
2019	Hani Haider, PhD, President
	International Organization for Standardization (ISO)
2002	Hani Haider, PhD, Chair, Expert Group-Revising Knee Wear Testing Standards
2018	Hani Haider, PhD, Chair and Head, US TAG of US Delegation ISO Technical Committee 150 on Implants for Surgery
	Mid-America Orthopaedic Association, est 1982
1982	Bernard L. Kratochvil, MD, Founding Member
2004	Kevin L. Garvin, MD, President
2007	Timothy C. Fitzgibbons, MD, President
2008	Lynn A. Crosby, President
2019	Matthew A. Mormino, MD, President
2020	Craig R. Mahoney, President

Active Studies

Official Study Title	Principal Investigator	Co-Investigator
Registry for Orthopaedic Trauma Children (ROTC)	Susan A. Scherl, MD	
Molany-Brittle Bone Study	Maegan J. Wallace, MD	
Brittle Bones OI Consortium - Longitudinal Study of Osteogenesis Imperfecta, Baylor Longitudinal Study of Osteogenesis Imperfecta	Maegan J. Wallace, MD	
Cross-linked Collagen Peptides as a Urinary Biomarker of OI Pathobiology	Maegan J. Wallace, MD	
Operative Treatment of Forearm Deformities in Children with Osteogenesis Imperfecta	Maegan J. Wallace, MD	
Long-Term Results of Femoral and Tibial Osteotomies and Fassier-Duval Nailing in Children with Osteogenesis Imperfecta	Maegan J. Wallace, MD	Paul W. Esposito, MD
Pediatric: Osteogenesis Imperfecta (OI) Metabolic Bone Data Registry	Maegan J. Wallace, MD	
Air Displacement Plethysmography in Children and Adults with Osteogenesis Imperfecta	Maegan J. Wallace, MD	Paul W. Esposito, MD
Longitudinal Study of Osteogenesis Imperfecta. Years 6 to 10	Maegan J. Wallace, MD	Paul W. Esposito, MD
The Role of Hemiepiphysiodesis and Growth Modulation in Patients with Osteogenesis Imperfecta	Maegan J. Wallace, MD	Paul W. Esposito, MD
Traditional vs. Wideband Tympanometry for Hearing Assessment in Pediatric Osteogenesis Imperfecta: A Retrospective Analysis	Maegan J. Wallace, MD	Paul W. Esposito, MD
Pediatric: Osteogenesis Imperfecta (OI) / Metabolic Bone Data Registry	Maegan J. Wallace, MD	Paul W. Esposito, MD
Molecular Studies of Anonymous Samples From Non-BCM Investigators Involved in the Study of Skeletal Dysplasias	Maegan J. Wallace, MD	Paul W. Esposito, MD
Nonlinear Ultrasound for Assessment of Bone Fracture and Healing	Matthew A. Halanski, MD	
Radiographic Evaluation of Long Bone Growth after Fracture	Matthew A. Halanski, MD	
Radiographic Measures of Pediatric Pelvis Growth	Matthew A. Halanski, MD	
Spine Fusion Database-OI	Brian P. Hasley, MD	
Pediatric Trauma Survey Part 2	Brian P. Hasley, MD	

Active Studies, continued

Official Study Title	Principal Investigator	Co-Investigators
Outcomes of Total Hip Replacement utilizing Oxidized Zirconium Femoral Heads on Cross-linked Polyethylene	Kevin L. Garvin, MD	Curtis W. Hartman, MD; Beau S. Konigsberg, MD
Clinical Function Correlates with Ideal Biomechanical Reconstruction	Kevin L. Garvin, MD	
Comparative Effectiveness of Pulmonary Embolism Prevention after Hip and Knee Replacement (PEPPER): Balancing Safety and Effectiveness	Kevin L. Garvin, MD	Curtis W. Hartman, MD; Beau S. Konigsberg, MD
Minimum 13-year Follow-up of Total Hip Arthroplasty with Longevity Highly Cross-linked Polyethylene Liners	Kevin L. Garvin, MD	Curtis W. Hartman, MD; Beau S. Konigsberg, MD
Immune Panel Repertoire	Tammy L. Kielian, MD	Kevin L. Garvin, MD; Curtis W. Hartman, MD; Beau S. Konigsberg, MD
Descriptive Analysis of the Effect of Surgeries on Human Immune Status	Tammy L. Kielian, MD	Kevin L. Garvin, MD; Curtis W. Hartman, MD; Beau S. Konigsberg, MD
Long-Term Outcome and Risk of Periprosthetic Fracture in Total Hip Arthroplasty using Uncemented Synergy Tapered Stems	Kevin L. Garvin, MD	
Wear Rate Differences between Oxinium and Cobalt Chrome Heads when Coupled with either UHMW or HXLPE - 10 Year Follow-up (Multi-center)	Kevin L. Garvin, MD	
The Effect of Tourniquet on Gait Biomechanics Following Total Knee Arthroplasty: A Randomized Controlled Study	Curtis W. Hartman, MD	Matthew A. Tao, MD
The Coefficient of Friction of Human Osteoarthritis Cartilage on Joint Repair Materials Lubricated by Human Osteoarthritic Synovial Fluid	Curtis W. Hartman, MD	Hani Haider, PhD
The Effect of Closed Incision Negative Pressure Wound Therapy on Post operative Infection and Surgical Site Complications following Revision Total Hip and Knee Arthroplasty	Curtis W. Hartman, MD	
Comparison of Outcomes Between Microorganisms in Prosthetic Joint Infections Following Two-Stage Revision	Curtis W. Hartman, MD	Beau S. Konigsberg, MD; Kevin L. Garvin, MD
Long Term (> 5 years) Follow-up of Two-stage Reimplantation of Prosthetic Joint Infections (Multi-center)	Kevin L. Garvin, MD	Curtis W. Hartman, MD; Beau S. Konigsberg, MD
Wear Analysis in Total Hip Arthroplasty utilizing Oxidized Zirconium and Cross-linked Polyethylene	Kevin L. Garvin, MD	Curtis W. Hartman, MD
Evaluation of Outcomes of Uncemented Acetabular Fixation in Total Hip Arthroplasty for Post-traumatic Arthritis Following an Acetabular Fracture	Beau S. Konigsberg, MD	Curtis W. Hartman, MD; Kevin L. Garvin, MD
Total Joint Arthroplasty with an Implanted Left Ventricular Assist Device	Beau S. Konigsberg, MD	Curtis W. Hartman, MD; Kevin L. Garvin, MD
Descriptive Analysis of the Effect of Surgeries on Human Immune Status		Kevin L. Garvin, MD; Curtis W. Hartman, MD; Beau S. Konigsberg, MD
Prevalence of Staphylococcus Aureus in Patients Undergoing Total Joint Arthroplasty and the Effectiveness of Preoperative Decolonization in Preventing Postoperative Infection	Kevin L. Garvin, MD	Curtis W. Hartman, MD; Beau S. Konigsberg, MD
Objective Performance Thresholds Indicating Operative Need (OPTION) for Total Hip and Total Knee Replacement: A Shared Decision-Making Survey	Kevin L. Garvin, MD	Curtis W. Hartman, MD; Beau S. Konigsberg, MD
Convolutional Neural Network for the Detection of Periprosthetic Joint Infection	Curtis W. Hartman, MD	Beau J. Kildow, MD
Convolutional Neural Network for the Identification of Hip Implants	Beau J. Kildow, MD	Kevin L. Garvin, MD; Curtis W. Hartman, MD; Beau S. Konigsberg, MD
Artificial Intelligence in Foot Injury Classification	Alex B. Sawatzke, MD	Matthew A. Mormino, MD; Sara M. Putnam, MD; Justin C. Siebler, MD
Distinguishing Commensal vs. Pathologic Staphylococcus Species in Cases of Fracture Nonunion after Internal Fixation	Matthew A. Mormino, MD	Kevin L. Garvin, MD; Curtis W. Hartman, MD; Beau S. Konigsberg, MD
The Effect of IV Non-steroidal Anti-Inflammatory Drugs and IV Corticosteroids on the Likelihood of Dysphagia and Dysphonia Following Anterior Cervical Discectomy and Fusion	Scott A. Vincent, MD	Chris A. Cornett, MD

Official Study Title	Principal Investigator	Co-Investigator
Understanding the Difference in the Expression of the Hedgehog Pathway before and after Chemotherapy in Solid Tumors	James B. Ford, DO	Sean V. McGarry, MD
Identifying Hip Fractures Using Deep Convolutional Neural Networks	Matthew A. Mormino, MD	Justin C. Siebler, MD; Kevin L. Garvin, MD; Curtis W. Hartman, MD; Beau S. Konigsberg, MD; Melissa N. Manzer, MD; Craig W. Walker, MD
Assessing Outcomes in Revision Total Shoulder Arthroplasty Using Allograft	Matthew J. Teusink, MD	
Can Intraosseous Antibiotics Improve the Results and Debridement and Prosthetic Retention for Prosthetic Joint Infection	Beau J. Kildow, MD	Curtis W. Hartman, MD
Gait Outcomes following nonoperative treatment of isolated distal fibula fractures	Sara M. Putnam, MD	
Inter-observer Reliability of Sacral Scope, Pelvic Femoral Motion and Cup Ante-inclincation on Anteroposterior Pelvic Radiographs in Healthy Individuals	Scott A. Vincent, MD	Kevin L. Garvin, MD; Beau J. Kildow, MD
Current Practices in Ulnar Nerve Handling During Distal Humerus Fracture Fixation	Philipp N. Streubel, MD	
Comparison of Gait Syndesmosis Injuries with Screw Fixation vs. Suture Button	Sara M. Putnam, MD	Matthew A. Mormino, MD; Alex B. Sawatzke, MD; Justin C. Siebler, MD
Evaluation of the Effect of a Sling on the Gait of Elderly Patients Undergoing Total Shoulder Arthroplasty	Matthew J. Teusink, MD	Matthew A. Tao, MD
An Immediate Weight-bearing Protocol vs. Stress Radiography to Determine Ankle Stability in Patients with Isolated SER Distal Fibular Fractures	Matthew A. Mormino, MD	Sara M. Putnam, MD; Justin C. Siebler, MD
Association Between Mortality and Early Post-operative Ambulation after Distal Femur Surgery in Elderly Patients	Sara M. Putnam, MD	Matthew A. Mormino, MD; Justin C. Siebler
In-vitro Models of Cartilage Development, Homeostasis, and Disease	Andrew Dudley, PhD	Beau S. Konigsberg, MD
Manipulation under Anesthesia (MUA) to Treat Postoperative Stiffness after Total Knee Arthroplasty	Kevin L. Garvin, MD	Curtis W. Hartman, MD; Beau S. Konigsberg, MD
UNMC Rheumatology Serous/Synovial Fluids and Tissue Bank	Geoffrey Thiele, PhD	Kevin L. Garvin, MD; Curtis W. Hartman, MD
Impact of Cancellation of Elective Surgery in Response to the COVID-19 Pandemic on Quality of Life in Orthopaedic Surgery Patients	Justin C. Siebler, MD	
Orthopaedic Registry to Monitor Treatment Outcomes	Kevin L. Garvin, MD	Chris A Cornett, MD; Curtis W. Hartman, MD; Beau S. Konigsberg, MD; Philipp N. Streubel, MD; Matthew J. Teusink, MD; Scott A. Vincent, MD
Adductor Canal Block and the Effect on Gait	Matthew A. Tao, MD	Elizabeth A. Wellsandt, PhD; Nicholas E. Heiser, MD
Sleep Improvement Program and Academic Performance	Matthew A. Tao, MD	Beau S. Konigsberg,MD; Physical Therapy Dept. and Graduate Medical Education
Isolated Radial Tears of the Lateral Meniscus in Adolescents	Matthew A. Tao, MD	Elizabeth A. Wellsandt, PhD
Medical Management of Painful Bone Lesions	Matthew A. Tao, MD	Laura Graeff-Armas, MD; Elizabeth A. Wellsandt, PhD
Accuracy of MRI in Diagnosis of Meniscal Tears in Patients with and without Concomitant ACL Injury	Matthew A. Tao, MD	Elizabeth A. Wellsandt, PhD; Melissa N. Manzer, MD
Role of Cumulative Knee Joint Loading in ACL-Injured Articular Cartilage	Elizabeth A. Wellsandt, PhD	Matthew A. Tao, MD
Protokinetics Zeno Walkway Validation Study	Elizabeth A. Wellsandt, PhD	Matthew A. Tao, MD
Return to Sport Testing after ACL Injury	Elizabeth A. Wellsandt, PhD	Matthew A. Tao, MD
Mobile, Biosensor Technology for Measuring Joint-Level Human Motion	Elizabeth A. Wellsandt, PhD	Eric Markvicka, PhD
Parameniscal Fat Edema as a Marker for Meniscal Tear in Equivocal MRI	Melissa N. Manzer, MD	Elizabeth A. Wellsandt, PhD; Matthew A. Tao, MD

Completed Studies 2008-2021

Year	Official Study Title	Principal Investigator
2008	Comparison of the Single vs. Double Incision Technique for Achilles Tendon Reconstruction with Flexor Hallucis Tendon Transfer — Is the Second Incision Really Necessary?	Timothy Fitzgibbons, MD
	Osteotomy Healing in Pediatric Osteogenesis Imperfecta Patients Receiving Low-Dose Pamidronate Therapy	Paul W. Esposito, MD
	Should Obese and Morbidly Obese Patients Wait for TJA?	Curtis W. Hartman, MD
	Radial Head Replacement Stem Loosening and Its Association with Foreman Systems	Edward V. Fehringer, MD
	Full Thickness Rotator Cuff Re-Tear Prevalence and Correlation with Shoulder Function in Patients 65 Years and Older	Edward V. Fehringer, MD
	Evaluation of a Cuff Tear Arthropathy Hemiprosthesis for the Treatment of Glenohumeral Arthritis in the Presence of a Chronic Rotator Cuff Tear	Edward V. Fehringer, MD
2009	Outcomes Following Fixation of Proximal Humerus Fractures with Short Intramedullary Locked Nail	Edward V. Fehringer, MD
	Displaced Femoral (Neck Fracture) Arthroplasty Consortium for Treatment and Outcomes (DFACTO)	Kevin L. Garvin, MD
	Full Thickness Rotator Cuff Retear Prevalence and Correlation with Shoulder Function in Patients 65 Years and Older	Edward V. Fehringer, MD
	Computed Tomographic and Functional Follow-Up of Glenoid Anchor Peg Component Fixation Utilizing Autologous Bone Graft in Total Shoulder Arthroplasty	Edward V. Fehringer, MD
	A Study in the Simulation of Chondrocytes in 3-D Culture by Continuous Ultrasound	Sean V. McGarry, MD
	Assays of Stem Cell function in Clinical Aging Research	Margaret A. Kessinger, MD
	An Evaluation of Outcomes of Total Joint Arthroplasty in Orthotopic Liver Transplant Recipients	Kevin L. Garvin, MD
	A Prospective Study on the Effect of surgical Treatment for Chronic Posttraumatic Headaches (Whiplash Associated Disorders) on Photophobia	N. Ake Nystrom, MD
	Outcomes Following Acetabular Fracture	Kevin L. Garvin, MD
	Distal Radius Fractures	Edward V. Fehringer, MD
	Plate Augmentation for Femoral Shaft Nonunions Previously Treated with an Intramedullary Nail	Edward V. Fehringer, MD
2010	Acute Bracing of Humerus Shaft Fractures	Edward V. Fehringer, MD
	Incidences of Spondylolysis and Spondylolisthesis in Children with Osteogenesis Imperfecta	Paul W. Esposito, MD
	Clinical Results of the Anatomic Compression Arthrodesis Technique with Anterior Tension Band Plate Augmentation for Ankle Arthrodesis	Matthew A. Mormino, MD
	Functional Outcomes after Plate Fixation of Humerus Shaft Fractures: Anterior Versus Posterior Approach	Edward V. Fehringer, MD
	Linkage Analysis and Gene Mapping of Familial Spinal Disorders (Scoliosis, Scheuermann's Kyphosis, Spondylolisthesis, Lumbar Disc Disease, Osteoporosis)	Edward V. Fehringer, MD
	Functional Outcomes Following a Quad Snip Approach in Knee Revision Surgery	Kevin L. Garvin, MD
2011	Why Are Total Hip Arthroplasties Revised?	Kevin L. Garvin, MD
	Surgical Treatment Outcomes for Whiplash Associated Disorder	N. Ake Nystrom, MD
	Long-term (24 -27 years) Follow-up after Total Hip Arthroplasty using a Tapered Tri-lock Component Inserted without Cement.	Kevin L. Garvin, MD
	Evaluation of Functional Outcomes of Mini Open Rotator Cuff Repair Without Acromioplasty	Edward V. Fehringer, MD
	Glenoid Anchor Peg component Fixation Utilizing Autologous Bone Graft in Total Shoulder Arthroplasty Follow-Up	Edward V. Fehringer, MD
	Follow-up of Shoulder Hemiarthroplasty with a CTA Head for Cuff-Tear Arthropathy	Daniel E. Firestone, MD
	Functional Outcomes of Intra-Articular Distal Humerus fixation Through an Extensor Mechanism Sparing Posterior Approach	Resident study
	Orthopaedic Registry to Monitor Treatment Outcomes	Edward V. Fehringer, MD
	Changes in Bacterial Species and Resistances in Infected Total Hip Arthroplasty Revisions	Kevin L. Garvin, MD

Year	Official Study Title	Principal Investigator
2012	Horseback Riding and/or Motorcycle Riding After a Total Hip Arthroplasty	Kevin L. Garvin, MD
	Periprosthetic Fractures of the Tibia After Total Knee Arthroplasty: An Overview and Description of a Surgical Technique Using Locking Plates, Cables and Augmentation with an Anterior 1/3 Tubular Plate	Miguel S. Daccarett, MD
2013	Results of Total Knee Arthroplasty Revision for Rotational Malalignment	Beau S. Konigsberg, MD
	CSSG Multi-center Retrospective and Prospective Observational Data Registry for Clinical and Radiographic Outcomes of Spinal Surgery Comparing Instrumentation and Procedures.	Brian P. Hasley, MD
	Is There Sufficient Orthopaedic Education in Medical School?	Medical student initiated
	Cardiovascular Pathology and Surveillance in Osteogenesis Imperfecta	Maegen J. Wallace, MD
2014	Revision Total Hip Arthroplasty with Impact Grafting	Kevin L. Garvin, MD
	Functional Outcomes after Posterolateral Plate Fixation of Humerus Shaft Fractures	Edward V. Fehringer, MD
	Prospective, Multicenter, Single-arm Study to Evaluate Efficacy, Safety, and Pharmacokinetics of Denosumab in Children with Osteogenesis Imperfecta	Eric Rush, MD Paul W. Esposito, MD
2015	An analysis of the accuracy of radiographic reference markers for digital templating in total hip arthroplasty	Curtis W. Hartman, MD
	Sonication for enhanced diagnosis of Prosthetic Joint Infection	Curtis W. Hartman, MD
	Anterior Knee Pain after Intramedullary Nailing of Tibial Fractures by Suprapatellar Approach	Justin C. Siebler, MD
	Five Year Outcome Follow-up of Glenoid Anchor Peg component Fixation Utilizing Autologous bone Graft in Total Shoulder Arthroplasty	Matthew J. Teusink, MD
	Clinical Results of Uncemented Tapered Stems with Total Hip Arthroplasty in patients aged 50 Years or Younger	Kevin L. Garvin, MD
	Outcomes after posterolateral plate fixation of humerus shaft Fractures	Miguel S. Daccarett, MD
	Plate Augmentation for Femoral Shaft Nonunions Previously Treated with an Intramedullary Nail	Ivan Tarkin, MD
	Initial Results and Experience with Intramedullary Rodding (Fassier-Duval Telescoping Intramedullary Rodding) in Children with Osteogenesis Imperfecta	Paul W. Esposito, MD
	Enhanced Detection of Staphylococcus Aureus Colonization in Patients Undergoing Prosthetic Joint Implantation	Kevin L. Garvin, MD
	Evaluating the epidemiology of pediatric muscular skeletal injuries at one academic pediatric practice	Susan A. Scherl, MD
2016	Prepping the External Fixator in Situ During Two Stage Pilon Surgical Treatment: Postoperative Complications	Resident study
	Clinical outcomes comparison between a single injection of Hylan GF20 and a series of 5 injections of Sodium Hyaluronate in patients for treatment of osteoarthritis of the knee: A randomized prospective study	Beau S. Konigsberg, MD
	The Value of the On-Call Resident (Multi-Center)	Matthew A. Mormino, MD
	Safety and efficacy of Liposomal Bupivacaine (Exparel) in Lumbar Spine Surgery	Resident study
	Hoverboard Injuries in Children (Multi-Center)	Medical student initiated
	Operative Treatment of Forearm Deformities in Children with Osteogenesis Imperfecta	Maegen J. Wallace, MD
2017	Low-energy open ankle fractures in the elderly. A Multi-center Retrospective Review Study	Miguel S. Daccarett, MD
	Pre-Surgical S. aureus Colonization and Outcomes of Total Joint Arthroplasty	Kevin L. Garvin, MD
	Patient Outcomes Following Rotationplasty Treatment (Versus Expandable Prostheses) for Osteosarcoma of the Distal Femur or Proximal Tibia	Sean V. McGarry, MD
	A Fracture Boot Stress Model for the Determination of Ankle Stability in Patients with Isolated Fibular Fractures	Matthew A. Mormino, MD
	The cause of and treatment for Total Knee Arthroplasty Stiffness	Kevin L. Garvin, MD
	A retrospective review of Hybrid total Knee Arthroplasty outcomes	Curtis W. Hartman, MD
	Prepping the external fixator in situ during two stage pilon surgical treatment: Postoperative complications	Matthew A. Mormino, MD
	Pneumatic tourniquet use without padding in upper extremity surgery	Philipp N. Streubel, MD

Completed Studies, continued

Year	Official Study Title	Principal Investigator
2018	Prepping the external fixator in situ during two stage pilon surgical treatment: Postoperative complications	Matthew A. Mormino, MD
	An Evaluation of Antibiotic Administration Treatment of Open Fractures	Matthew A. Mormino, MD
	Surgeon Attire: Does what you wear in clinic matter?	Kevin L. Garvin, MD
	Can pre-operative Rand SF-36 scores predict function outcomes from hip and knee arthroplasty?	Curtis W. Hartman, MD
	A retrospective study on the association of internal injuries with femoral fractures	Justin C. Siebler, MD
	Long-Term follow-up of Joint Infections after Re-implantation	Kevin L. Garvin, MD
	Evaluating Length of Hospital Stay (LOS) and Readmission Rates (RR) Following Total Hip Arthroplasty: Is there a correlation between LOS and RR? Do co-morbidities factor in LOS or RR?	Kevin L. Garvin, MD
	Orthopaedic residents' OITE study habits: A modern review	Joseph A. Morgan, MD
	Early outcomes of a new design stem - The REDAPT revision femoral system	Curtis W. Hartman, MD
	Study on incidence of proximal femur fractures after open reduction and internal fixation of distal femur fractures	Justin C. Siebler, MD
	Does prophylactic administration of TXA reduce mean operative time and perioperative blood loss in posterior approach lumbar spinal fusion surgery perform for degenerative spinal disease?	Chris A. Cornett, MD
2019	Long-term outcome follow-up of glenoid anchor peg component fixation utilizing autologous bone graft in total shoulder arthroplasty	Matthew J. Teusink, MD
	Prospective observational study of donor-site morbidity following posterior iliac crest bone-graft harvest in thoracic and lumbar spinal fusion operations	Chris A. Cornett, MD
	Regional and seasonal variations in the incidence of post-traumatic infection after open extremity fractures	Justin C. Siebler, MD
	CT vs. X-ray in measuring displacement and angulation in clavicle fractures	Matthew A. Mormino, MD
2020	Postoperative outcomes of hip fracture surgery in older patients on clopidogrel or warfarin at the time of surgery	Justin C. Siebler, MD
	Defining the role of head of bed angle in cerebral deoxygenation events during upper extremity surgery in the beach chair position.	Matthew J. Teusink, MD
	Proximal Humerus Fracture Database Registry	Philipp N. Streubel, MD
	The utility of oral antibiotic therapy following 2-stage revision arthroplasty for infected prosthetic hips and knees.	Curtis W. Hartman, MD
	Prevalence of Staph Aureus in patients undergoing total joint arthroplasty and the effectiveness of pre-operative decolonization in preventing post-operative infection	Kevin L. Garvin, MD
	Comparison of Stretch Conductive Stockinette and Cast Saw Alarm System with Traditional Materials when Removing Long Arm Casts	Matthew A. Halanski, MD
2021	Early Ambulation after Hip Fracture Surgery and the Effect on 30-Day Mortality	Matthew A. Tao, MD
	Review of Clinical Outcomes in Patients Requiring Long-Term Antibiotic Treatment for the Management of Orthopaedic Infections in Patient with and without a History of Recreational Intravenous Drug Use (RIVDU)	Philipp N. Streubel, MD
	Does immediate postoperative opioid consumption correlate with long-term outcomes in patients undergoing one and two level posterior lumbar fusions	Chris A. Cornett, MD
	Pain Associated with Cemented and Press-Fit Long-Stemmed Tibial Components in Revision Total Knee Arthroplasty	Beau S. Konigsberg, MD

Current and Past Faculty

Name	Job Title
John A. Albers, MD	Instructor
L. Russell Alberts, PhD	Associate Professor
Brett Andres, MD	Volunteer
Ryan M. Arnold, MD	Volunteer
Stanley M. Bach, MD	Associate Professor
Gordon D. Bainbridge, MD	Instructor
Jackson J. Bence, MD	Instructor
Donald D. Berg, MD	Instructor
Patrick Bowman, MD V	Volunteer
John Brantigan, MD	Assistant Professor
David E. Brown, MD	Assistant Professor
Dwight W. Burney Jr., MD	Associate Professor
Charles F. Burt, MD	Instructor
Thomas C. Bush, MD	Assistant Professor
James Canady, MD	Associate Professor
Shelby H. Carter, MD	Clinical Instructor
Dennis Chakkalalkal, PhD	Assistant Professor
Gary L. Chingren, MD	Instructor
David J. Clare, MD	Volunteer
Michael P. Clare, MD	Assistant Professor
Patrick E. Clare, MD	Volunteer
Robert M. Cochran II, MD	Assistant Professor
John F. Connolly, MD	Professor and Chair
Chris A. Cornett, MD	Associate Professor
Lynn A. Crosby, MD	Assistant Professor
Frederick L. Crouter, BEd, MEd	Assistant Professor
Miguel S. Daccarett, MD	Associate Professor
Douglas O. DeShazer, DDS	Associate Professor
James W. Dinsmore, MD	Associate Professor
Mark E. Dietrich, MD	Associate Professor
John D. Douthit, MD	Vice-Chair
Klaus Draenert, MD	Volunteer
Robert W. Dugas, MD	Volunteer
Kenneth W. Ellis, MD	Instructor
Paul W. Esposito, MD	Professor
Edward V. Fehringer, MD	Associate Professor
Thomas P. Ferlic, MD	Associate Professor
Daniel E. Firestone, MD	Assistant Professor
Timothy Fitzgibbons, MD	Clinical Instructor and Chief, Bergan Mercy Hospital-Omaha
Katie L. Freeman, MD	Assistant Professor
Dwight M. Frost, MD	Assistant Professor
Fred J. Fricke, MD	Senior Consultant
Samuel I. Fuenning, MD	Professor
William F. Garvin, MD	Assistant Professor
Kevin L. Garvin, MD	Professor and Chair
Glen M. Ginsburg, MD	Associate Professor
Mark E. Goebel, MD	Assistant Professor
Paul Goetowski, MD	Clinical Assistant Professor

Name	Job Title
William H. Gondring, MD	Instructor
Ann C. Grandjean, EdD	Clinical Instructor
R. Michael Gross, MD	Volunteer
Steven V. Hagan, MD	Assistant Professor
Hani Haider, PhD	Professor
William R. Hamsa Sr., MD	Chairman and Sr. Consultant
William R. Hamsa Jr., MD	Associate Professor
Curtis W. Hartman, MD	Associate Professor
Brian P. Hasley, MD	Associate Professor
Matthew A. Halanski, MD	Associate Professor
John A. Henke, MD	Instructor
Scott Hodges, DO	Spine Instructor
L. Thomas Hood, MD	Professor and Chair/Senior Consultant
Harold R. Horn, MD	Instructor
James Q. Hossack, MS	Professor of Civil Engineering
Walter W. Huurman, MD	Professor Emeritus
Kirk S. Hutton, MD	Volunteer
O. Max Jardon, MD	Professor
M. Layne Jenson, MD	Assistant Professor
Herman F. Johnson, MD	Professor
August F. Jonas, MD	Instructor
Donald G. Kanefield, MD	Instructor
C. Michael Kelly, MD	Clinical Instructor
David N. Kettleson, MD	Assistant Professor
Reginald Q. Knight, MD	Volunteer
Beau S. Konigsberg, MD	Associate Professor
Bernard Kratochvil, MD	Instructor
Anthony J. Lauder, MD	Assistant Professor
Gene S. Lewallen, MD	Assistant Professor
David Lindsay, MD	Ehrling Bergquist Hospital Offutt AFB
Louis Lippiello, PhD	Associate Professor
Michael C. Longley, MD	Volunteer
John P. Lord, MD	Professor and Chair
John "Jack" A. McCarthy, MD	Volunteer
John W. McClellan, III, MD	Assistant Professor
Patricia A. McDougall, MD	Assistant Professor
Scott T. McMullen, MD	Volunteer
Sean V. McGarry, MD	Associate Professor
Edward M. Malaschock, MD	Associate Professor
Monte S. Mathews, MD	Assistant Professor
Michael H. McGuire, MD	Associate Professor
Morris B. Mellion, MD	Associate Professor
R. Michael Mendlick, MD	Assistant Professor
Bruce Miller, MD	Assistant Instructor
David W. Minard, MD	Associate Professor
Howard E. Mitchell, MD	Assistant Professor
Joseph A. Morgan, MD	Assistant Professor
Matthew A. Mormino, MD	Professor and Program Chair
Fereydoon Namavar, PhD	Professor

Current and Past Faculty

Name	Job Title
James R. Neff, MD	Professor and Chair
Russell C. Nelson, DSc	Professor
Michael T. O'Neil, MD	Assistant Professor-Volunteer
Erik T. Otterberg, MD	Volunteer
Howard D. Pachman, DPM	Volunteer
Eugene W. Peck, MD	Clinical Instructor
Eric D. Phillips, MD	Clinical Instructor
Richard C. Pitner, MD	Associate Professor
Sara M. Putnam, MD	Assistant Professor
Samar K. Ray, MD	Instructor
Lori K. Reed, MD	Associate Professor
David Rhodes, MD	Assistant Professor
Bradley C. Rosenberger, MD	Clinical Assistant Instructor
Alexander B. Sawatzke, MD	Assistant Professor
Jerry Schenkin, MD	Associate Professor
Susan A. Scherl, MD	Professor
Robert Schrock, M.D.	Associate Professor
Ronald O. Schwab, MD	Instructor
James Scott-Miller, MD	Associate Professor
Todd D. Sekundiak, MD	Associate Professor
Anthony B. Serfustini, MD	Las Vegas, NV faculty
Justin C. Siebler, MD	Associate Professor
William W. Smith, MD	Instructor
Richard D. Smith, MD	Associate Professor/Senior Consultant
William W. Smith, MD	Instructor
Basil S. States, PhD	Associate Professor
Warren Stinson, PhD	Associate Professor
Frank P. Stone, MD	Associate Professor
Basil S. Strates, MD, PhD	Associate Professor
Philipp N. Streubel, MD	Associate Professor
James K. Styner, MD	Assistant Professor
Samuel A. Swenson Jr, MD	Associate Professor
Matthew A. Tao, MD	Assistant Professor
Frederick F. Teal, MD	Professor
Matthew A. Teusink, MD	Associate Professor
John M. Thomas, MD	Associate Professor (Pediatrics)
James E.M. Thomson, M.D.	Adjunct Professor
Jeffrey J. Tiedeman, MD	Clinical Instructor
Scott A. Vincent, MD	Assistant Professor
Maegen J. Wallace, MD	Assistant Professor
W. Michael Walsh, MD	Associate Professor
Chester H. Waters III, MD	Instructor
Frederick S. Webster, MD	Clinical Instructor
Edmund B. Weis Jr., MD	Professor
Howard R. Woodward, MD	Clinical Assistant Instructor
John C. Yeakley, MD	Instructor
John G. Yost, MD	Assistant Professor

PROJECT LEAD

Kevin L. Garvin, M.D.,
Professor and Chair, UNMC Department of Orthopaedic Surgery & Rehabilitation

EDITORS

Chris Christen
Susan Siebler

DESIGNER

Christine Zueck-Watkins

RESEARCHERS & WRITERS

Doug Meigs
Blake Ursch
Dan McCann

CONTRIBUTORS

Kristine Gerber
Kurt A. Keeler

PHOTOGRAPHY

Scott Dobry
Department of Orthopaedics archives
Omaha World-Herald archives
McGoogan Library of Medicine, UNMC
Kent Sievers, UNMC Strategic Communications

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ORTHOPAEDIC SURGERY AND REHABILITATION

Department of Orthopaedic Surgery and Rehabilitation
985640 Nebraska Medical Center
Omaha, NE 68198-5640
www.unmc.edu/orthosurgery

Jeffrey P. Gold, M.D.
Chancellor,
University of Nebraska Medical Center
Executive Vice President & Provost,
University of Nebraska

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