

Real Food as Part of a Healthy Tube Feeding Diet

Featuring:

Katherine Bennett, RD, MPH, CLEC

TRANSCRIPT

Ashley: As a parent or caregiver, you want the best for your children – the best education, the best doctors, and the best experiences, and so much more. So, of course, when it comes to food, you want the best options for nutrition. As a caregiver to a kiddo who is tube fed, you might wish you could provide more variety or that your child could eat foods that other family members are eating for dinner.

Ashley: Hello, and welcome to Abbott Nutrition Health Institute’s Power of Nutrition podcast. My name is Ashley Bronston, and I’m a registered dietitian. Today’s topic is “Real Food Tube Feeding,” and that’s because we and our experts have noticed a growing interest in offering real foods as part of a healthy tube feeding diet. There are so many benefits to this approach, along with some considerations to keep in mind. Today, we are so lucky to have Katherine Bennett, a registered dietitian at the Children’s Hospital of Orange County, CHOC, in California. Katherine has over 15 years of experience in the field of pediatric nutrition and a passion for helping caregivers use real food as part of their child’s tube feeding diet.

Ashley: Welcome, Katherine.

Katherine: Thank you for the invitation.

Ashley: Before we start, I should note that I’m recording in a studio, while Katherine is dialing in from California. So, you may notice a small difference in the sound quality from our respective microphones.

Ashley: Katherine, I always like to take a few minutes to properly introduce our guests. Would you mind taking a moment to tell us a bit about yourself and your background? How did you become involved with counseling families on blenderized tube feeding?

Katherine: Of course, Ashley, I’m happy to. So, like many dietitians, I became interested in nutrition as I felt very passionate about the power that food has on our bodies and health. And I truly felt, and still do, think of food as medicine. Early on in my career, I started working in a neonatal intensive care unit, taking care of all the little preemie babies and helping them grow. And then, about 11 years ago, I started working in pediatrics and moved into the pediatric gastroenterology and nutrition area shortly afterwards. I now work with kids of all ages and all GI conditions; however, a large part of who I see are children who depend on tube

feeding for some or all of their nutrition. And, like so many dietitians, I was taught that only water, formula, and medications can go through a feeding tube. But, one day, about nine or so years ago, a mom and her daughter came to see me, and the mom wanted my help in making a blended diet for her daughter. She wanted to be able to feed her all the things that the family eats. And her daughter was born premature at about 26 weeks – about three months early – and she had a breathing tube and a feeding tube to support her. So, I was nervous, as neither the mom nor I had experience in doing blenderized tube feeding; but we were both up for the challenge. So, I think, with this mom’s passion, patience, and a lot of experimenting and trusting each other, we ultimately made it happen.

Ashley: So, this topic is so near and dear to my heart. When I first started schooling, it seemed like nutrition support was just limited to enteral formula and parenteral nutrition or nutrition delivered through an IV. However, when I was in graduate school, I conducted research in a complex care unit on the outcomes of blenderized tube feeding, and since then, blenderized tube feeding – or real food tube feeding – has become so much more popular. And, I really want to start with some fundamental questions for our listeners. Can you tell us exactly what is blenderized, or real food tube feeding, to start?

Katherine: Of course. So, blenderized tube feeding is the act of getting food, typically in a blended or puree consistency, through a feeding tube. Now, there are infinite combinations of food that can be given, and the blenderized diet may compromise part or all of a child’s nutrition through their feeding tube.

Ashley: And why do you think this is such a growing trend?

Katherine: Well, that is a great question. I’d like us to start by saying that I am thankful to the parents and tube feeders who started blending long before us health care providers knew about all its benefits, and it was these parents who kept blending and pushing for better nutrition for their tube-fed children. These days, honestly, I don’t really even consider it a trend anymore. I feel like it’s just something that’s here to stay. You know, there are national recommendations that encourage – for those of us who eat by mouth – a diet full of whole grains, fruits, veggies, less processed food – and now it is possible for those to eat by tube to do this, as well. In fact, some of my blenderized tube feeding patients are the healthiest people that I know. Other reasons that I think a blenderized tube feeding diet is popular is that it actually gives parents and caregivers a choice in what and how they want to feed their child or even an option to use if their child is not tolerating their commercial formula regimen. And speaking of, one of the main reasons I think that blenderized tube feeding is so popular is just that – we see a lot of improved feeding tolerance and stooling patterns on blenderized tube feeding.

Ashley: And I think that's the same experience that I had when I was in the clinic too. I saw a lot of those same things that you did. Let's say a parent comes to you and is interested in learning more about blenderized or real food tube feeding. Can you tell us, who's the right candidate for this type of feeding?

Katherine: So, I try to help everyone who wants to be on a blenderized diet get on a blenderized diet. Now, it may not mean that we get on a full-blenderized diet immediately, but we try to work through any barriers to get in as much blended food as possible. There are a few things that I look for when evaluating a child for a blenderized diet, however. The first is tube size. Ideally, we want a tube size of 14 French or larger. However, I do often work with children who have a 12 French size. Um, I also let my families know that I am going to be part of their child's medical team now and that we will be working closely together, and because of that, we need consistent follow-ups to make sure things are going okay. Lastly, I do look for families who are motivated to blend, and this is really pretty easy. Most of my families who come to me for a blended diet are already super motivated and passionate.

Ashley: Now, from your perspective, are there potential risks to blenderized or real food tube feeding?

Katherine: So, yes, there can be some potential risks with doing blenderized tube feeding. I will say, however, that the majority of the families I work with, it seems that the benefits greatly outweigh the risks. But, there can be some equipment issues, like tube clogging, pumps alarming, or pumps not infusing the entire blenderized feeding, for example. I do think the biggest risk that I see is children not getting enough or appropriate nutrition on a blenderized tube feeding, and this may be due to them not working with a dietitian or not regularly following up with a dietitian. I see children on low-carb blends and not gaining weight. I also see home blends that are deficient in vitamins and minerals, like calcium and sodium. So, I do think working with a dietitian, if possible, is key to ensure that a child is getting enough nutrition, but also balanced nutrition.

Ashley: And I think I heard you mention that, in your belief, you thought the benefits typically outweighed the risks. What do you think are some potential benefits to the blenderized or real food tube feeding?

Katherine: Yeah, there are quite a few benefits to blenderized tube feeding. As I mentioned earlier, we do see a lot of improved feeding intolerance, meaning we've got less reflux, less vomiting. Some children might be able to tolerate a larger volume of their tube feeds over a shorter period of time. We also see improved stooling patterns. Many of my families also report to me that they've noticed their kids on the blenderized tube feeding are showing more interest in eating by mouth, or actually eating more by mouth for those that can eat by mouth. They also share with me that their children are sleeping better, have better skin color, and even some of them say that their kids seem to have a better mood on a blenderized tube feeding diet. Now, the research supports a lot of these benefits, and some research has even found that those on a real food

tube feeding actually use less health care resources, like less visits to the doctor or less trips to the ER, for example.

Ashley: Those sound like a list of some amazing benefits. Now, if a caregiver wants to incorporate real food tube feeding into their child's diet, do they have to do a full blend or are there different ways to go about this?

Katherine: There are definitely different ways to go about this. When I meet with a family for the first time to discuss blenderized tube feeding, I go through all the potential options to see what would work best for their child, and ultimately, their lives, their schedules, their day-to-day. These options could include continuing with their child's standard formula regimen and providing what I call little snacks of blended food, anywhere from one, two, three times per day. Another option could be doing half of their nutrition from their commercial standard formula and half from a homemade blenderized diet. Another option could be a full-blenderized diet. Thankfully, we also have a lot of commercial real food-based formulas on the market today, and for many of families that aren't able to do a home blended diet, these can be wonderful options. I always tell my families that, whatever they decide to start with, they can always change. So, for example, if they start with a commercial real food-based formula and decide one day they want to start doing a home blend, we definitely can move towards that.

Ashley: So, it seems like these types of diets are pretty flexible when working with a registered dietitian. And I heard you mention commercial real food formulas. For a parent or a caregiver, are there any key attributes that one should look for when trying to select a formula?

Katherine: Yes. So, we are very lucky that there are so many options for commercial real food-based formulas available now, and I hope that these options continue to grow. But there are some considerations to think about when using these formulas. One consideration I tend to think of is: how much real food does it contain? They are not all created equal when it comes to the amount of real food. Second: does the food it contains work for the child and the family? Does the caregiver like the ingredients, is it something they want their child to eat, and also, if their child has allergies or intolerances, making sure that we're choosing a product that doesn't contain any of these offending foods. Another consideration is if the product contains added vitamins and minerals. Now, this isn't a barrier for me to use the products that don't have added vitamins and minerals, but it does mean that we might need to supplement what is missing to make sure the child meets all their nutritional needs.

Ashley: If one of those parents or caregivers prefers, say, a plant-based protein, what types of protein options are available for those formulas?

Katherine: So, there are quite a few options for plant-based protein, commercial, blenderized formulas out there. They offer plant-based proteins like pea protein, rice protein, soy protein, and all of these are great plant-based options for those who choose to or cannot have an animal-based protein. I will say, in my experience, I tend to see similar tolerance rates to both types of proteins, both animal- and plant-based protein types.

Ashley: As with any type of food preparation, having the right tools on hand will help ensure a smooth transition. Can you provide some guidance on what tools one would need to start this process?

Katherine: So, yes, making a home blenderized diet, you're right, does require some tools. One main tool that is needed, of course, is a blender. I don't let blender type limit the ability to do a blenderized diet, but not all blenders are created equal. A standard household blender can work, but it might limit the types of food that can be used, as it may not blend some of these foods well enough. Industrial or high-powered blenders work amazing but can be on the pricier side. Another set of tools that is good to have are measuring cups and spoons. These are especially helpful when starting out to help ensure adequate and balanced nutrition. You also may or may not need a strainer depending on what food you use, how well your blender works, and if you're using a pump to feed, you may need to strain your blend to get out all the thicker, larger, or stringy particles to make a smoother blend. And, not necessarily a tool, but it is helpful to have a general understanding of what and how much nutrition your child needs. So, having an idea of how many calories, how much of each food group, do they need any extra vitamin/mineral supplementations, for example, really help ensure that your child is getting everything they need.

Ashley: Thanks so much, Katherine. And now that you've discussed the tools that we need to use to get started, can you provide some best practices to follow when these parents and caregivers are trying to store, prepare, and administer a blenderized or real tube feeding?

Katherine: So, when preparing a blenderized tube feeding, following safe food handling practices is ideal to avoid any contamination and decrease the risk of any food-borne illnesses. Now, it doesn't have to be complicated, it means washing your hands before you start, and making sure your prep area and equipment are clean, similar to as if you were preparing food for other family members in your household. Prepared home blends can be stored in the refrigerator for up to 24 hours, or in the freezer for up to three months. And, in terms of administering blenderized tube feeding for a home-prepared blend, it is recommended that it not be out of refrigeration for more than two hours. So, this means that a feeding of home blended food must be finished in two hours or less.

Ashley: Are there ways that families can monitor the nutrition adequacy of their child's diet in order to ensure success with a blenderized or real food diet?

Katherine: So, ideally, a family has access to, and can work with, a dietitian who can guide them on providing nutritionally adequate blends. If not, working with a pediatrician or even a gastroenterologist is probably the next best option. They can usually provide general nutrition advice and at least monitor the child's growth. Using nutrient analysis apps like My Fitness Pal might also be helpful. It can at least help a family or caregiver know what the nutrient content is of your child's home blended diet. Some things that families can do on their own to make sure their child is getting good nutrition from a home blended diet is to watch for changes in weight. If their child is looking leaner, clothes are fitting looser, or they haven't bought new clothes in a long time, this might indicate some weight loss or not enough weight gain. Additionally, looking at the balance and variety of their child's diet might help identify any large gaps. So, overall, and for the majority of the time, making sure they're getting good sources of a protein, grains, fruits and vegetables, dairy or non-dairy substitutes, and fats in their blends, and if any major food groups are left out or are minimal compared to other food groups, kind of on a consistent basis, then nutritional adequacy might be compromised.

Ashley: For those parents and caregivers that are listening with us today, do you have any recommended resources for this process that we can share with them?

Katherine: Of course. So, there's a lot out there, and I especially feel like I hear about new ones all the time when I meet with my families. But I have two kinds of all-time favorite resources. The first is a homemade blended formula handbook by Marcia Dunn Klein and Susan Evans Morris. They are both speech-language pathologists. They also enlisted the help of parents of children fed by a tube and dietitians and a physician. One of the things I love about this book is how comprehensive it is. It talks about how to ensure your child is getting the nutrition he or she needs. It helps troubleshoot any problems. It also provides experiences and recipes from families doing a blenderized diet. Another book that I love is called, "Complete Tube Feeding: Everything You Need to Know about Tube Feeding, Tube Nutrition, and Blended Diets," written by Eric O'Gorman. Now, Mr. O'Gorman is actually a tube feeder himself and shares his experience with tube feeding, more tips and tricks, and some wonderful advice and recommendations on blenderized tube feeding. So, I think both of these are great places to start in terms of resources.

Ashley: And those sound like fantastic resources. Thanks, Katherine. Now, are there any closing comments or key takeaways you'd like to share with our listeners?

Katherine: Well, I guess I'd like to close by saying that, working with families with blenderized tube feedings, my passion for nutrition has come full circle. Knowing the invaluable role that food plays in our health and prevention of disease, we can actually now provide these benefits to those who eat with a feeding tube. I'm really grateful for this, and I'm excited to see where else this real food tube feeding journey takes us.

Ashley: It's been such a pleasure speaking with you today. Thank you, Katherine, for your insights and for joining us on today's Power of Nutrition Podcast.

Katherine: Thank you so much for having me, Ashley.

ANHI: For our listeners, if you're looking for more education on this topic, you can find infographics on anhi.org by clicking RESOURCES at the top of the page, then PRINTABLE MATERIALS.

Ashley: Thanks for listening. Stay healthy and safe.

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