Home Blenderized Tube Feeding:
A Practical Guide for Clinical Practice

Featuring:

Caroline Weeks, RDN, LD

TRANSCRIPT

Maura Bowen: Hello listeners, and welcome back to the last episode in our three-part podcast series on blenderized tube feeding. In our first episode, we welcomed Dr. Teresa Johnson from Troy University who talked about the prevalence and the efficacy and the safety of these types of feedings. And then in our second episode, we talked to Kathleen Eustace who discussed her article on the common attitudes and perceptions of blenderized tube feeding among physicians and advanced practice providers. You can hear both episodes along with today's recording on the ANHI POWER OF NUTRITION Spotify page, or on the ANHI.org website under Resources > Podcasts and Videos.

Now in today's episode, Caroline Weeks, who is a registered dietitian at the Mayo Clinic in Rochester, Minnesota will tell us about an article she published in a 2019 edition of Clinical and Translational Gastroenterology. And that was called Home Blenderized Tube Feeding: A Practical Guide for Clinical Practice. Caroline intended the article to help equip gastroenterologists with a guide for initiating and monitoring and evaluating blenderized tube feeding regimens, as well as to encourage greater partnership between the gastrointestinal provider and the registered dietitian. So, with all that said, let's get started.

I'm Maura Bowen with Abbott Nutrition Health Institute, and I'm delighted to introduce you to Caroline Weeks. So, Caroline, thanks for joining us today.

Caroline Weeks: Thank you so much for having me on today, Maura. It's a pleasure. And I just want to say that I'm honored to be grouped with such esteemed colleagues like Kathleen Eustace and Dr. Johnson from your previous episodes and the theories.

Maura Bowen: Wonderful. Before we begin, I'll note that I'm recording in the studio. Caroline is dialing in from her office in Rochester [Minnesota]. So, listener, you may notice some slight differences in tonality across this recording. And then secondly, Caroline, I'd love to take a few minutes to properly introduce you. So, if you don't mind, can you tell us a little bit about yourself and your background?

Caroline Weeks: Sure thing. I am a pediatric registered dietitian nutritionist most recently at the Mayo Clinic in Rochester as you mentioned. Throughout my career, I've worked in many different sub-specialty areas of pediatrics but have always maintained a role within the area of cystic fibrosis and pediatric gastroenterology. Outside of my clinical career, I am passionate about nutrition communication and education, and I actually utilize social media platforms to share evidence-based information. My most recent endeavor that I'll be starting, and it'll definitely serve as a change of gears for me, but I'm actually starting a graduate degree in physician assistant studies this, actually next month at the University of Nebraska Medical Center. So, I'm very excited for the opportunity to further deepen my career within the field of medicine.

Maura Bowen: Well, congratulations. That's amazing. As I said, it's a pleasure to have you here today. And I figure it's usually a good idea to delve into the origin story. So, can you tell us a little bit about the history of blenderized or real food tube feeding?

Caroline Weeks: Yes. As I mentioned in my paper, back in the day we, we bulk-did foods that were given to hospital patients and it really wasn't until the turn of the century that commercialized formulas were really made and becoming more popular. So, I think people don't really realize that there is a history of that. I think certain research has dated back to ancient times actually in terms of use of blenderized feeding. So, there's definitely been a resurgence of interest and that's what inspired the article.

Maura Bowen: So, in that 2019 paper, you referred to, "A renaissance of home-blenderized tube feedings." And I love that by the way. And then you went on to say where, "Patients are adamant about pursuing this feeding modality." So why in your mind do you think this is occurring?

Caroline Weeks: Yes. When I wrote this paper, it was shortly after a new set of US dietary guidelines have been published. And actually, since my paper has been published, these guidelines have been further updated. So, it's sort of not as up to date now.

But at the time, there was a major highlight on nutrients of concern and emphasizing the importance of whole foods, minimizing added sugars for optimal health. And I think in recent years, and probably a lot of this has to do with people going to social media for their information, many individuals are paying closer attention to their dietary choices. What ingredients are in their foods, paying more attention to the sourcing of their foods, et cetera. And people receiving enteral nutrition really have been no different. So, there's been, again, this resurgence of interest in going back to old ways of making the homemade blends. And actually, clinically there's been some limited evidence that we are seeing some symptomatic improvement in patients as well.

Maura Bowen: All right, that makes great sense. And you also state that, "Although research is limited, there is evidence of high levels of patient satisfaction with blenderized tube feeding." So, what do you think is driving this patient satisfaction?

Caroline Weeks: Yes. Speaking anecdotally, I have seen major psychosocial benefits in families transitioning to home blenderized tube feedings. Oftentimes parents or caregivers I think, feel somewhat disconnected to their child in the feeding process. And again, I work in pediatrics, so I'll say child, but it could be a son or daughter taking care of a parent.

For example, these people aren't necessarily able to share previous culturally traditional recipes or homemade meals, but now with blending, that all becomes possible. And I think that everyone can agree that food is emotional for many people. Whether it's your grandparents' favorite famous super casserole recipe or whatever, you feel a greater connection to your loved ones when you share those things.

Clinically too, we have also seen benefits. And I know that your other speakers have expounded upon this in your previous episodes, but in general, from my clinical experience, I've seen medically complex children have better tolerance to blenderized tube feedings with fewer gagging or retching episodes and improved stooling patterns to name a few.

And one thing, I have no real evidence to be honest with you to base this one story on, but I remember in clinical practice, one child I wrote ongoing home blenderized tube feeding recipes for was actually more willing to take tastes of a small amount of table foods after being on a blended diet for several months via her G-tube. So, whereas she was NPO or nothing by mouth prior and had some sensory aversion, there seemed to be some sensory benefit as well after being on a home blenderized tube feeding for several months. So, I thought that that was a really magical anecdote that we got to share together as a family-provider relationship.

Maura Bowen: Oh, that's great. And I think you're kind of hinting at some of this already, especially as it relates to pros and cons of blenderized or real food tube feeding, but can you think of other pros and cons?

Caroline Weeks: Yes. Pros are some of the things I've definitely already mentioned. Additionally, there's the opportunity for greater intake of nutrient diversity. So, the commercial formulas are, yes, wonderful, of course nutritionally complete, but I always kind of make this analogy or put it in perspective like this. If you're eating by mouth, would you want to have the same meal three times a day or more per day, 365 days in a year? Right? The benefit of blended food is that you can mix it up and get a greater variety and kind of better diversity of nutrients.

Caroline Weeks: When it comes to the cons of blenderized tube feedings, there are definite hurdles to face with blending. I would say probably the most notable being food safety risk that just comes with handling food in a non-sterile kitchen environment. I know many hospitals too have had difficulty navigating how this would work. For example, if a patient were on blenderized tube feedings at home and were to get admitted, what would that process look like?

From a caregiver standpoint, time is a major factor as well. And though there are ways to organize your blend prep sessions, many people work full time or would just prefer the convenience of a pre-packaged commercial formula. So that's something to keep in mind as well.

Research has shown some conflicting outcomes on blenderized feedings effect on weight and growth, especially as it relates to children. Obviously when making homemade blended diets, it's not an exact science no matter how good we are at weighing or measuring the ingredients, and we simply just cannot achieve the same consistency that commercial formulas provide in terms of caloric content and micronutrients, et cetera. So, this is one of the reasons why it is so important to have ongoing multidisciplinary follow-up with your medical team to ensure that patients are progressing in the right ways.

Maura Bowen: Those are all really important points. Thank you for pulling those forward. So, I'm kind of putting air quotes here around the word right, but who would be the "right" patient for this type of feeding?

Caroline Weeks: That is such a great question. And it's one that merits exploration with your team of course. A patient who would be "right" for a blended diet would be someone receiving enteral feedings, ideally and preferably via gastrostomy tube, and one who could tolerate syringe bolus feedings as this really does, A, make things simpler, and B, reduces the risk for equipment clogging and is really just optimal from a food safety standpoint and timing standpoint. If a patient is receiving jejunal feeding continuously for many, many, many hours, that puts us at risk for unsafe food temperatures, et cetera. So that's the reason for that.

Blenderized feedings would also not be appropriate for infant patients receiving breast milk or formula obviously as that needs to be their primary nutrition source. So as a registered dietitian, the youngest patient I've ever worked with on a blenderized tube feeding diet was over one years old. And many patients I think move to blenderized diets, blenderized tube feedings after they haven't tolerated commercial formulas. However, with more clinical and clinician education within this space, it would be my hope that this could be introduced as an option alongside all the others in the very beginning, say when a patient was first told that they needed nutrition support for their optimal medical treatment.

Maura Bowen: So, in your mind, what's the best way to get a patient started on a blenderized or real food tube feeding regimen?

Caroline Weeks: Yes, I think it's definitely overwhelming. It can seem overwhelming not only to families, caregivers, but even sometimes medical providers too. So, taking things one step at a time and using your resources, using your team is so important. From a patient standpoint, I encourage you to talk to your medical provider, share openly your goals for your nutrition and have a conversation about what you'd like to do for yourself, and see if you can to work with a registered dietitian if not already, as they're the ones who will really, really have that ongoing work with you to customize recipes and work with you to incorporate ingredients that you already have in your kitchen, et cetera.

I think one thing that's important to note as well is one can start really slow with a blended diet too. It doesn't necessarily have to be a cold turkey thing. I've also worked with patients to incorporate a mix of commercial formula use as well as blends. For younger children, I've worked with parents that will add say baby food purees to a commercial formula and kind of create their own mix. Some families might also prefer to use commercial formula during the day when their child is say at school or daycare and then blend for the family meal at dinner time. So again, create those psychosocial bonds. So, it's not an all or nothing approach. And I think once families understand that and realize that the possibilities are really endless.

Maura Bowen: So, it's critical that patients work closely with the registered dietitian nutritionist. Can you tell us a little bit about why this is so important?

Caroline Weeks: Yes. I'm biased obviously as a registered dietitian myself, but your registered dietitian nutritionist is your licensed, credentialed professional who has had thousands of hours of highly specific training, not only in the realm of medical nutrition therapy, but also in the food science aspect of things. So, we as dietitians actually understand how ingredients function, how they hold up in blended solutions and are truly the experts in helping patients achieve goals as they relate to growth and development in the pediatric space or weight management say for our older patients.

So, I mentioned close monitoring as an important aspect of patient care regardless of what situation we're talking about, but I think this becomes even more important when patients are on a blended diet to ensure that they have the proper education around food safety, food preparation, and so that these patients can meet their goals in an efficient manner.

Maura Bowen: So, earlier you mentioned the multidisciplinary team and how important that team is. So how can the entire healthcare team work together to help these patients, especially with monitoring and evaluating progress?

Caroline Weeks: That's a great question. I think we could probably have an entire other podcast episode just about this one topic. I think something that I have learned through communicating with your group at ANHI and speaking with other professionals is that there isn't much education or isn't as much as I maybe once

realized amongst medical providers about blenderized tube feedings as an option. And I think what inspired my paper was this sort of disconnect almost, I hate to say, between medical providers and patients. And the patients really wanting this as an option, feeling as though they should be able to pursue it, but then those medical providers not knowing what resources to fall back on to provide that best care for them.

Caroline Weeks: So again, this is always going to come from a team environment. Your dietitian is your nutrition expert, your doctor is your expert on medications and overall overarching medical treatment and care. So together, I think we're a powerful force. I have had the privilege of working at institutions where I have wonderful dynamic relationships with the physicians. And we communicate behind the scenes, and we talk to make sure that everybody's on the same page. So, it does truly come down to just talking with your colleagues and working together with perhaps care-coordination meetings or working with your nurses to understand what your patient's goals are. It truly is a two-way street.

Maura Bowen: So, this next question is kind of a two-part question. And the first is: What do you wish more clinicians knew about this type of feeding? And then the second part is: What about patients and families and caregivers?

Caroline Weeks: I was somewhat surprised that clinicians and either nurse practitioners, advanced practice providers, PAs, or MD, DOs, didn't really know about this as an option. And I think we have a lot of learning to do as a medical community and a lot of further research to engage in. But I think it's important for clinicians to understand that nutrition is such a vital role in a patient's clinical care.

And whether it comes to healing or growth or development for a growing child, nutrition is so, so impactful. And I know I'm speaking to the choir on that one but understanding that I think this interest in nutrition and interest in this whole-foods movement, really incorporating more colorful ingredients, fruits, vegetables, fiber-rich foods. So much ongoing research about the microbiota, et cetera. This is here to stay.

And so how I think we can really delve in further, dive into investigate how we can provide this as an option. I really wish that blenderized tube feeding could be an option put on a table from the get-go. As I mentioned, when a patient is first told that they need a tube feeding, something I try to do in my practice is lay out all the options from day one in my first conversation. So, I discuss commercial formulas as an option, some of the in-between-type style formulas, and then blending as an option too, and really letting the family or the patient themselves decide because they're the ones that know their lives best and know their own goals. So that's, I think, where I hope things can go.

Maura Bowen: Wonderful. Caroline, I'd like to thank you so much for your time today. I think this conversation was the perfect way to round out our series on this topic, and we really appreciate your insights. So, I hope you'll join us again.

Caroline Weeks: Thank you so much. It was such a pleasure.

Maura Bowen: And for our listeners, if you're looking for more podcasts, we have dozens and dozens across a variety of different nutrition science topics. And you can find them on ANHI.org by clicking Resources at the top of the page, and then Podcasts and Videos. And we also have quite a few other blenderized tube feeding related resources too. And that's including a handful of self-study courses and a tube feeding guide for parents along with a helpful series of infographics we created with families and caregivers in mind. And of course, we're also on Spotify. So, if you're so inclined, look for ANHI's THE POWER OF NUTRITION podcast, and you can subscribe and of course tell your colleagues about us. Thanks everyone. Stay healthy and safe.