

PODCAST TRANSCRIPT

UNMC Chancellor Jeffrey P. Gold, MD: Hello, this is Dr. Jeff Gold, and I'm the chancellor of the University of Nebraska Medical Center. And I want to welcome you to "Health Care Heart to Heart," providing insights into the medical and the scientific issues of the day. As you may know, I am a recovering cardiothoracic surgeon, a longtime medical educator and a firm believer in the ability of science to change lives for the better.

Dr. Jill Poole is a physician scientist who both sees patients and conducts groundbreaking research in her role as the chief of the University of Nebraska Medical Center Department of Internal Medicine's Division of Allergy and Immunology. Dr. Poole and her team are leaders in studying the adverse effects, including lung disease, of inhaling dust in agricultural environments. But Dr. Poole is also an expert on allergies and what to do about them, and that's always a hot topic. So, Dr. Poole, let's talk allergies. But before we do that, let me ask you a question our audience always asks me, so I'll just turn it around. Was there a magic day/moment that you decided that you wanted to pursue a career in this area of allergy and immunology? Was there a mentor? What made the determination for you?

Jill Poole, MD: Well, it wasn't just one person or one day. It was actually a number of individuals and researchers and doctors who really made this pathway clear for me from my time at the NIH (National Institutes of Health) working in the NIAID (National Institute of Allergies and Infectious Diseases) with immunologists, to mentors during my residency and the patients themselves. It's such a fascinating area of medicine, and I just loved it.

Dr. Gold: Because it's a such an important area. And so, with that, let's dig in a little bit, and let's talk about dust and pollen and what's going on these days in terms of trends. What are you seeing in your practice? What are you reading in the literature about what's different today than two years ago, five years ago, et cetera?

Dr. Poole: Well, allergens have always been important during my career, but what we continue to see is this increase of people that are affected by it. And what's been really trending is the climate change and the air pollutants that mix with the pollens and causing more disease and more people with disease. And so, we're seeing more symptoms and longer duration of symptoms.

Dr. Gold: So, if you were to compare what we see today compared to perhaps, you know, the Middle Ages, or a long, long time ago, were allergies and these types of symptoms as common as we see them and hear about them today? I mean, it's almost impossible for me to be with a group of folks that somebody's not sneezing or coughing. Of course, now in the COVID era, our minds immediately race to other considerations. But the response is usually "I'm okay. I just have an allergy," and that seems almost the norm rather than the exception.

Dr. Poole: Well, that's, that's very true. More than 50% of Americans have allergies now, so it seems normal to have them, but it wasn't always that way. Now, allergies have been reported 3,000 years ago, from the Greeks, the Romans, Chinese doctors, of these plant fevers and even anaphylaxis to bee stings of a Pharaoh dying. But it was still rare to have allergies. The 19th century, it started being reported in the medical literature, and then it really wasn't until the 20th century, in the last part of the 20th century, that we started to see this great increase. Back in the 1970s, only about 20% of people had allergies, and now it's over 50%.

PODCAST TRANSCRIPT

Dr. Gold: And is it due to aging of the population or other considerations of that nature?

Dr. Poole: Well, you can get allergies at any point in your life, so you're never too old to develop allergies for the first time -- although it's more common to get allergies in your twenties and thirties and even younger.

Dr. Gold: So, you know, a lot of people say, and I don't know if it's true, that people grow into them and also grow out of them. Is that a characteristic -- that you can be allergic at a younger age, and then as the pages fall off the calendar, let's say either the severity or the allergy itself goes away without treatment or vice versa?

Dr. Poole: Well, once you develop allergies, it's actually less likely that you'll outgrow them. Although about 10% of people will just outgrow their allergies. It's more common that allergies come on, and so they can keep coming on at any decade of one's life. And so, a lot of people over 60/70 get frustrated that they've never had allergies and now they do. So, it's not uncommon for them to come on, more so for them to go away on their own.

Dr. Gold: And is there anything that they can do to prevent that?

Dr. Poole: If we could prevent allergies, that would be great. At this point, we're not sure how to prevent allergies. There's been some evidence and research in the last decade or so about food allergies, and that if you introduce foods into the diet of the infant early on, that may prevent the food allergies.

Dr. Gold: Sort of all the literature that's come along with peanut and other nut allergies about exposing young children at an early age.

Dr. Poole: Yes, that is a very key point to get across is that is really important to expose at a young age, because that can prevent then the onset of allergies. But aside from that literature, these environmental allergies, we don't know how to prevent.

Dr. Gold: So, a lot of people also, when they think about allergies, think about an allergy season -- that is a seasonality to it. And I know that pollen levels change and dust levels change, et cetera, but is there a season to allergies, or is it really blended across the entire calendar? I know some people are allergic to holiday spending in the deep of the winter, but that's not what we're addressing here.

Dr. Poole: Well, allergens are very dependent on the growth season. So, tree pollen is going to be really important in the spring when the trees are pollinating. Trees don't have any pollen the rest of the year, but we're coming upon the weed pollen season. So, there is this fall season that we tend to see all the weeds, and here in Nebraska, Kansas, the Midwest, we see ragweed, and mold becomes really problematic about midsummer and still remains problematic. So, there are some seasons to it, but a lot of people suffer year-round.

Dr. Gold: You know, most people, at least that I know, who say they have allergies self-treat them; that is to say, they purchase some over-the-counter medication, they sort of take it as they

PODCAST TRANSCRIPT

feel they need it. But is there a threshold that over-the-counter medication should either be deemed unsafe, or unnecessary or prompt the need for a health professional evaluation? In other words, how, when does somebody who begins to develop symptoms at any age need to see you or need to see somebody in your profession?

Dr. Poole: Well, we're happy to see them at any point. If they want to know what they're allergic to, we can test for that. But for the medicines, there's very good over-the-counter medications, but they don't always control the symptoms, or patients break through as the year goes on, the medications aren't enough. And there are some over-the-counter medications that you want to avoid, like decongestants on a regular basis, as that can increase blood pressure. And some of the nasal sprays over the counter can be addictive, and so you don't want to stay on them for too long without getting an opinion from your physician.

Dr. Gold: So, it sounds like if somebody has persistent symptoms that before they get too dependent or start to increase the dosage or frequency of their over-the-counter medication, that that probably would be a good time to pick up the phone, schedule an appointment and get some professional guidance as to how to sort of mix and match, and perhaps do something more definitive. Which gets me to the question of, you know, growing up classmates talked about allergy shots. Is that still a thing?

Dr. Poole: Oh, yes. We still do lots of allergy shots.

Dr. Gold: And that is to desensitize people?

Dr. Poole: Exactly, to desensitize you, we call it allergy immunotherapy now. But it is a set of shots that you build up to get to a maintenance phase where you're coming in frequently, and then it, it ends up being about once a month for three-to-five years to desensitize you to what you're allergic to. And that therapy can have long-lasting effects for people. Some up to 10, 20 years or forever, some less, less long.

Dr. Gold: Well, we certainly live in the era of our immune systems, whether they're vaccines or vaccine therapies; not just for prevention, but you know, we talk an awful lot about personalized cancer care, and a lot of that has to do with cancer-specific vaccines. So as our audience probably is well aware, you are much more than a wonderful physician, but you're also scientist. And so, what's going on in the scientific literature? What's going on in your world that our audience might see in the future in these areas?

Dr. Poole: Well, there's been a lot of new medications and breakthroughs as far as therapies for allergic asthma that have come out really in the last five or so years. And so, we have a number of tools that are directing against specific proteins in the body to decrease allergic asthma and are very well tolerated. They may be expensive, but a lot of insurances are covering them. And there's just more and more of these that are coming out on an almost monthly basis. And their indications are covering a lot of diseases, from asthma to chronic sinus disease, to eczema, to some types of esophageal food allergens.

Dr. Gold: Really? And are these currently available at various levels?

PODCAST TRANSCRIPT

Dr. Poole: Yes.

Dr. Gold: And I'm sure there are new ones that are under development at any time.

Dr. Poole: Oh, there's a number of these, and they're called monoclonal antibody therapies.

Dr. Gold: That's a word we learned quite well during the pandemic. Right?

Dr. Poole: Right. And so, we have a lot of these therapies that are available that can be administered at home or at a hospital setting.

Dr. Gold: So, you know, speaking of the pandemic, our audience asks me all the time, not whether it's over because, you know, as Yogi said, "It ain't over till it's over," and who knows what that means. But are there any, what you're seeing, longer-lasting immunological changes that have occurred in individuals who were infected, particularly those that had a serious infection, serious enough to get hospitalized? I mean, any impact on allergies or other types of symptoms that you've noticed?

Dr. Poole: Well, we've certainly seen some of the post-COVID syndrome, that has been some long-lasting effects that have affected things like just the mast cells in the body, that have had these systemic effects in people. For allergies, we saw vaccine allergies. And a lot of those things we're seeing have been going away with time, but we're still dealing with, you know, some of those people that are having the post-COVID syndrome, some of them will come to the allergy immunologist for some evaluations.

Dr. Gold: And hopefully for some care. Well, Dr. Jill Poole, thank you so much for being with us today. Thanks for all that you do and for particularly joining us on this podcast.

Jill Poole, MD: Well, thank you for having me.

Dr. Gold: Thank you for tuning into this episode of Health Care Heart to Heart with Dr. Jeff Gold. And until next time, stay healthy.