Transcript Details

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Sublingual Immunotherapy for Peanut Allergy: The Value of Early Intervention

Announcer:
You're listening to *On the Frontlines of Food Allergies* on ReachMD. On this episode, we'll learn about the effectiveness of sublingual immunotherapy, or SLIT, for peanut allergy in young children with Dr. Edwin Kim. Not only is Dr. Kim an Associate Professor of Pediatrics and the Division Chief of UNC Pediatric Allergy and Immunology at the University of North Carolina at Chapel Hill, but he's also the Director of the UNC Food Allergy Initiative. Let's hear from him now.

Dr. Kim:
So thinking about particular times, stages of life, or ages where sublingual immunotherapy might be most effective, it does look like if you can get in there younger that there is a potential to have a stronger and perhaps longer-lasting effect, and we've seen similar types of data coming out of oral immunotherapy, or OIT, as well as epicutaneous immunotherapy, which is in development. All of these seem to suggest that perhaps if you can get in there when the kids are young, their immune systems could be a little bit more moldable, and they also seem to deal with the side effects better, so the risk seems to be better.

And so, specifically, we've done three different studies of peanut SLIT here at the University of North Carolina. The first two studies were done in an age range of one to 11 years, and so the average age for those studies was about six to seven years old, or about first or second grade. We saw some great benefits in kids who were reacting to maybe a third of a peanut: after their treatment they were able to eat as many as 10 plus peanuts, so again, at least a 10 times increase, which is a lot more than you probably think kids will get into if they bit something by accident. Maybe not quite enough to be able to eat a peanut butter sandwich.

But then we wanted to ask that same question of if younger is better. The third study we went down to just focusing on the one to four year olds. And so the average age of that study was two years old—actually 2.2 years—so really young kids. And what we found was that the thresholds went even higher. So the median amount was actually over 4,000 milligrams, so more than half the kids were able to eat the entire 15 or 16 peanuts without any symptoms at all. But then the other thing that was really nice to see in that group was after three years of treatment, we actually took the peanut SLIT away and then had them come back three months later just to see if the changes that we had seen in the immune system reversed right away or if they can last a period of time. And the majority of those kids—just about half of those kids—three months later were still able to eat the maximum amount of peanuts without any symptoms at all.

Now, do I think this is a cure? Probably not. I do think that if you give the kids long enough time, that allergy likely is coming back, but what this tells me is that it's not coming back overnight, and so there is going to be some of that flexibility. Life happens, so if you're doing the treatment and then perhaps you get sick for a couple of weeks or maybe you go on a family vacation for a couple weeks and just don't want to bother with the treatment, this tells me that that benefit is probably going to be there and you can probably just jump right back into the treatment once you come back. And we've seen this with allergy shots and even with bee sting venom allergy shots as well, so it lines up with those findings. And we'll figure out what that looks like and how we use it in clinic, but I thought that was very reassuring.

Now I'm actually going to jump to the second study we had done. So this was an older age group with an average age of seven years, but the reason I bring that study up is because we used that study to try to get a sense of how quickly that effect actually wears off. In that particular study, the kids did the peanut SLIT for four years and then they stopped for a random amount of time between one and 17 weeks; so some of the kids stopped the treatment for one week and came back, some of them for four weeks, some of them for six weeks, and all the way out to 17 weeks with the idea that across all those kids, we might be able to kind of get a sense of how quickly or not the actual benefit is wearing off. And so doing some fancy statistics on that study, what they estimated was it was probably about 22

weeks before the kids in that study start to become reactive again. And so they do lose that treatment effect, but it's not overnight. And in that particular case, we're talking about three, four, or five months before they actually fall down low enough where it actually might affect them and they could react if they were actually exposed to a small amount of peanut.

Announcer:
That was Dr. Edwin Kim talking about using sublingual immunotherapy to address peanut allergy in young children. To access this and other episodes in our series, visit *On the Frontlines of Food Allergies* on ReachMD.com, where you can Be Part of the Knowledge. Thanks for listening!