Managing food allergies and seasonal allergies in children

Magic Isn't required to handle food and seasonal allergies

By Dr. Hugh Sampson and Kathleen Zelman, RDN

Kathleen: [00:00:00] Welcome to the Nutrition for Kids podcast, providing nutrition advice you can depend on. Hi, I'm registered dietician nutritionist, Kathleen Zelman. I'm a member of the Nutrition for Kids Advisory Board, your podcast host, and an award-winning journalist. Our goal for the Nutrition for Kids podcast is to equip listeners with inspiration, skills and parenting tips that are all based on evidence, are easy to understand and doable for both parents and kids.

We want to be your trusted source of information that helps you nourish your family. From breast and formula feeding to introducing solid foods, feeding finicky eaters, food allergies, GI issues, to feeding young athletes and many other medical conditions. We promise to bring you the latest nutrition [00:01:00] information for you and your family.

We will tap leading experts in pediatric nutrition from our advisory board and beyond. Thank you so much for joining us today. Welcome to the Nutrition for Kids podcast. I'm your host, Kathleen Zelman, and today we are tackling the subject of pediatric allergies. Many parents are faced with the challenges of allergies in their children from switching infant formulas to diagnosing food allergies or determining whether it's an intolerance, and then you compound that with the seasonal allergies.

I live in Atlanta, and boy it is - the springtime is beautiful - but so is the pollen all over the ground. So today we bring you an extraordinary expert to answer your questions. He is an eminent leader in the field of allergy disorders. Dr. Hugh Sampson is the Kurt Hirschhorn professor of pediatrics at ICANN School [00:02:00] of Medicine in New York.

He has over 40 years of research experience in food allergy disorders. He has authored or co-authored more than 550 articles, 90 book chapters, and five books. He's also a member of the National Institutes of Health Working Groups that have formulated the guidelines on food allergy and prevention of peanut allergy.

In 2003, he was elected to membership in the National Academy of Medicine for his research accomplishments. He's the past president of the American Academy of Asthma, allergy and Immunology, the past chair of the section on

allergy and immunology of the American Academy of Pediatrics. And the list goes on.

We are so fortunate to call him a member of the Nutrition for Kids Advisory Board and to be our guest today. So welcome, Dr. Samson.

Dr Sampson: Well, thank you very much. It's a pleasure to be here.

Kathleen: Oh, I'm thrilled. Well, let's jump in with [00:03:00] what are the most common food allergies in children?

Dr Sampson: Today I would say the most common food allergies are really milk, egg, and peanut.

We know that with milk, about 2% of the pediatric population will develop a milk allergy. Same with, ahh, egg. The one good thing about, uh, egg and milk allergy, however, is that most of the children will eventually outgrow it, and we believe that close to 85% to possibly even 90% will outgrow it as they pass through the first decade of life.

Kathleen: So by about age 10?

Dr Sampson: Yes, by about age 10.

Kathleen: Okay.

Dr Sampson: The one that's been more of a problem, however, is peanut and in the US and many of the westernized countries around the world, we're seeing a prevalence of peanut allergy in children at about 2% as well. And the problem with peanut allergy is, uh, only a [00:04:00] smaller fraction of those children will outgrow it.

Estimates now are somewhere between 20 and 30%. So for the majority of, uh, children developing peanut allergy, this is going to be a lifelong uh, process. We're also, uh, now seeing increases in other foods, which had not been so much a problem in the past, especially in the area of tree nuts. And probably the most common, uh, tree nut allergy that we see now is cashew.

And in Australia there was just recently a study came out showing that about 2% of their pediatric population actually have cashew allergy now. Wow. Certainly from my experience in our clinic, it seems like we're seeing, uh, numbers with cashew that are comparable to peanut.

Kathleen: Interesting.

Dr Sampson: Yeah. Like peanut allergy though we don't see these children outgrowing their allergy. Again, only maybe 15 to 20% of these children with [00:05:00] tree nut allergies will outgrow it.

Kathleen: Well, is there something unique to peanuts or cashews that they have in common? Or why not other tree nuts? Why does it seem to be cashews? And then of course, peanuts are not a tree nut. They're legume.

Dr Sampson: That's really a great question. We do. It used to be that walnut was more common. If you look up the statistics, which are basically based on some of the older studies, walnut will come up as this the most common tree nut allergy, but it seems like things have been changing over the years.

The other thing that we've really noticed in the last 10 years or so is that it's quite common that children are allergic to more than one food. When I started my career in, in food allergy, it was very uncommon to see somebody who was truly reactive to more than one food. They might, you know, have a positive skin test or a blood test suggesting they were allergic to a food.

[00:06:00] But when we challenged them, we found that they were usually only allergic to one food. Today, it's almost the opposite. It's uncommon for us to find children who are only reacting to one food. What's brought that about is something that, you know, we're all trying to sort out.

Kathleen: Yeah. It seems as though that, you know, a lot of parents think and surmise that allergies are on the rise with children, so you're verifying that that indeed is true.

But the reason is unknown?

Dr Sampson: Um, well, we have lots of theories that that could be a whole other podcast, but, uh, one of the theories that everybody talks about is the, so-called Hygiene Hypothesis that we're too clean. I'm not sure it's exactly being too clean, but clearly the bacteria that we have inside our gastrointestinal tract and on our skin plays a very significant role in the development of our immune function, and we know, for example, [00:07:00] that children born by c-sections who have not come down the birth canal and been, as we say, seeded with the vaginal microbiota or the bacteria that are in the vaginal vault, have a more increased likelihood of developing food allergy, autoimmune disease, and some other metabolic problems.

So we actually at this point are doing a study looking at, uh, babies born by c-section and doing something called vaginal seating where we take a swab from the mother and then swab the baby born by c-section. Half the babies being swabbed, half the babies not, to see whether or not we can actually demonstrate a difference in the prevalence of food allergy in the two populations.

Kathleen: Wow, that's fascinating. Well, and I think that's a great segue into your research and what has been learned about the introduction of peanuts early in life in an attempt to reduce that allergic reaction. So do tell [00:08:00] about how that has become somewhat of a common practice and the benefits of that exposure early in life.

Dr Sampson: Sure. This is, um really a, a major change over the past decade in, in our whole approach to introducing, uh, various allergenic foods. It's an interesting story in that Dr. Gideon Lack, who actually performed the, what's called the LEAP trial, which was a large trial of early introduction of peanut allergy, had made the observation when giving a lecture in Israel that physicians in Israel were not seeing children with peanut allergy. And he went back and they did a comparative trial looking at Jewish children in London versus Jewish children in Israel, and saw that the prevalence of peanut allergy was 10 times as higher in the UK than it was in Israel.

And this observation made by Dr. Lack enabled him to convince the NIH to [00:09:00] sponsor a study to compare this early introduction of peanut protein in children who were at risk. And from this comes what's called the LEAP trial, which showed unequivocally that early introduction was a very good way to prevent the development of allergy in children.

Up to this point, we were taking the opposite approach where we were saying that we should have these children completely avoid these foods until their immune systems matured and they would be less likely to develop allergy. The thing that wasn't appreciated was the fact that most food allergy in young infants actually develops by food coming in contact with the skin. In children with atopic dermatitis who have inflamed skin, will actually make this IgE or allergic antibody to food proteins or environmental proteins that get onto their inflamed skin. And so Dr. Lack then came [00:10:00] up with this dual exposure hypothesis where he was suggesting that if in fact we fed them early, they would develop tolerance before they became sensitized by contact through the skin.

And we now know after other studies that have been done, that things like house dust can contain large amounts of food protein. In one of the studies we

did, I was the PI on something called the Consortium of Food Allergy Research. We had the house dust analyzed in a large cohort of, uh, babies from the US and Dr Lack's lab ran the assays for the peanut protein, and we found out that the US has much higher levels of peanut protein in their house dust than even the people in the UK.

Kathleen: Because we eat so much peanut butter or peanuts or how does it get into our dust? Fascinating.

Dr Sampson: Yeah, and it's the interesting thing is it, it really is the countries that seem to ingest a lot of peanut butter that, that have these high [00:11:00] rates, and it probably is due to the fact that, you know, it gets on people's hands, they touch the babies, gets on countertops and things, and you know, dries and then gets into the house dust, and when the baby's inflamed skin comes in contact with that, then it makes the allergic response.

Kathleen: But now we're not relying on dust to help mitigate peanut allergy.

No. Tell us a little bit about like at what point you need to introduce. Well, bombas are what my grandchildren love, but you know, the, the simple peanut protein so that you can develop this, uh, tolerance.

Dr Sampson: Yes. So, the new guidelines, uh, or at least the guidelines probably now for the past seven years or so, have been this concept of early introduction of peanut.

And it's especially important in children who have atopic dermatitis or that red itchy eczematous skin rash because these are the children that are at highest risk. And so what's been recommended is that at four to six [00:12:00] months of life, after they've been introduced to some form of solid food, that we then try to get peanut into their diet, ideally four to six grams per week, and this would be like four to six teaspoons of peanut butter.

Now, the, the NIH has come out with a nice recipe for how to give your baby the appropriate form of peanut at this age, and you can either use Bomba, which is a great way to do it. 21 pieces of Bomba is equivalent to about two grams of peanut protein. You can put a little liquid in there and make it into a mush, and the baby can eat it that way, or you can water down something like peanut butter.

But there, there are ways to make those introductions in a, you know, age appropriate form. And with that early introduction, we believe that we can

drastically decrease the number of those children that are gonna become peanut allergic.

Kathleen: So how does that play out with other [00:13:00] potential allergies such as the cashews or milk or eggs or wheat?

Is it a similar approach being investigated?

Dr Sampson: I. Yes, and that's, that's a great question. The the two that have been fairly convincingly shown to be effective are peanut and egg. There is some data also suggesting that early introduction of milk, although probably even earlier than four to six months, is necessary to try to prevent it.

But we also are now recommending similar things with the different tree nuts, so other major allergens. So we will suggest getting something like cashew butter, walnut butter, almond butter, and you can dilute those out in a similar way to what's been recommended for peanut and get those in sometime in the, in the first year of life.

Kathleen: Hmm. And when you're talking milk, we're not talking formulas. We're talking whole cow's milk.

Dr Sampson: No, I'm, I'm sorry. It can be formula. 'Cause there was actually a very Oh, it can.

Kathleen: Okay.

Dr Sampson: Yes. There's [00:14:00] actually a very interesting study that was done in Israel looking at babies who were allergic to cow's milk. And this study looked at about 13,000 babies and they were looking at the prevalence of milk allergy. And once they established that, they then looked to see when did those babies first come in contact with milk protein? And so the very early ones were actually formulas. And what they saw was that those babies who had been given the cows milk formula on a consistent basis, starting in the first couple weeks of life, had the lowest rate of milk allergy, compared to babies that were waited up till, you know, getting introduced at four to six months. So it may differ with some of the foods, but we believe that tree nuts are gonna be some, you know, somewhat similar to what we saw with peanuts.

Kathleen: Well, that's great news on the horizon. So let's talk about families who are dealing with kids that have multiple allergies.

So maybe to seafood and to wheat and [00:15:00] soy and milk and eggs. How do you manage the nutritional voids that, you know, when you take out a whole food group and you can't eat any seafood, how do you get your Omega-3 fatty acids? Do you rely on, on supplements or what is the approach for managing the nutritional wellness when you have lots of allergies?

Dr Sampson: Yeah, so the, the first thing I would recommend when you're confronted with the possibility of having multiple food allergies is really make sure that in fact the child is allergic to all these foods. 'Cause we do see children who get, uh, large batteries of either skin tests or blood tests and may have, you know, a dozen positive tests.

But a positive test doesn't necessarily mean you're gonna be reactive to the food. There are, we know now from, you know, a lot of experience that if you have, well an IgE level, so the IgE being the [00:16:00] allergic antibody. If you have a certain amount of that, a certain quantity above which it is likely that you will be reactive, but many, we see many children with low levels of, of this allergic antibody to many foods, and they can actually really tolerate those foods.

So the first thing is to, to make sure I would, you know, consult with an allergist who deals with food allergy and really make certain that you are reactive to those foods. And then, as I was mentioning, we do see many children with multiple food allergies and nutrition can become a problem. I'm extremely fortunate being here at, uh, the ICANN School of Medicine 'cause we have three fantastic dieticians who I can refer to, to make sure that our, our children with the multiple food allergies, they're really getting an adequate diet.

Uh, sometimes you do need, uh, specific supplements or sometimes they can just [00:17:00] substitute in certain other foods that might be high in the certain element that you do need.

Kathleen: I imagine that parents or caregivers are hesitant to give their kids foods that maybe they got a positive test for. So is that something that you do in the office that you know, gives them confidence that yes, they can tolerate it?

Or how do you encourage parents to move that needle so that they can give the kids another chance?

Dr Sampson: Yeah, you're exactly right. I mean, when a parent gets a test back that's positive, immediately they're worried. The other thing that I just wanna make sure that people understand is when we look at a number, you know,

usually when we look at the IgE level, it could be anywhere from what we say 0.35, which is the detectable range, up to greater than a hundred.

And the one thing that parents need to understand is because you have a high number, doesn't mean you necessarily are gonna have a severe reaction. Some people are told that your level's so high, [00:18:00] you know you're gonna have a terrible reaction. Well, there's really not a good correlation between the actual value and the severity of the reaction you're gonna have or the amount of food that it's gonna take to cause that reaction.

Kathleen: So you really need to rely on your allergist to help you navigate this process.

Dr Sampson: Exactly, exactly that it really is more like sort of a barometer once you exceed a certain level of. Number. So with egg, for example, if you have a level greater than seven kilo units per liter, it's better than 90 to 95% likely you would react to egg.

It doesn't say how badly you'd react, just that you would. Milk and peanut have different values. So, you know, fortunately now we know what many of these, we call them cutoffs, uh, are for predicting, uh, whether or not you'll react. But in those individuals that have lower levels, you're exactly right.

Parents are still often [00:19:00] reluctant to give the food at home. And we bring children in, uh, to our clinic and we do cha, what we call challenges every day. You know, six or seven children are getting challenged every day and it's basically just showing the parent, you know, at least 80% of the time we're right.

Kathleen: Giving them confidence. Yeah. Well, and there's also a lot of confusion about is it an allergy or is it intolerance? So in terms of milk for example, that you know, the intolerance is to the lactose, that allergy has to be to a protein. Do you get a lot of those kinds of confused parents, or is that better understood than I think it is?

Dr Sampson: In the population I see now, I think they do understand this more, but it, it's, you're absolutely right. It's still a major problem that people confuse an intolerance such as lactose intolerance with an allergy. The lactose intolerance is due to the lack of enzyme activity [00:20:00] that breaks down that sugar and leaves you with a bloated uh, stomach, often a stomachache, maybe some diarrhea, whereas the allergy is this immune mediated or you know, you need this IG antibody that then causes you to have a reaction, which

may be called the skin, the respiratory track, or in severe cases cardiovascular system where you may actually get hypotension. And that's not what you typically would see from uh, an intolerance.

Kathleen: So what are some of the symptoms that if you have a young child and you've fed 'em something and have no idea that they could potentially have an allergy? What are the symptoms that parents should immediately go to the emergency room or, or seek out medical care?

Dr Sampson: So a fairly typical scenario when, especially if we're talking young infants, if they were to ingest a food that they are allergic to, oftentimes they'll start to cry 'cause they can't tell you, you know exactly what's [00:21:00] wrong. Uh, they'll frequently break out in hives or get red rashes, especially around the face and the chest. Um. They may develop some, uh, cough, they may develop some wheezing, although that's less common in infants. Very frequently they'll vomit and, you know, maybe one or two times.

Uh, but especially if you, if a parent sees that their child seems to be having any kind of breathing problem, then they definitely need to, along with things like the hives, they definitely need to call 9 1 1 and get them to an emergency room.

Kathleen: Good advice. Well, we're almost out of time, but I can't leave you until we talk about some seasonal allergies.

So, we have tons of pollen around here. Kids are struggling. It's hard to know, is it allergy? Is it an asthma? And then there are these theories that, well, if you eat your local honey, it might help you reduce your reaction. So I'd love your thoughts on how parents can [00:22:00] manage seasonal allergies and get their kids through this season.

Dr Sampson: Okay. Well, having been in North Carolina for a number of years, I can totally empathize with the pollen.

Kathleen: That green pollen.

Dr Sampson: So basically when we're looking for seasonal allergies, you break them down into season. We know the trees come first. We know the grass comes second, and then the weeds are typically in the fall, depending where you are. So where you are, you're already into the pollen season. Up here, we're not in the pollen season yet. We're just about ready to start. And we know that there are certain trees up here. It's primarily birch and oak. Down where you are, it can be, uh, oak can be maple and, and some of the other trees,

Kathleen: pine

Dr Sampson: we know when it starts.

And then one of the problems is grass season starts right as tree pollen season is ending. So people who are allergic to both have two seasons to deal with. Usually you get a break in the summer and then around [00:23:00] Labor Day you'll see the ragweed and some of the wheated pollen starting, at least, you know, on the eastern part of the country.

So, ways to try to deal with that. Typically what I will tell parents, uh, as we're approaching tree pollen season is to to watch the trees, to see when you start to see green buds starting on the tree. 'Cause that means it's, it's going to be pollinating pretty soon, and the best thing you can do is to get on or put your child on a, what we call a second generation antihistamine.

Like cetirizine. Brand name is zyrtec, which is longer lasting, so they can take it once a day. I tell them to take it at bedtime. And what you're trying to do is you're trying to fill all the histamine receptors in the nose and in other, in the eyes and things like that so that when you confront pollen and the mast cells release histamine.

They don't have a receptor to go and activate the symptoms. The other thing is that when you use an antihistamine like [00:24:00] that, you need to do it on a daily basis. It, you know, once the patient already is having symptoms, the antihistamine is not gonna turn it around quickly.

Kathleen: Uhhuh. So you wanna try to do it beforehand and then do it regularly?

Dr Sampson: And yes, do it on a regular basis and I just help patients watch. You can go on like a weather channel or www.pollen.com, put your zip code in and you can follow what the, the pollen's doing. Once you see that the pollen's gone, you can then stop the antihistamine. If you have grass, which comes next, uh, you know, usually in the late spring, then you may have to do it, uh, keep 'em on it through that particular season.

And this, uh, cetirizine is a, is a very old drug. It's been used for a long time in children. It's got a you know, great safety record. So it's, it should not be a problem

Kathleen: good. How young?

Dr Sampson: Well, usually the first allergies we see in children are generally to food or then to something like dust mite, which is an indoor [00:25:00] allergen.

The tree pollen, usually it requires a couple seasons of exposure before they will actually develop a sensitivity. So it, it's not common to see much in the way of um, pollen allergy until they're, you know, above three or four years of age.

Kathleen: Okay. And then it's safe. Well, what about do home air purifiers? Are those good treatments?

Do you like the local honey?

Dr Sampson: Yeah. So

Kathleen: old wives tale?

Dr Sampson: Yeah. A couple other tips. One is, you know, we, especially in the spring when the air seems so fresh, we always like throwing the windows open in the morning and getting all that good fresh air. But unfortunately, early morning is when plants put out most of their pollen.

So the best thing you can do is actually not open your windows in the early morning. Use air conditioners, you know, especially if, if they have some kind of filter system on 'em to try to keep the pollen out of the house. Air purifiers can be somewhat helpful for pollen. Things like dust mite though, which is an allergen that's[00:26:00] worldwide – it's a small, microscopic member of the Spider family that tends to live in mattresses and pillows, and that you have to take a different approach. You put impermeable and casings on those which you can purchase, and then washing bedsheets fairly regularly. But using some of those tricks, then you can deal with the indoor allergens.

You can also try to avoid some of the outdoor allergen and then especially having them treat prophylactically with antihistamine. Also, there are, there are other medications you can use like Pataday if they have some kind of eye drops and histamine eye drops, if they have a lot of difficulty with their eyes.

There's also steroid sprays you can use for your nose if you have a lot of difficulty with that. And then if all that is unsuccessful, you can also think, certainly think of allergy shots, which can be effective for, you know, many people.

Kathleen: Excellent. Alright, I have one last question just because I get this question a lot about back to food allergies, this stigma [00:27:00] that's associated in the classroom or dining out, or you know that nobody on the airplane can eat the peanuts because of my little son.

How do you empower parents and caregivers to help their kids not feel left out or that they can't eat whatever's being served at a birthday party? It's a social issue, but yet it's an important one.

Dr Sampson: Yes. Um, you know, this is a whole area that's now, uh, receiving much more attention, which is a good thing.

You know, early on we were just trying to understand food allergy and how best to deal with it. But yeah, you know, there, there have been studies and there's clearly bullying goes on in school. Uh, you know, people get upset when, uh, you know, they find out they're restricted of, of being able to eat foods.

Um, I think the main thing is, you know, basically trying to educate people about it. Um, happily on airplanes now it's, it's not as common probably because, um, you know [00:28:00] when we used to get the bags of peanuts a long time ago, if you remember, they were always puffy in that because they were packaged on the ground.

And then when you got up at 30,000 feet, it's like they're under pressure. So when everybody's popping 'em open, you're blowing dust out. Well, now they're, you know, they, they're vacuum packed, presumably, because they're not puffy anymore. Also, you don't give very many peanuts, but you know, there's not that dust problem.

The biggest problem we see in airplanes is that the child is either picked something out of, you know, a pocket or out of the seat somewhere and eaten it, or, you know, the tray's been dirty. So we just recommend that the, uh you know, the parents take some, uh, wet wipes or something and wipe down the tray and the handles before they go on.

But we do, you know, we, there are a number of groups that are trying to educate the public about the fact that, that these food allergies can be a life-threatening issue and, you know, we really have to take them seriously. I think [00:29:00] restaurants and many of the, the stores that sell foods now are much better.

You know, I feel like every time I go somewhere they ask. The, the waiter will ask, you know, is there any food allergy or when you buy foods, they're asking, are there food allergies? So I think it's much, much better than it was, you know, like 20, 30 years ago.

Kathleen: And you can really trust the food labels too, that when you look at the list of ingredients, they've gotten very vigilant about making sure, you know, all ingredients are identified.

Dr Sampson: Right.

Kathleen: Well, this has been fabulous. Thank you so much for these pearls of wisdom and your research. It's phenomenal what you and your team are doing to move the needle and, and help life be a little easier for these kids, especially the early introduction. I, I think that that's gonna obviously be beneficial in the long run for many, many children.

So, Dr. Sampson, thank you kindly for joining us today, and thank you listeners for dialing in. We hope that you go to Nutrition 4 Kids. Remember that four is numeric and sign up for our [00:30:00] email link, check the links out where you can listen to the podcast. Thank you.

Dr Sampson: Thank you very much.