

Transcript of Treatment of Advanced Diarrhea  
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Welcome to another podcast segment and this time we're going to be dealing with Advanced Diarrhea. I am Martin Carr, a gastroenterologist who has been practicing GI for 30 years. We are going to go through what any patient with chronic diarrhea should have considered to find a solution. If you have been to your primary doctor and have been to your first or second 15 minute appointment with a GI doctor and it has not been solved then you need to listen to this podcast. There is always a cause for chronic diarrhea and there is always a way to correct it. First I want to mention something that I am very interested in and that you may want to look up after you have solved the problem of your chronic diarrhea and that is the American Gut Project. It is an ongoing crowd source funded research project, part of the microbiota research at the Knight lab at UC San Diego lead by Rob Knight. You can make a contribution on the website and then be sent a kit to send in a small sample of your gut microbiota or some other bacteria on your body and learn more about it.

So let's get started. What I mean by advanced diarrhea is diarrhea that is happening virtually every day. I am not talking about someone who occasionally has 1 loose stool. I am talking about someone who is constantly dealing with diarrhea such that it is fairly rare that they have a formed stool. On the Bristol stool scale #1 is tiny little chunks of hard stool like nuts, #7 is watery. People with chronic diarrhea always have 5, 6 or 7--mushy stool or watery stool and they may have enough of it and have had it long enough that they sometimes even have trouble controlling it and have incontinence and have an accident. That is a big problem. That is what I mean by advanced diarrhea. First you need help to figure out if the diarrhea is due to one of these initial categories because then you can go in a different direction than what I am going to cover in this talk. To hear those different categories that you need help to do some testing to see if your diarrhea is caused by 1 of these problems.

The first important category to test for is whether you have an inflammatory condition in your gut, that is, you have either inflammatory bowel disease such as Crohn's disease or ulcerative colitis or a milder form of inflammatory bowel disease called microscopic colitis that tends to affect more women than men and tends to occur after age 55. There is a very good stool test called fecal calprotectin spelled CALPROTECTIN. Fecal calprotectin is a very sensitive test for inflammation in the gut. a simple stool specimen that should be frozen if you are not giving it in immediately is needed for lab to run that test. It is easily available at any lab in United States. Also as part of checking whether you might have an inflammatory condition causing your diarrhea is a stool test for occult blood or invisible blood mixed in the diarrhea is also appropriate. If you have invisible blood in the stool or if this fecal calprotectin level in your stool is abnormal then you are going to end up needing colonoscopy and perhaps upper endoscopy with biopsies and then get treated once that diagnosis is made.

The next condition you need to initially get help to figure out if you may have is celiac disease. Celiac disease is a condition in which the small intestine has an abnormal inflammatory reaction to some components of the protein gluten that is found in wheat rye and barley. Gluten is found only in wheat, rye and barley initially but it is also used very widely in the food industry as a thickener or as a way to add protein to something. So a lot of products from salad dressings to prepared foods, frozen foods, canned foods may contain gluten. So people who find out that they have celiac disease have to be very careful to avoid it.

There is a very simple test for celiac disease and that simple test for celiac disease is a blood test. There are a couple of different celiac disease blood panels that your physician can order for you. They all contain a test called tissue transglutaminase IgA antibody. There will be other components of the test but it is an easy blood test order, any lab can send it out, insurance will cover that. So if you have chronic diarrhea you need to have that blood test to see if you have celiac disease.

The next important condition that you need some testing to determine if you have advanced daily diarrhea caused by this is pancreatic insufficiency. The pancreas makes an enzyme called lipase that is crucial in beginning the digestion and absorption of fat from our diet. If your pancreas is not making enough lipase then you are going to be getting diarrhea related to inability to absorb the fat in your foods. By fats I mean everything from olive oil, margarine, butter, nuts, avocado, chicken and fish and other meats, lots of baked goods, cookies and pies, ice cream, you get the idea. A lot of foods that contain fat and we cannot live without fat in the diet so absorbing it is crucial. Stool can be sent for microscopic test for stool fat globules and there is also a very good test called pancreatic elastase. Pancreatic elastase is an enzyme that survives the trip through the intestines and ends up in the stool in healthy people with a normal pancreas. People with pancreatic insufficiency will not produce pancreatic elastase and so it will not be at normal levels in the stool of those people. So that is another stool test that can be done to determine if you have pancreatic insufficiency. If you do, you will need some imaging of your pancreas to see what it looks like by CT scan or MRI and then you get a trial of pancreatic enzymes. If that is your problem, your diarrhea will be solved.

The next important category to get checked for is whether you have unintentional laxative intake, that is, if you are taking something that is acting as a laxative or something that causes diarrhea and you do not realize it. For example, if you are taking as a magnesium supplement something called magnesium citrate tablets those are going to cause diarrhea if you take them with water and if you have them every day. There are other types of magnesium pills that are slow release and well absorbed and hardly ever cause diarrhea and the brand names of those are Slow-Mag, Mag 64 and Mag Ox. But some other brands of magnesium pills can cause diarrhea. Another category of things you might be taking in that are unintentionally acting as a laxative for you are the artificial sweeteners or sugar alcohols in food. If you are eating a lot of diet soda, if you are eating diabetic cookies or candy because you are a diabetic or because you thought that eating those would help you lose weight then you may be inducing diarrhea. I will talk more about artificial sweeteners and sugar alcohols in a minute.

Another important thing that you need to get checked for if you have advanced diarrhea is small intestinal bacterial overgrowth. This is done by means of a breath test that you do at a facility, usually in an office in an endoscopy center or a hospital. You follow some instructions for the night before, you come in fasting and you are given usually a sugar called lactulose as a sweet liquid to drink. Humans cannot metabolize lactulose but bacteria are really good at it. If you have bacteria living in abnormally high numbers high up in your small intestine and you drink this lactulose for the test, within 60 minutes you will be starting to exhale hydrogen and that will be a sign that you have abnormally high numbers of bacteria living up in your small intestine. If you have that then you will need treatment with a special antibiotic called Xifaxan and will need some instruction about dietary changes too. So if you have been found not to have small intestinal bacterial overgrowth then another condition you would need to be checked for if you have advanced diarrhea is diabetes. If you have adult-onset diabetes and it has been gradually developing, you could have either small intestinal bacterial overgrowth because that is more common in diabetics or you could even have diabetic gut neuropathy. Neuropathy means injury to nerves. People with diabetes can develop injury to the nerves of the gut

and that can result in diarrhea. There is a treatment for that and usually the treatment is the test after somebody who is diabetic with advanced diarrhea has gone through all of the other testing and trials.

There are some other rare causes of advanced diarrhea but it is usually not appropriate to immediately do the workup for those as part of your initial assessment because these are so rare. It makes more sense to have considered what I have just discussed in the past 10 minutes and then move ahead to what I am about to describe, and if that does not work, then you need to have the rare unusual causes of chronic diarrhea tested for. Also one word of caution at this point. If you have had advanced diarrhea and you have also had major weight loss along with that you cannot wait to figure out what is causing this. You need a complete assessment with endoscopy, colonoscopy, CT scan of the abdomen and pelvis, and a rapid sequential workup by a good GI doctor. So if you had advanced diarrhea with major weight loss do not wait to get a good assessment. You need to find out quickly what was going on.

So now it is time to move on to what I am going to ask that all of you be helped to do or do on your own with these instructions to help solve your diarrhea problem. If none of the things that we just discussed apply to you, then in an organized way go through the steps I am going to describe. These include removing what we refer to as some common irritants--things that can irritate your gut and give you a cause for diarrhea. I am going to ask you to check what foods you are eating and make sure that you are avoiding certain ingredients. Then I will suggest what diet would be good to be on to test to see if that diet gets rid of your diarrhea. Finally I will talk about fiber supplements and stress management and then finally what medications you still might need. I am going to give credit here to Susan Watkins an excellent registered dietitian and certified diabetes educator with whom I work who put together the set of steps that I am describing right now. This is been a big help to patients whom I see. Removing irritants means avoiding the foods that from the experience of physicians and dietitians who see a lot of IBS patients are frequently ones that cause trouble. We want you to try to avoid these things and then as you improve you may be able to start to increase the amount of these foods that you eat again, but first it is best to eliminate all these things and see what your reaction is.

Here are the common irritants that you should eliminate to figure out if these are contributing to your diarrhea:

- Coffee including decaf the oils and coffee can be a source of diarrhea for some people so you would have to completely get rid of coffee including decaf.
- Fatty greasy foods--things like pizza, doughnuts, pastries, fatty ground meat, French fries, hamburgers, cheeseburgers. Get rid of those things.
- Foods made with a lot of butter and oils, even the so-called good oils like olive oil or canola oil. Some people are sensitive to too much fat in one meal and that will be a trigger for diarrhea, even if your pancreas is normal.
- Hard to digest foods such as raw fruit and raw vegetables, especially those that have a lot of seeds or tough skin.
- This next category might surprise you because a lot of people have been told to eat a lot of this if they have GI problems-- whole-wheat and high-fiber breads. All those breads in the store that have 5 grams of fiber per slice and look like they have pieces of nuts and seeds in them --

get rid of those high-fiber breads because that may be an irritant. Brown rice is another thing to eliminate.

- During this initial phase you also need to eliminate nuts, seeds like sunflower seeds, granola and popcorn.
- You have to get rid of gas producing foods such as broccoli, cauliflower, cabbage, beans, peanut butter and psyllium fiber like psyllium husk.

**As far as dairy goes**, it may be a problem for some. Many people already know whether or not they are lactose intolerant, that is, whether they get bloating or gas or diarrhea from lactose. Four ounces of milk or less will not have enough lactose to cause symptoms in most people with lactose intolerance. Either completely get rid of dairy that contains lactose or have a very small amount.

So after you have removed those irritants from your diet you also need to look carefully at the labels of different foods you eat to make sure that you eliminate the following things:

- Inulin which is a fiber component and chicory root. This is an inexpensive fiber additive that is used to increase fiber content or as a filler in many foods. For example soy meats and other meat alternatives have a lot of inulin or chicory root, Granola, protein bars and fiber bars-- Fiber One Bars, for example, have have the first ingredient chicory root.

Artificial sugars or sugar alcohols. Let me go through the names of these so that you be able to identify them on labels.

- ACESULFAME potassium which is an ingredient in foods, also sold as packets under the brand name Sunett or Sweet One.
- ASPARTAME either added to foods or as packets or in containers labeled NutraSweet or Equal.
- SACCHARINE which is labeled Sweet and Low
- SUCRALOSE which is Splenda and is also in a lot of artificially-sweetened sodas.

All of these artificial sugars are things that we cannot digest and absorb. They go through us and are either partly digested by bacteria or may go straight through us and carry water into the colon and cause diarrhea. You have to get rid of all of those artificial sugars.

You also have to get rid of the sugar alcohols. These have names such as:

- XYLITOL --this is natural, made from beech wood but if you have a large quantity of it it still can be a cause of diarrhea. A lot of artificially sweetened gums contain xylitol.
- SORBITOL, MANNITOL, MALTITOL and ERYTHRITOL are other sugar alcohols. They are made from corn and they do not give us calories to absorb, so they are sugar-free. But they can cause diarrhea or gas or bloating in sufficient quantities. They are used in different foods and also in artificially-sweetened gums.

**What you do if you want to chew gum that does not have an artificial sweetener?** There are 2 companies I know about that made good-tasting gums that have natural sugar in them, and not too much. One is called SIMPLY GUM. The website you would buy it on is [www.simplygum.com](http://www.simplygum.com) Another naturally-sweetened gum that does not cause diarrhea is GLEE at [www.gleegum.com](http://www.gleegum.com) These are also available on Amazon.com.

**What about Stevia and Truvia?** Stevia is from a plant that originally grew in South America and is now around the world. The name of the plant is Stevia rebaudiana. Stevia is used as an extract in a lot of foods or as a powder or liquid sweetener. It is over 100 times sweeter than sucrose sugar. It really does not cause diarrhea so you could use a small amount of Stevia, but it can cause a bloated, fullness feeling. Truvia is actually a patented product developed by the Coca-Cola and Cargill companies. It contains some Stevia extract called rebiana, erythritol and some other flavors. That is actually a patented combination. Again, it is not very likely to cause diarrhea but could cause a bloated, full feeling.

So those are all the ingredients you have to avoid and that is the list of common food irritants you have to avoid. What would we suggest as a diet for you to eat while you are seeing if your advanced diarrhea is all diet induced? We suggest you eat

- rice and pasta and if you are not sure about the gluten issue, gluten-free pasta
- flour or corn tortillas
- rice crackers
- yams or sweet potatoes
- applesauce
- cooked vegetables, but make sure that they are well chopped-up and well-cooked and do not have tough skins or seeds, have small amounts to start
- lean grilled or baked meats such as boneless, skin less chicken, fish, ground turkey with only 7% fat

I give credit to Susan Watkins, registered dietitian, who gives those instructions to our patients.

Finally while you are eating that diet you can start taking a fiber supplement. The best fiber supplements to use are ones that do not have any coloring or sweetener or other flavorings. and it see You want either Benefiber, available at any supermarket or pharmacy or megastore. Another very good source is acacia fiber sold by Heather Van Vorous's company Heather's Tummy Care and that is available on the [www.helpforIBS.com](http://www.helpforIBS.com) website or on Amazon. Start with about 1/2 teaspoon added to water or food before breakfast and dinner. Gradually you you can increase to as much as 5 tablespoons per day although most people get up to about 1 tablespoon twice a day and that is enough to improve stool consistency and help improve the diarrhea. You know that you are on the right dose of the added fiber when you are on that restricted initial diet and you get better consistency, that is #3 or 4 on the Bristol scale, soft, formed stools and you are not having the liquidy diarrhea anymore.

While you are following this restricted diet and taking a fiber supplement, plan to eat smaller meals at regular intervals rather than fasting for many hours and then eating a tremendous meal. Also very important and will be dealt with in other segments of the podcast is stress management. There is a tremendous role of stress and the gut-brain axis inducing diarrhea in people with irritable bowel syndrome. So you may have followed all the instructions that I am describing here but still have some tendency to urgent, crampy, liquidy, softer stools if you are not managing the stress that is impacting your irritable bowel syndrome. Mindfulness-based stress reduction, meditation, yoga are all examples of things that will help you manage the stress. But you may need to see a psychologist or a licensed marriage and family therapist, someone who is experienced at helping people with IBS and other conditions, to identify the stress triggers and manage them.

Finally I want to talk about medications for advanced diarrhea that a gastroenterologist would typically help people to try if necessary. Those include loperamide, which actually is an opioid drug but is specific to the gut. Loperamide is sold under the original brand name Imodium but there are always store brands next to it in the store. Two mg pills can be taken up to as many as 8 pills in one day in cases of severe acute diarrhea. More commonly, people with advanced diarrhea who needs some assistance with loperamide would only have to take 1 or 2 pills to prevent diarrhea while traveling or giving a talk at work or going on a long car drive just to make sure they do not end up with a problem. This may be more important in the early phases as you are working to get your condition diagnosed.

Other medications include diphenoxylate-atropine which is a prescription medication that is partly an anticholinergic and partly an opioid.

Another medication that is FDA-approved only for women and can sometimes be very helpful in IBS-diarrhea in women is alosetron.

Viberzi, generic name eluxadoline, is a newer drug. It is also a type of opioid that slows down the gut. Very important is that people who do not have a gallbladder, people who have had the gallbladder removed, cannot take Viberzi because it can cause pancreatitis which can be very, very serious.

Another medication that is sometimes used is called colestipol and there are 2 other drugs that also bind bile acids. Some people have chronic diarrhea because they are not reabsorbing the bile acids that come out from the liver through the bile duct to the intestines and help assist with digestion of fats and absorption of fat soluble vitamins. All of the bile acids are supposed to get reabsorbed in the last foot of the small intestine and some people develop a weakness there and do not reabsorb them. These people may be magically cured of their diarrhea by having either some colestipol or Welchol or a powdery medicine called cholestyramine once a day. Any of these bile-binding medicines have to be taken away from other prescription medicines by at least 3 hours, preferably even 4 hours, to avoid certain medications binding to these bile binding agents and not getting absorbed.

Dicyclomine that is used for cramping in IBS is sometimes also useful in treating people with advanced diarrhea. I am going to have other discussions about medications in the other segments of the podcasts but I wanted to include this here.

This has been kind of long, over 28 minutes, but there was a lot to cover and I hope that this is helpful. On my website [martincarrmd.com](http://martincarrmd.com) you can find a transcript of this entire podcastsegment. Good luck and remember there is always a cause of advanced diarrhea and there is always a solution, do not forget that. Make sure you get to help define your cause and your solution.