GI Issues Q&A

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General GI Concerns in Connective Tissue Conditions

What are the most common gastrointestinal issues in people with connective tissue conditions?

Gastrointestinal issues are very common in all humans, but some are more common in those with connective tissue conditions than in the general population. The treatments and investigations for these issues are similar to those used for the general population.

With Marfan syndrome, there can be difficulty gaining weight. This is typically more of a problem in younger people, especially in some children with Marfan syndrome. The exact reason for this is not clear.

Similarly, those with Loeys-Dietz syndrome (LDS) can also have difficulty gaining weight. In LDS though, there is an increased risk of allergies to foods and the environment, eczema, and asthma. These inflammatory conditions can use up extra calories or make it hard to absorb calories. Sometimes supplements are needed to help boost calories, especially if surgery is planned in the near future. People with LDS are also at risk for two inflammatory conditions of the intestines. One is a slow-motion food allergy called eosinophilic esophagitis (EoE - more on this below), and the other is called inflammatory bowel disease (IBD). In IBD, white blood cells get confused and think there is an infection in the intestines when there is not. Both of these conditions can lead to trouble gaining weight. EoE typically leads to trouble swallowing and reflux, while IBD typically leads to diarrhea and blood in the stool. Both conditions are diagnosed and treated following typical protocols.

Constipation is also a common problem, especially in LDS and Vascular Ehlers-Danlos syndrome (VEDS). Almost all those with VEDS and most of those with LDS can benefit from a daily osmotic stool softener (PEG3350 (miralax/glycolax) or magnesium citrate) to help manage bowel movements. The osmotic stool softeners only work well when they are a daily medication and do not tend to work well when used “as needed.” Untreated constipation can slow stomach emptying, worsening reflux symptoms, and can lead to abdominal pain and cramping. It is thought specifically for VEDS, treating constipation will lessen the chance of a colonic perforation, or tear, in the large intestine.

Disorders of gut-brain interaction such as irritable bowel syndrome (IBS) may be more common in those with connective tissue conditions. IBS is characterized by symptoms with no damage to the intestines (unlike IBD where the inflammation is actually damaging the intestines). IBS is quite common in the general population and there are many ways to address the symptoms.

Diagnostics & Treatment

When should someone see a specialist? What are the indicators? Is it important to find a specialist/center who has experience with these conditions?

You should see a specialist if your GI symptoms are significantly impacting your quality of life or if there are any warning signs or changes in your lab measurements that can’t be explained by another condition you have and are pointing to a possible problem in the GI tract. Also, don’t be afraid to see a second GI provider if you don’t “click” with the first one. Seeing someone with experience is a good idea because the provider will already know about some of the specific issues mentioned above.

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However, depending on where you live, that might not be a reasonable option for you. You want a doctor who will listen to your story and take your concerns seriously. They should be willing to learn about your condition. And their plan should make sense. Even if you have no medical background, your doctor should be able to explain their plan in a way that makes sense to you.

What types of diagnostic tests are most useful for evaluating GI issues in connective tissue conditions? Are there any tests that should be avoided due to vascular fragility?
There are a lot of possible diagnostic tests available in gastroenterology. The only ones right now that may need an extra discussion due to the increased risk are studies in which instruments, fluid, or air are used in or instilled into the GI tract, and then only specifically in people with VEDS. This includes colonoscopies, enemas, CT enterography (Different than a CT scan – in a CT enterography, the colon is inflated with air for the CT scan), and similar tests. The colon in VEDS is at an increased risk for perforation (or tear in the lining), and these procedures put extra stress on the wall of the colon. While Marfan and LDS are also connective tissue conditions, they do not have the same risk of perforation of the colon that VEDS does.

Do these patients tolerate standard GI medications (e.g., PPIs, prokinetics) well, or are there concerns about side effects or interactions?
Out of an abundance of caution, it is best to avoid using enemas as well as stimulant laxatives, senna (ex-lax), and bisacodyl, in VEDS, again because of the risk of colonic perforation.

People with LDS are predisposed to EoE. Proton pump inhibitors (PPIs) are some of the best medicines for treating EoE. However, PPIs' side effect is that they slightly increase the risk of fracture, and people with LDS may have weaker bones. So, this needs to be part of the discussion with your doctor. However, for EoE, there is a new injectable medication that avoids the fracture risk of PPIs.

Are there any newer treatments, surgical interventions, or research developments that offer hope for better GI symptom management in these conditions?
There are so many new treatments for many of the GI symptoms, and newer research is looking at treatments such as acupuncture, acupressure, transcutaneous electrical stimulation, and other non-invasive treatments that harness the power of the nervous system and the interaction between the GI tract's nervous system and the brain to help modulate a person's symptoms.

Specific GI Conditions & Symptoms

Many patients experience severe bloating, slow digestion, and food intolerances. How can they differentiate between common digestive issues and those related to their connective tissue condition?
The GI issues in those with connective tissue conditions are not different than those without connective tissue conditions. They are the same issues, just some of them are more likely to occur in someone with a connective tissue condition than someone without. So, the investigations and treatments are the same.

What is the connection between these conditions and irritable bowel syndrome (IBS) or small intestinal bacterial overgrowth (SIBO)?
This is a difficult question with controversial answers. There are many subtypes of IBS, and there may be

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a connection between IBS and SIBO for some of the subtypes of IBS, but the causality and extent of overlap are not clear, even for the subtypes of IBS for which SIBO seems to be a more common manifestation. It is still difficult to work out whether SIBO causes IBS or if it is a consequence of dysmotility or altered gut microbiota in IBS for some specific IBS subtypes.

Patients sometimes report difficulty swallowing (dysphagia). Is this due to connective tissue laxity, vascular issues, or something else?

One reason for dysphagia would be something called Eosinophilic Esophagitis (EoE). EoE is a slow-motion food allergy where allergic white blood cells called eosinophils infiltrate the lining of the GI tract and irritate it. This can happen in any part of the GI tract, but the most common part is the esophagus. With this irritation, it becomes harder for the esophagus to push the food down. This slow-motion food allergy is different from the fast-food allergy, where you can have rashes, trouble breathing, or a drop in blood pressure. The slow-motion food allergy does not turn into the fast allergy or vice versa, but you can have both types of allergy to the same or to different foods. The blood and skin tests only work for the fast allergy. They do not indicate what food might be causing the slow allergy. People with LDS are more likely to have both the slow and fast allergy than the general population. The only way to tell if you have the slow allergy is with an endoscopy with a biopsy. If this does confirm EoE, there are treatments to relieve the inflammation, and the trouble swallowing will abate. There is no increased risk of EoE in those with VEDS and Marfan.

What are the risks of diverticulosis and diverticulitis in people with connective tissue conditions?

Everybody gets diverticula, or outpouchings of the large intestines (colon), as they get older. If you have some of these outpouchings, or diverticula, you have diverticulosis. People with connective tissue conditions are more likely to have diverticulosis than the general population (this increase in diverticulosis is best described for those with Marfan). If the opening of outpouching back into the colon gets blocked, usually with a piece of hard stool, you create a closed space, and this gets inflamed. Once it gets inflamed, you have diverticulitis. If the inflammation gets bad, the diverticula can rupture, spilling stool into the abdominal cavity, which can make you quite sick. You can lessen the chance of this with a high-fiber diet or using an osmotic stool softener such as PEG3350 (miralax/glycolax) or magnesium citrate.

Severe & Life-Threatening GI Complications

Are there specific warning signs that indicate a GI complication is becoming serious and needs urgent medical attention?

Severe abdominal pain, pain out of proportion to objective changes, inability to find a comfortable position, severe vomiting, or a hard, painful abdomen are all warning signs that you should see your doctor or go to an emergency room. With connective tissue conditions, if you have severe chest or abdominal pain and go to an emergency room, you should get a CTA or MRA done to look specifically for an aneurysm or dissection. These studies are tuned to look specifically at the blood vessels, and that is what the radiologist will direct their attention toward. If this happens to you and the report comes back that the blood vessels all look fine and you still have the symptoms, ask to have the radiologist look at the GI tract specifically. Some GI complications that can occur in connective tissue conditions have been missed in the initial look at a CTA or MRA.

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Are there specific guidelines for screening or managing mesenteric artery aneurysms or bowel perforations in these patients?

Mesenteric artery aneurysms will be picked up with abdominal and pelvic arterial imaging that will be part of your standard screening schedule. Bowel perforations are a surgical emergency and are much more of an issue in VEDS as opposed to LDS and Marfan. They are not progressive outpouchings that get worse and worse and then perforate, they are just tears that occur. They are more common in males, seem to happen in late teenage years to young adulthood, and are more common in certain VEDS genetic variations than in others. Frequently, they are the event that leads someone to be diagnosed with VEDS. The type of surgery immediately after a perforation is, in general, agreed upon; the surgery after the immediate management of the perforation is a topic of active discussion among doctors and surgeons taking care of people with VEDS.

Lifestyle & Long-Term Management

How can physical therapy, abdominal massage, or other non-medication approaches help with motility issues?

For longstanding constipation, the muscles that need to work together to have a bowel movement start to not work together, called pelvic floor dyssynergia. For those with pelvic floor dyssynergia, even with the correct medical therapy, getting the constipation under control can be challenging because, without the muscles working together, it is very difficult to keep the rectum empty. Pelvic floor physical therapy can be helpful in getting these muscles to start to work together. Another technique that can be useful in lessening GI symptoms is behavioral psychology. You are looking for a practitioner who focuses on cognitive behavioral psychology and has experience working with people with abdominal pain. The exercises through this approach help minimize the impact of the GI symptoms on your daily activities.

For answers to medical questions about genetic aortic and vascular conditions like Marfan, Loeys-Dietz, and VEDS, contact the Marfan Foundation's Help & Resource Center at marfan.org/ask.

To find academic medical centers that have expertise in genetic aortic and vascular conditions or to learn how to create a care team, visit marfan.org/findcare.