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>> Lindsay: Good Afternoon. Thank you for joining us today for the United Spinal association webinar, solutions for bowel management, second of a two-part series that included bladder management. Again, today's presenters on Ms. Jennifer French, MBA. I'm Lindsay Elliott, Director of member initiatives at United Spinal association and I will be your moderator for today's presentation. All of United Spinal association's webinars are archived at [www.spinalcord.org](http://www.spinalcord.org). These use the questions chat window on your control panel to type in your questions and we will do our best to get to them at the end of today's presentation. For any questions remaining unanswered, e-mail them directly to the presenters, whose e-mail address will be on the last slide. Closed captioning instructions also appear in the chat window of your control panel.

Jennifer French became a quadriplegic from a C6-7 spinal cord injury in 1989. She's an active user of the implantable scan and transfer system presented by the Cleveland FES center, the first person to receive such a system. She's the cofounder and executive director of a 501E3 organization called narrow tech network with a focus to educate and advocate to access to Neurotech following. French is also the associate publisher and senior editor of Neurotech reports, a leading news and analysis publication for the Neurotech industry. She is a silver

medalist from the 2012 paralympic games and the 2012 Rolex Guess woman of the year, the first woman with a disability to receive this distinction. She is the cofounder and development officer of the warrior healing program, a maritime educational program for wounded, ill, and injured service members through the USMMA sailing foundation.

Dr. Anderson-Erisman is a Director of education for the Miami project, secure paralysis, at the University of Miami Miller School of Medicine. She's focused on transitional investigations and bridging the gap between basic science, clinical science, and the public community living with spinal cord injury. Her training spans a spectrum of spinal cord injury research from cellular and molecular studies to whole animal and behavioral studies to human clinical research. She has conducted a multi-center clinical study evaluating the reliability and validity of the spinal cord independence measure in the U.S. healthcare setting. Several of her studies have focused on obtaining the perspective of people living with spinal cord injuries on various aspects of research, including functional priority, benefits and risks, preference for neuro-prosthetics, and exercise participation. Her current projects focus on, one, aging-related changes and broader health after spinal cord injury; two, determining the minimum amount of exercise and local motor training for targeted clinical trials of spinal cord injuries; and three, identifying the facilitators and barriers to clinical trial participation from the SB icon summer perspective. In addition to pursuing her own research regarding chronic injury, she is part of the leadership between running the swan full implantation clinical trials at the University of Miami, collaborating with Dr. Levi, who leads our participation in an industry-sponsored stem-cell trial.

Without further ado, I'd like to hand it over to Ms. Jennifer French.

>> Jennifer: Thanks, Lindsay, for that great introduction and thank you for attending this webinar. It's great to have you all here. Before we go ahead and get started, we just wanted to, again, reiterate to you that we have a question box that's over on your right-hand side of the screen. If you have any questions during this webinar, please type them in and we will have time at the end to address questions. Again, as Lindsay mentioned, if there aren't any questions that Lindsay failed to get to.

Mail those to us and we'll send them at the end of this webinar.

also, we're going to be covering quite a few different types of ways to manage your bowel and we're also going to be providing a lot of links to different websites, as well as resources. We just wanted to let you know you don't need to write this down during the presentation. We have in the handout section you'll see on your screen a pdf format of this presentation, so you can follow along as well and make your personal notes there, and those also have live links to the websites that we'll be referring to in this presentation.

So first we'd like to introduce you to our organizations that both Kim and I represent. Kim, would you like to introduce the Miami project?

>> Kimberly: Yes. The Miami Project is the Richard center within the University of Miami, and our mission is dedicated to finding more effective treatment. So ultimately lead to cures for paralysis, which are due to spinal cord injury damage.

>> Jennifer: The Neurotech Network a nonprofit organization that focus on his education advocacy to access neuro[indiscernible] devices and treatments for people living with impairments, their caregivers, and the medical professionals who care for them. That's the introduction to the two organizations we represent, and now we have to go into this quick disclaimer that our attorneys require us to say. Grin and bear it.

the information presented in this webinar is not meant to replace the advice from a medical professional. You should consult a healthcare professional familiar with your specific case, concerns, and conditions. The Neurotech network and its representatives do not endorse, rate, sell, distribute, prescribe, administer, or recommend any products, procedures, or services. We highly recommend you take this information to a trained medical professional familiar with your case to discuss options familiar to you.

Now that we're through that, let's get into the good stuff we're going to be talking about today. First we're going to go over how the bowel works so we kind of understand some of the anatomy behind it. Also, we wanted to go over what happens after spinal cord injury and how that system changes. Also, some of the complications that you need to be aware of for people living with spinal cord injury.

Also, the importance of nutrition. We'll go over some of the medications and other techniques that may help in terms of managing the bowel, then we'll go over some of the technology options that are available. And then at the end we're going to leave you with some additional resources where you can learn more and also what we've been referring to in this webinar.

With no further ado, I would like to hand it over to Kim.

>> Kim: We'll go ahead and lead off the webinar today talking about something that people with spinal cord injuries have said to researchers, and that is that bladder and bowel control continue to be the highest priority for regaining function. And that is what's indicated here in this graph from a paper that I published back in 2004.

So let's get into what happens -- sorry about that. There have been several other research studies that also show that people with spinal cord injuries rate bowel function as being significantly important to regain their quality of life.

So we're going to talk a little bit about the anatomy, the dysfunction, and the types of management that you can have, and then Jen will go into this new device that are available as well.

So the bowel system. The bowel system is part of the GI tract. The GI tract is from your mouth, your esophagus, stomach, all the different portions of the intestine, down to the rectum and down to the anal sphincter. The movement of how food or liquid that you ingest is moved throughout that system is by a process called peristalsis, and this is movement of the muscles and walls of the organs that you're not consciously controlling. It's an automated process that is controlled by your body. But the neurologic control of that is through your spinal cord and through autonomic nervous system that your spinal cord regulates. So we're going to talk about that in a few more minutes.

The actual bowel portion is made up of two big parts. One is your large intestine here and the other part is your small intestine here. And the main responsibilities of the bowel in the GI tract are to absorb nutrients and to eliminate any waste. That's the two things that are very important for it to do. So if there is a complication in any of that, that can affect your body.

So the control of the bowels is pretty complicated,

but the important things to know are that I mentioned autonomic nervous system. So here is sympathetic vagal nerve, and in the lower portion of the spinal cord, that's one component of the autonomic nervous system. The other component is the sympathetic nervous system. And the spinal cord and the brain controls these. So when you have a spinal cord injury, you get variable amounts of damage to the spinal cord, and depending where the injury occurs can dictate how much of a problem you can have with your bowel control.

Since there are other neurologic cells, they're called the enteric system, and they go directly to the different organs, the stomach, the intestines, the rectum. And these all work together to control the absorption of nutrients and elimination of waste and keep your body in [indiscernible].

So what happens after spinal cord injury? There's two big types of bowel dysfunction after spinal cord injury. The first type is called reflexic. And this is if the injury to the spinal cord is above thoracic level 12. So that means that the lumbar sacral segments of the spinal cord are intact, and that's upon, because that's where actual circuitry systems are located. So if your injury is above C12, then you can have a reflex type of bowel. And this means that the automated peristalsis of the movement, it remains intact throughout the system, but the stool that's in the rectum will not usually exit without some kind of stimulation. So the main way this people can defecate there is by triggering release of the bowel by using some kind of stimulant medication and by stimulating the rectum by digital stimulation.

The other big type of bowel dysfunction is called areflexic. And this is when you have the injury below T6-T12 and the spinal cord gets damaged. When that happens, when the circuitry is damaged, it can't respond reflexively. So you have a very reduced peristalsis or it could be completely absent. And the anal reflexes are absent. And that means there's nothing holding it in, so the stool can leak out at any time. And so in that particular situation, the bowel usually needs to be removed or emptied manually at least one and possibly up to three times a day, depending on your body.

So there are some complications that occur if you are not able to manage your bowels well, and obviously the biggest one is constipation. If that happens for long

enough, that tends to lead to many different problems in your body that go further up into the intestinal system. You can have fecal impaction through the rectal area. You can have fecal incontinence when you have accidents. You can develop hemorrhoids from doing the digital stimulation for a long period of time, numbers of years. It's pretty common for people to develop hemorrhoids after a while or if you do the digital stimulation somewhat rough manner, that can damage that tissue and cause hemorrhoids.

Another complication is that you have a really long bowel program. It could take hours to do, and then that really impacts on your life. You can have leakage of mucous, excessive gas. You can have diarrhea, which is the exact opposite of constipation. You can also develop autonomic dysreflexia, which we're going to take a little time to talk about in a couple minutes. When it comes down to it, if you have any of these complications, it can be very impactful on your life and can really lead to reduction in your independence and your participation out in the community.

So what is autonomic dysreflexia? We talked about this in the bladder seminar that we gave a little while ago, but it's very worthwhile to talk about this again in relation to bowel, because over so many of the bladder and over so many of the bowel are the main causes of dysreflexia in the majority of people with spinal cord injury. So autonomic dysreflexia, that means where you have a dis-regulation of the autonomic nervous system, and remember that I mentioned there's two components. One is the sympathetic component and one is the parasympathetic component. And these work back and forth opposite each other in a negative feedback loop.

So if you remember, if you think about sympathetic as being your fight or flight response, that's how you activate your body. Parasympathetic is rest and digest. It slows thing down and it relax. So you can see that they can really combat each other. Sympathetic can cause constriction of your blood vessels. You get an increase in blood pressure, increase in heart rate. If you need to escape somewhere, that enables you the ability to move very quickly.

Parasympathetic is the exact opposite. It induces dilation of your blood vessels, reduces your blood pressure, reduces your heart rate. And they work together normally to help your body maintain a steady state.

so what happens after spinal cord injury, remember, I told you that the regulation of the autonomic nervous system is within the spinal cord. So you have an example of a diagram that is a spinal cord injury here, and the most important cutoff is around thoracic level six, because this big portion of the sympathetic nervous system control is below T6. So if you don't have any information coming down from the brain or coming up from the spinal cords to regulate that sympathetic inflammation, it's uncontrolled.

So what happens after spinal cord injury when something can trigger AD is that you have a noxious or a painful stimulus below the level of injury. And we're talking mere about fecal impaction, but also mentioned that it can happen with a full bladder.

What that causes is a signal of the spinal cord, but because of the injury, it can't reach the brain. However, what it can do is trigger the sympathetic outflow that's in this region of the spinal cord. So it body senses that something painful is happening, triggers the sympathetic nervous system so you've got to do something about this. It causes a massive amount of vasoconstriction, closing of your blood vessels, the smallest. This it causes a rapid increase in your blood pressure, and it can also cause you to release catecholamine, which are kind of like adrenaline and its relevant molecules. Remember, this is because it's a fight or flight response. You need this activation to mobilize quickly, so that happens.

Also, after spinal cord injuries, you still have intact the brain control of the heart recognition and there's sensors in the carotid artery that detect when blood pressure is rising. So that triggers a slowing of the heart rate here through the vagal nerve, which is part of this parasympathetic nervous system, and that part is still intact, because it's above your injuries. But it tries to trigger a counterbalance to this sympathetic overflow, but because of the injury, the signal can't get down there. So even though the brain is trying to counteract what's happening with the increase in blood pressure, it's not able to do that effectively. So therefore, you keep getting continued increase in blood pressure, because you have continued constriction, because you're still having a continued response to these injuries.

This becomes an Avalanche. You are in this uncontrollable cycle of increasing blood pressure,

decreasing heart rate, and if it's not caught, you could ultimately have a stroke or your brain could bleed or you could even die from that. So how do we prevent that or how do we treat it? The most important thing is that you want to be able to identify what is that stimulus below your level of injury that's causing this? But most importantly, if you feel like your blood pressure is very high, which is characteristic side and very high or a very strong headache, what you wanted to do is stay sitting up. You don't want to lay down, because if you lay down, that can cause the pressure in your brain to increase, and we don't want that to happen, because that's what can lead to the stroke.

As I said, very, very, very important. Identify what is causing the painful stimulus and eliminate it. So if it's because the bowels are full, empty them. Some people experience dysreflexia while they're actually doing digital stimulation to empty their bowels, then you need to stop doing that for a while until the feeling goes away, and then you can resist for a short period of time.

If you can't identify what the trigger is or if you identify it and it doesn't reduce the symptoms, go immediately to the emergency department. And they will monitor your blood pressure, and if need be, they can give you some very fast acting medications that can lower your blood pressure out of the danger zone. But it's really important to monitor that carefully, because if you give the medication before you eliminate what the stimulus is and then later on you eliminate the stimulus while you still have the medication, you can cause a severe drop in your blood pressure.

Okay. So some of the management techniques for bowel, very importantly be it's not just one method. As you can see in this image here, the way or the method that you use to evacuate your bowels is one component. Medications or devices, as we'll hear from Jen, that's another component. Your schedule. You have to have a routine that your body gets used to. It's extremely important and in the middle of all of that, what you eat and drink is extremely important to your bowel movement and the timing of everything.

So let's talk a little bit more about nutrition. This is a wonderful resource for people with spinal cord injuries to use for how to eat well and live well. As you can see, there's a chapter specifically here for a

neurogenic bowel, as well as one for a neurogenic bladder. It's a great resource, and here's the website that you can go to to get your own copy. And here is another example of food that slows, or it could reduce diarrhea if you were having that or it could cause constipation if that was a problem. And foods that make you go, so if you are constipated, these are the kinds of things you would want to eat. And here's another website resource that's really, really good for you. These are -- what you eat and what you drink is an easy way to really help manage and maintain good bowel health.

And then lastly here, a little bit about medications. There are stimulants that you can take to cause the muscle in the intestine, in the bowels to move. There's laxatives that make the stool softer. There are also stool softeners and pro-kinetic medication, which helps movement of the tissue as well.

Reflection voiding is positioning, and it can be done by many different physical methods. And very lastly, there are surgical interventions, and you can see these are three locations that a surgeon could actually put a stoma where you could help push the bowel through. So those surgical interventions should really be restricted until the latest [indiscernible].

So Jen is now going to take over with devices.

>> Jennifer: Thanks, Kim. So that's a great overview of the bowel system, as well as some of the methods that are available as well, in terms of medications, what you can do in terms of reflexive voiding, as well as possible surgery option. But let's go into some of the medical devices that are currently available for managing bowel.

This device actually we introduced in our bladder webinar as well. It's called the Finetech-Brindley, also known as the VOCARE system. This is an implanted stimulation system that is both FDA approved and CE Marked in Europe. So it's an implanted system where you have some electrodes that are implanted on the bladder and over here on the urethra. You also have an external controller box so that user or the person that has the device can actually control the system. And there are three different functions that come with this. So not only have we covered bladder in the last webinar, but it also controls your bowels and your bowel evacuation, as well as erection. And the nice thing about this is that it's an on demand

function, so you press the button, it provides the stimulation, you get the function that you want, and then you can shut off the stimulation when desired.

Now, it is currently only available in Europe and under the Finetech Medical, and here is the website to be able to learn more about this specific device.

Another device that we talked about in your bladder is typically administered for overactive bladder. It's called the sacral nerve stimulation system. Now, again, this is an implanted system where they implant electrodes on the sacral nerve, then you have a little external control box here to be able to control the system, but what we've discovered, that since this device has been on the market, they've done additional studies and found that it can be implanted and used for fecal incontinence, and it's been approved for fecal incontinence and implantation for that as well.

The nice thing, again, about this device is, you know, implantation requires surgery, so you can temporarily or use a trial method of this device before you decide to get a device permanently implanted. So it's almost like a try before you buy for this device and there are two companies out there that have this device on the market. One is Medtronic, sold through the inter-stem device. That's the website. And also Axonics Sacral Neuromodulation system, and that's the website to access this device.

Another device that can be commonly used is through irrigation. Yep, that's right. It's using water. There's two main devices out there. First I'd like to go over it's actually trans-anal irrigation. And it uses a catheter that's injected into the anal area, and what it does is it basically introduces water into the bowel, and through this kind of rectal catheter that's used, it helps to cause the stool to come out. And this device prides itself on being quad friendly, so those of you that have low hand function or minimized hand function with help with that. So it's used to help reduce constipation and incontinence and also the time it takes to complete your bowel routine. And this device is offered through Coloplast, and here is the website to learn more about this specific device.

The other device that we have on here is very similar, but it uses what's called pulsed irrigation evacuation. So again, it also uses water. It uses a catheter in a very similar manner, however, it introduces the water in a

pulsing motion which, again, is just another method of being able to evacuate the stool and complete your bowel program. This also comes with a disposable bag, so when it empties, it empties into a disposable bag. So these systems are really used in terms of being able to evacuate the bowel system, to be able to, for a treatment for fecal impaction, and also if you're preparing for a colonoscopy, it's a good way to prep and empty out the bowel system.

Another new device that is out, just been recently implanted and it's available through a company called Torax medical. And this is an interesting device. It's been introduced for incontinence, fecal incontinence, and they just recently had the first implantation here in the United States over at the Mayo Clinic in Jacksonville, Florida. And what this does is it has, like, a ring, if you will, or ring band of titanium magnetic beads that are implanted around the rectal sphincter, around the anal canal. And when it's implanted, the beads or the magnetic beads come together to close off that anal sphincter.

Now, when the person that has this is looking to empty the bowels and wants to consciously empty those bowels, the beads will separate and you can then empty out the stool through that track. And once you're done emptying out the track, the beads come back together and close off that area. Now, again, this is for people that have fecal incontinence where, again, the anal sphincter is open with a lot of leakage. So this, again, is as Kim had learned in the webinar. It was primarily for people that have a lot of leakage where their injury is lower in the spinal cord. And again, this is offered through Torax medical, and here is the website for this as well.

So that goes over our medical devices, but we wanted to introduce you as well to what's going on in terms of the clinical trials world and what's going on in terms of the development and what's going on in the pipeline for bowel management. So there's a couple of clinical trials we just wanted to highlight for you today. One is in regard to bowel training. The using of bowel biofeedback training for a routine for your bowel function. So it's using biofeedback and exercise over a 12-week period and seeing how that impacts people with spinal cord injury and their bowel training. So this is the ID number of this clinical trial, and you can go to [clinicaltrials.gov](http://clinicaltrials.gov), which we'll provide you on the next slide. But if you put in this identification number, you'll be able to find that clinical

trial.

Another one that's going on is actually looking at the impact of bowel function in exoskeletons. We've done some webinars in the past about exoskeletons and their availability and what's coming down the pipeline and what's currently FDA approved, but they really are looking, these researchers are looking at how does the use of an exoskeleton over 36 sessions actually impact the bowel function, along with they're looking at cardio-metabolic profiles and impact in mobility, but a key thing in here is looking at how it affects bowel function. So if you're interested in this clinical trial, again, this is the ID to find out about that trial.

One other one is looking at electrical stimulation. There's a lot going on in terms of electrical stimulation, but it's looking at the afferent stimulation to evoke recto-colonic reflex for voiding. So they're looking at how they can electrically stimulate the rectum instead of stretching it, as Kim mentioned before. Using electrodes instead and seeing how beneficial that is in terms of the bowel program for people with spinal cord injury. And here is the identification number for that clinical trial.

And the final one that we wanted to highlight for you today is actually looking at a new medication method, looking at instead of taking suppository or oral medication, doing those pro-kinetics that Kim mentioned before, but doing it in a transdermal matter, meaning that it's a patch on the skin and being able to see how that increases bowel activity and promotes your bowel movement. So that's a new way of being able to administer medication. And again, this is the identification.

So all of these clinical trials can be found on [clinicaltrials.gov](https://clinicaltrials.gov). We highly recommend if you're looking into clinical trials is to go to this website. Learn about what it means to be a part of a clinical trial and what the expectations are going into them and what the commitments you should be aware of. And we also wanted to provide you with some possible search terms that you can look on on this website. A lot of these clinical trials have been vetted so that you can look and see all the details that are available about that and what the contacts are.

We also wanted to leave you with a couple of more resources that are available out there. Neurotech network. We have a fact sheet that's on our website. That's for bladder and bowel management, and this is the

web link to be able to find that. Not only to talk about the bladder Neurotech following devices, but also bowel management devices.

There is also a great resource. Actually some of the photos out of this webinar came from this website for neurogenic bowel and what you should know. This is provided but the PDA, and it's a consumer's guide to bowel management. That's a great resource for you to learn more about managing your bowel and a lot of the other options. Again, a lot what we went over for today is available in that resource.

There's also an association called the national association for incontinence. They covered not just bladder management or overactive bladder, but they also cover bowel management and bowel incontinence, so that's a great resource for you as well. And finally, specifically for spinal cord injury, the northwest spinal cord injury forum has a great resource out there for managing the bowels and some videos that are available. So those are some great links for him and some resources that you can refer to after this webinar. Just to learn more about managing your bowel system and hopefully bringing you a better quality of life for those of us living with spinal cord injury.

So with that, that concludes our webinar, and at this point we'd like to bring in Lindsey and open it up for questions.

>> Lindsay: Thank you so much, Jen and Kim. That was wonderful. We do have a couple of questions. Just to remind everybody to please use that question box and type your questions in and we'll try to get to them today. The first question is are there medical devices appropriate for only specific levels of injury?

>> Jennifer: Sure. Really, it depends on the function. Your bowel. I know Kim went over that earlier on the webinar of what level or what function of incontinence you have, depending on what type of bowel movements that you have. So the devices are actually dependent on more of that than it is on your specific level of injury. However, to say that not all devices are appropriate for a very specific level, so I think it's best to be able to review this with a physician and a gastroenterologist to be able to see what is best for your specific injury. So I think that's the best way to be able to answer that question.

Kim, did you want to address anything else?

>> Kimberly: Nope. You covered that very well.

>> Lindsey: Thank you. The next question is is there a problem with using enemas for a long period of time, especially for a C site level?

>> Kimberly: I can handle that. I don't think that there is any kind of medical problem associated with using enemas all the time, as long as you're properly getting your bowel to empty with it.

>> Jennifer: And I would add to that in terms of -- Kim had mentioned this earlier in terms of doing some digital stimulation along with that and, you know, some of the damage that you can do to the rectal tissue and/or development of hemorrhoids. So it's just something that you want to be aware of if you're somebody that's lived with a spinal cord injury for a long period of time.

>> Lindsey: Thank you both. The next question is would a Squatty Potty be good for persons with spinal cord injury? And if so, are there any out there designed for persons without leg control?

>> Jennifer: Good question. So the Squatty Potty is actually designed to use for positioning of the body. However, I do not know of any that are available for those that do not have function in their legs. Kim, have you come across anything?

>> Kimberly: No. I would just imagine that you would have to prop your feet up into some kind of position that way.

>> Lindsay: Okay. The presentation should be accessible to everyone. The chat section, where is it located, Jen? Do you know?

>> Jennifer: I'll see an area for handouts and you'll see the link right there to the PDF. We also have the PDF available on websites, both on Neurotech network under consumer education. It will be available on the United Spinal web page as well once the transmission comes up. And Miami Project should have that as well.

>> Lindsay: So you'll be able to find that PowerPoint presentation and all the people are curious about the websites again. They're all in that pdf, which is in the handout section on your screen. All right. The next question, what kind of problems can an over full colon cause over time?

>> Kimberly: Well, if the colon gets too backed up and too constipated, then you're going to start impacting

the ability to appropriately absorb nutrients that you do need, if it's getting to be completely impacted and constipated, and then that can lead to many other medical issues and organ issues if it happens for a prolonged period of time.

>> Lindsay: Okay. The next question is I am 30 years old post injury. I went on T trials and started having hemorrhoid and mucous leakage. How can I manage this?

>> Kimberly: Do you want to start with that, Jen?

>> Jennifer: Yeah, I'll be happy to start with that. If you're having that fecal incontinence, you might want to look into some of the medical devices that we mentioned. The sacral nerve stimulator might be an option for you, so encourage you to go to those websites and try to find a physician near you that's educated on that device, because that device is actually approved for fecal incontinence specifically. The new device by Torax is actually new in the U.S., but that might be an option for you, too, if you're having that type of leakage. And Kim, did you want to touch on maybe diet?

>> Kimberly: Yes, I was just going to say that for the hemorrhoids, there is a natural supplement and it's called horse chestnut. And you can get it at a local vitamin store or Whole Foods type of store. And that actually helps to reduce the size of the hemorrhoid and that might be something you want to try to address first, and then if the hemorrhoids get very, very big and they're pleading, then you really do want to see a physician and see if they need to do some sort of surgical option to remove the hemorrhoid and tie them off so they don't bleed anymore.

>> Lindsay: Thank you both. The next question is does a full bowel cause bladder incontinence?

>> Kimberly: It could. I'm sure that it could. They're very close to each other when you're talking about the rectum and the bladder. They're very close to each other and depending on your body, you know, mass and how you're sitting and the pressure of each, they're already interacting with each other pressure wise.

>> Lindsay: Great. Thanks, Kim. How about are there any long-term effects on the body with long-term use of suppositories?

>> Jennifer: I think we mentioned it's very similar to the question that we were asked earlier. We really don't know of any in terms of being able to use those suppositories for a long period of time. It's just a

matter of how it's administered and try to reduce the damage when you're doing digital stimulation and/or the injection of that suppository.

>> Kimberly: Yes.

>> Lindsay: The next question is, is every other day sufficient or should it be done more often?

>> Kimberly: I think that also goes back to your individual situation, how you notice that your body reflects, and if you're able to eliminate a lot when you have your bowel movement or if it's not very much that comes out. I think those are all factors that come into the division.

>> Jennifer: As well as how you feel. One of the things that Kim highlighted earlier in the webinar is really to get your body in a routine, which is really important. If your body reacts well to an every-other-day routine, then that's good. Your body is reacting to it. If you feel that you're bloated and I just don't -- it's not feeling well and/or you find that you're starting to get compacts or you're having leakage in between, I mean, it might be that you want to go to an everyday schedule. So everybody is different. It's really more important to get yourself on a proper routine.

>> Lindsay: Great. Thank you. Next question is, again, regarding using the Squatty Potty. Would it increase the risk of skin break down?

>> Kimberly: I've never sat on one.

>> Jennifer: For Kim and I at our levels of injury, we're just trying to figure out the transfer onto a Squatty Potty, because both of us are higher level cervical injuries. I think it's a really interesting question for those that can do those types of transfers. You know, it would be really interesting to see how you can do that type of transfer and be able to get a more natural bowel movement out of that. But again, the transfer, I think, is what Kim and I are a little stuck on. I think the key thing when you're looking for skin break down is sitting on a hard surface for a long period of time. And if you have reduced sensation and you're sitting on a hard surface, whether it's a Squatty Potty or a regular potty, you really want to make sure your skin is protected. So it might be if you're using a Squatty Potty and you find your bowel routine is a little bit longer, you might want to look at putting some type of cushioning on there or make sure you keep a good eye on your skin.

>> Lindsay: All right. Thank you. The next question is, are there any known pressure points on the body that can be stimulated to facilitate bowel or bladder evacuation?

>> Jennifer: Some people that have good hand function, they'll use a glove and you can get one finger, slipovers to be able to stimulate, to be able to get the bowel going without having to use any type of laxative or suppository. Some people do that more naturally. And Kim, you had presented some other positioning earlier. Did you want to go over that?

>> Kimberly: I believe that lying on your left-hand side helps to facilitate movement of the bowels, but in regards to something like a pressure point or something, I'm not aware of that, though there may be some information in alternative medicine literature about that.

>> Lindsay: All right. And Kim, can you repeat the name of that natural hemorrhoid treatment again that people can pick up?

>> Kimberly: Yes, horse chestnut.

>> Lindsay: Thank you. Okay. The next question is how long should you be sitting on the toilet to empty your bowel and how long in between digital stimulation should you wait to do your next one?

>> Kimberly: I can give an answer, but it's more based on personal experience. Number one, I think the best suppository out there is the magic bullet. And I've tried a lot of different suppositories. For me, that is the most pact acting suppository so that I don't have to sit on the chair, on the seat for a long period of time, and it's the best getting the rectum moving so the bowel comes out on its own and then having to do two, three or so digital stimulation potentially separated by ten, 15, 20 minutes, you have to allow the body sometimes for it to try to work on its own after you do a digital stimulation if it's taking more than two hours, I think you should be looking to find some other style of management.

>> Vince I: The next question is given the closeness. Does digital stimulation contribute to bladder infection?

>> Jennifer: I'm not familiar with anything in the literature that shows that doing anal digital stimulation will cause a bladder infection. The only way, at least that I can see, and Kim, you can chime in to this as well, if there is some fecal left over that's not properly cleaned and possibly if you're doing an intermittent catheter that

that fecal, residual fecal substance, if you will, that's caught onto a catheter and introduced, but I don't know of any other way that would cause that. Kim?

>> Kimberly: Yeah, that would be my same thoughts.

>> Lindsay: Okay. Next question. To avoid constipation and stools that are very hard, how much water should one person drink? How much fiber should be consumed? And how many stool softeners should be taken daily?

>> Kimberly: I would start out with eating foods that are high in fiber to help mobilize the stools first, and there's a saying that you can never drink enough water, but yes, you could drink too much water. But now what is recommended per day -- I don't know the number. Do you know, Jen, the amount of water you're supposed to technically drink per day? That should be helping you a lot.

>> Jennifer: Yeah. I believe it's -- isn't it 8 glasses of 8 ounces per day? But I think to kind of go off the fiber as well, really, you need to match your water with your fiber, because if you have too much water and not enough fiber, that's not a good combo. So fiber needs water to be able to break down the bowels, so those are two that really need to be in combo together, and then the amount of stool softener that you're going to need might change over time and it might change via your diet. So really, it's important to watch what you eat. If you go out with friends and you really didn't have a very good diet for a day or so, you might want to look at increasing your stool softener just to help that bowel movement, because your body is going to waste that out, and so that's a good way to be able to monitor how much of a stool softener you need.

>> Kimberly: And I'd also like to chime in that once you find a good system for your body and, like, what you eat, you may be able to not have to use a stool softener anymore.

>> Jennifer: Or a laxative or a suppository for that matter. There are people out there that have the higher level injuries that don't use laxatives or suppositories and they just manage it completely off of diet and positioning.

>> Lindsay: Great. Thank you. The next question, I am a C5 quad. I eat right, use plenty of water and suppositories every day. My bowel program is three hours,

but I never have accidents. Should I look for ways to speed things up or just be thankful the system still works?

>> Jennifer: Yeah. You know, I'll talk a little bit about personal experience and then, Kim, if you want to chime in, that would be great. You know, I'm a C6C7 and my bowel program used to take that long and what I found, not that I'm promoting a product, but I was using a very cheap suppository that was oil-based and went to the water-based suppository that's known as the magic bullet, the brand that Kim had mentioned. There's a couple of other brands out there where the suppository is water-based, and that reduced by bowel routine exponentially. So that might be another option for you is just trying to shake it up a little bit. Maybe your body needs something different. Kim?

>> Kimberly: And I would add that I wouldn't change your timing or your diet if you're happy with your diet and air not having any accidents or things like that. If it's just to reduce the time, something that Jen suggested as well to try.

>> Lindsay: Wonderful. Great advice. Next question, I use a medication Consella. Are there other similar meds available that will stimulate the bowel?

>> Kimberly: I'm not aware of that medication.

>> Jennifer: Nor am I. I'm sorry I can't address that question in terms what have might be available. I know when we go back to our other slide there, we mention some of the medication categories, so it might be worthwhile to look at those different categories and see what other drugs might be available in that category. And we also mentioned in the clinical trials the transdermal patch in terms of the medication to take for your bowel management, so that might be two other options for you.

>> Lindsay: Okay. We have time for a couple more questions. Sometimes I take two magic bullets at one time. Is that safe?

>> Kimberly: I don't know that there's actually any research that has been done to address that particular question. It looks like one versus two versus three at the same time. That would really be the way that you get at that. But that is one of the issues with medications and other things that are out there available. When things aren't working, they don't always get that amount of research that you need to answer those specific types of questions.

>> Jennifer: If I could just chime in, as long as you're evacuating, if you're holding that into your body, that might not be good, but as long as you're evacuating and it's working for you.

>> Lindsay: Okay. Very good. One more question. Are Probiotics effective?

>> Jennifer: Well, I know in the able body world it is. I don't believe there's any research out there for Probiotics and spinal cord injuries specifically. Kim, are you familiar?

>> Kimberly: Not anything that is published yet, but I know that there seems to be something that is spoken of about more frequently now, so there could be studies ongoing that we don't know about.

>> Lindsay: Okay. Wonderful. Thank you so much to you I'm asking a going to leave on the screen both Kim and Jen's e-mail addresses, so I'm sorry and I apologize. We couldn't get to everybody's questions today. We're running out of time. But certainly please feel free to e-mail them your questions and they'll be sure to get them answered for you. And on behalf of United Spinal association, I'd like to thank Jen and Dr. Kim Anderson ears man so much for sharing personal experience and knowledge today on their solutions for bowel management. Thank you both so much. We really appreciate it. Please join us for our upcoming webinar presentations. The next one will be held on May 19th from 2:00 to 4:00 p.m. It's preventing falls in adults with disabilities and chronic conditions. That's eastern time. Again, May 19th, 2:00 to 4:00 p.m. east ten standard time and then we are Boeing to be hosting the disability integration act and why it matters to you on May 24 from 3:00 to 4:00 p.m. eastern standard time. To sign up and receive our webinar newsletter and for our advocacy alliance visit, spinal cord.org, visit new mobility.com for our SCID publication. Thank you all again so much for joining in today's webinar. Have a wonderful day. Thanks.

[Webinar Concludes]

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