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PRESS RELEASE

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FOR IMMEDIATE RELEASE

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FOOT PROBLEMS
They can quickly limit a farmer or farm worker's ability to function and hinder productivity. Photo by Canva

The human foot has 26 bones, 33 joints, 107 ligaments, and 19 muscles. The human body has 206 bones, meaning 25% of our bones are in the feet.

"There are a lot of common complications or foot problems we see, especially within the farming and agriculture industry," says Dr. Tony Merendino, DPM, clinical assistant professor at the University of Florida Department of Orthopedic Surgery and Sports Medicine. "Fungal infections are common issues we see along with bacterial infections, bunions, and hammertoe deformities."

Fungi are living entities that move by spreading out or sending spores into the air. Many fungi live naturally in our bodies but can overgrow under certain circumstances. Fungal infections can affect skin, hair, nails, other mucous membranes, lungs, and other body parts. Anyone with a weakened immune system is at higher risk of fungal infection.

Fungal infection of the foot is typically known as athlete's foot, a skin infection of the feet or toes, which can occur in different areas of the foot. Fungal infection can also occur under the toenail. Athlete's foot typically begins between the 4th and 5th toe space and can spread to the sides and sole. It may also spread to the heel. A fungal infection may involve one toenail or multiple toenails. Most commonly, nail fungus affects the big toenail and the little toenail.

"Fungi love chronic moist and dark environments," Meredino says. "We are always exposed to fungi spores, which find their way into these nice little cozy, dark environments. With some moisture, the fungi spread and grow."

Most nail fungi are secondary to foot fungi. When untreated, foot fungus tends to migrate to the toenails. Fungi under the nail can cause toenails to become thick and painful. The nails may

separate from the nail bed. Without treatment, foot fungus can lead to secondary bacterial infections.

“Shoe gear is the most common culprit for a fungus,” Merendino says. “Our footwear may hold too much moisture and be too dark. Look for a shoe made of breathable material. Historically, leather has been one of the materials used for shoes. It’s water repellant, and you can improve it with oil or wax.”

Rubber or vinyl used for boots may be waterproof but aren’t breathable, which means feet can become sweaty and provide the perfect environment for fungi development. Other materials available today, such as Gore-tex, are waterproof and breathable.

The most crucial fungal prevention step is keeping the feet dry and keeping socks and shoes clean and dry. Socks that wick away moisture to keep it away from the skin are helpful. Although cotton socks are commonly worn, they are heavy, unbreathable, and uncomfortable when wet. Wool socks may be the best option when feet are likely to become wet during work activity.

“Everybody wants cotton socks, but when you sweat, cotton will hold the moisture,” Merendino says. “We want material that the fluid moves through and evaporates away instead of staying next to your skin. If it doesn’t evaporate, it can cause fungal infection, leading to bacterial infection and many other problems. Wool socks absorb twice as much moisture and wick it away from your foot.”

Tight or ill-fitting shoes set the stage for structural foot deformities, leading to significant pain and discomfort. Pressure on any part of the foot poses a risk of developing a severe puncture wound that could potentially lead to bacterial infection or even am putation.

“One of my patients had a magnetic letter off the refrigerator in his shoe. He walked with it for two days that way, not knowing it was there,” Merendino says. “He had wounds across all his toes. That’s comparable to an agricultural worker wearing a boot all day and getting something inside the boot without realizing it.”

Merendino saw one patient with a seed inside his sock, leading to a hole in his foot.

“These things can happen,” Merendino says. “I recommend inspecting your feet and shoes daily. Don’t assume nothing is sticking into your foot. Those working in agriculture should especially look for rocks and pebbles. If you can’t bring your foot up to look at the bottom, use a mirror leaned against the wall to view the bottom of your foot. Put your foot up against that mirror daily and inspect it.”

The biomechanics of feet are complex as energy is transferred from the ground to the body and back to the ground. In a normal foot, energy expenditure is minimized, and stress on the foot bones is reduced. Abnormal biomechanics contribute to problems that affect the foot and ankle. Anyone with a foot deformity, such as hammertoes, will likely encounter foot issues when regularly working on uneven terrain and in harsh weather conditions.

Although feet don’t continue to grow as we age, foot structure can change as arches grow flat. Having an annual foot examination may help avoid structural issues.

“It won’t matter how great your shoe is if you have pain after just 30 minutes of walking,” Merendino says. “Anytime you have a foot issue, seek treatment right away. Soaking your feet is good if you notice fungus or infection and treat the problem immediately. Everyone tends to soak in warm water and Epsom salts. However, a cup or two of white vinegar is better. It acts as an astringent and antibiotic and helps kill bacteria. Whatever the issue is, make sure you treat it

right away. If it progresses to the point of needing surgical treatment, that may permanently limit your abilities.

“Anyone with diabetes, neuropathy, or some type of pathology should inspect their feet daily,” Merendino says. “Working outside on uneven terrain daily greatly affects our feet. Our feet are a unique part of our body, and it’s important to understand how to keep them healthy.”

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