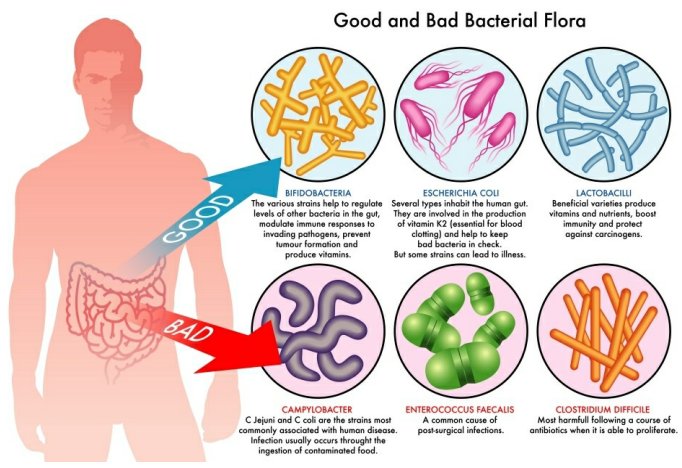
Microscopic Colitis Foundation

MICROSCOPIC COLITIS NEWSLETTER

January 2018
Volume 3 Issue 2

Bacteria May Be Responsible for Causing Microscopic Colitis



Ever since collagenous and lymphocytic colitis were first medically described about four decades ago, many medical professionals have suspected that the disease is probably caused by bacterial infections. Other types of inflammatory bowel diseases (IBD) have also been thought to have a bacterial cause, but proof of an association has been elusive. Much research has focused on Crohn's disease because the symptoms are so similar to Johne's disease in cattle, sheep, goats and other ruminants. So far though, no conclusive proof has been found. Celiac disease is the exception to the bacterial hypothesis of IBDs, as gluten sensitivity is generally accepted as its cause.

Johne's disease is caused by *Mycobacterium avium* subspecies *paratuberculosis* (MAP) bacteria.

Johne's is quite contagious, especially among confined livestock such as dairy cattle, and it tends to infect animals while they are very young. But normally, symptoms don't start developing until months or even years later. Johne's primarily affects the small intestine, and the damage can be extensive and debilitating among ruminants. Antibiotics can be used to treat the disease, but there is no cure. It always relapses. Many other species of animals commonly develop the disease, but they usually don't appear to become sick. Only ruminants seem to be significantly sickened by the disease. Ruminants are animals that have multiple stomachs and chew their cud.

So it's not surprising that researchers would suspect some type of MAP bacteria or a similar pathogen as the cause of Crohn's disease.

But this line of research relies on a direct link between the bacteria

and the disease, such as exists with Johne's disease. Perhaps assuming a direct link in human IBD has been the wrong approach. Maybe bacteria don't directly cause IBD. Maybe bacteria just create an environment of chronic inflammation that predisposes a host to a condition highly favorable for the development of IBD. Maybe a secondary issue actually triggers the IBD.

Proof that this is not only easily possible, but a likely scenario in virtually anyone's daily life, has very recently been published.

A recently published article in the journal Science (1) verifies the details of how such a sequence of events might occur. This may prove to be the elusive cause of IBD that researchers have been trying to find for decades. The researchers were able to demonstrate that relatively minor food poisoning events, when repeated, could lead to a sequence of events that resulted in the development of IBD. Yang et al., (2017) were able to prove how this could happen by infecting mice with a very common species of bacteria that are often responsible for food poisoning, Salmonella typhimurium. They showed that even though the Salmonella infections they induced were easily resolved by the mice without a need for medical treatment, only four repeated infections were necessary to cause the mice to develop IBD.

The researchers noted that the Salmonella induced a deficiency of intestinal alkaline phosphatase (IAP) in the host.

Various bacteria normally found in the colon produce toxic lipopolysaccharides (LPS). LPS are often referred to as endotoxins, and they elicit strong immune responses in all mammals, including humans. IAP is normally produced by the small intestine and the body uses it to remove phosphates from molecules such as toxic LPS, detoxifying them and preventing inflammation.

But when the small intestine is inflamed, enzyme production is compromised.

When production of the IAP enzyme is diminished, that means that LPS can be only partially detoxified, resulting in a state of chronic low-level intestinal inflammation. Production of other digestive enzymes is impaired as well, and that's one of the reasons why large meals are less likely to be digested properly when eaten by MC patients. It's why eating smaller, more frequent meals may improve digestion.

This sets the stage for the development of IBD.

As similar food poisoning events are repeated over time, detoxification of LPS may become increasingly compromised. Eventually the inflammation can reach a state where the development of IBD is likely. So at the moment, the big question facing researchers is whether or not monitoring the IAP level would be a practical way to assess the risk of developing IBD, and whether the supplementation of IAP would be beneficial, and could possibly be used to prevent the development of IBD.

But why should celiac disease be exempted from the suspicion that it might be caused by bacteria, also?

Celiac disease is a true inflammatory bowel disease. We all know that celiac disease is associated with gluten sensitivity. But what actually initially triggers celiac disease? It appears possible (even likely) that the sequence of bacterial infections described above might trigger the inflammation that leads to the onset of celiac

disease. Gluten sensitivity might be the result of the inflammation (inflammation that causes increased intestinal permeability), rather than gluten initially causing the inflammatory process. Of course, gluten sensitivity will perpetuate the inflammation after leaky gut develops. But perhaps this explains why celiac disease can suddenly develop at arbitrary times and arbitrary ages.

1. Yang, W. H., Heithoff, D. M., Aziz, P. V., Sperandio, M., Nizet, V., Mahan, M. J., & Marth, J. D. (2017). Science, 358(6370), eaao5610 Retrieved from http://science.sciencemag.org/content/358/6370/eaao5610

Introducing Our New Microscopic Colitis Foundation Board Member, Gabrielle (Gabes) Ryan

Gabes has 20 years of office manager/contract/logistics experience in a myriad of industries. After years of research in functional whole-body wellness, and spending 3 years recovering from chronic illness, she now works as Chiropractor's Assistant for a functional chiropractic team helping others achieve optimal health. In her spare time Gabes does photography in nature and is keen classic car/classic race car enthusiast. She lives in Hunter Valley, NSW Australia.

On the Road Again

As Willie Nelson sings, we “just can’t wait to get on the road again”. A key part of our motto “You can get your life back” involves the transition from being tied to our house and bathroom to being confident enough to start traveling again. It is different for each person, but there are some common themes and strategies for doing so. Let’s look at them, and then hear some travel stories.

We can feel pressure from friends and family members who are frustrated by being limited in travel and outside activities by our

illness. But our first duty is to ourselves, and we need to reach the point in our recovery where we feel confident enough that we are willing to expand our horizons. And of course, if you have had a bad experience with a sudden need to find a bathroom in a public place or have had an accident, you will be traumatized and feel a lot of worry and stress when first venturing out.

So, a step-wise process to build confidence can help. Here are some tools that have worked for many people.

1. Keep track of your bathroom visits, and choose a time to be out when you have the least history of needing one. Most commonly the morning is the when our digestive system tends to be most active.

2. Experiment with the strategic use of anti-diarrhea medications like Imodium. Determine how much you need, and how long it lasts, and this can provide some confidence.

3. Plan ahead, and do a mental run of all the steps. For the first outings, choose someplace close with identified bathrooms.

4. Prepare for the worst, just in case. For example, you might want to wear an adult diaper, and/or take along a tote bag with a change of clothes and baby wipes.

5. Gradually increase the length of time and the types of activities as you gain confidence.

6. Visit our Forum, as there is lots of advice. In the “Information” section of the Main Message Board are “Tips on Traveling with MC”.

The challenge is to find ways to have control of your food while traveling because the biggest risk is eating out. Here are some suggestions.

Travel to a destination where you can rent a condo that has cooking facilities. Then go grocery shopping and stock up on supplies. If you are worried about cross-contamination from the cookware, purchase a cheap pan or two and use aluminum foil on baking dishes.

When traveling by plane, plan ahead. You can purchase a small, soft-sided cooler with several compartments designed for carrying on a plane. This gives you the flexibility to bring safe food, especially protein, that need refrigeration. To get through security, a trick is to put ice cubes in Ziploc baggies, empty them out before going though security, and then refill afterwards either from a food court or on the plane. Or you can freeze some of the food, which will then keep cool for many hours.

Traveling by car allows you to pack a cooler. When staying at hotels, they usually provide a buffet breakfast and even the most minimal usually have fruit and boiled eggs that can be added to what you

bring, if these will work for you.

Cell phones, GPS navigation, tablets and laptops all provide the ability to search for restrooms, check menus at restaurants, locate specialty food stores, and make life much easier for travel.

Cruises have advantages. If you aren't doing well, you can easily stay in your room or close by. You can choose to take shore excursions or not, depending on how confident you feel. Cruise ships are familiar with diet restrictions and usually do a good job accommodating your particular diet. Your traveling companion will have company if they want to do more than you, and will have access to all the food offerings, so it works for everyone.

Eating out can be made less worrisome by identifying items in chain restaurants that will work, such as a hamburger in a lettuce wrap, or particular items in more enlightened restaurants like Chipotle. Investigation of menus ahead of time in restaurants where you are traveling can provide some variety.

A "Chef Card" listing what you can't and can eat can be very helpful when eating out.

Here a a couple of travel stories to inspire you!

Gloria

We're going on our first road trip since my diagnosis and I'm a little nervous. I'm not so concerned about urgent stops on the way, but more about how to eat away from home for a week.

I'll have a food suitcase which will contain rice cakes, GF cereal, soup broth, potatoes, potato chips, sunflower butter, Ener-G egg replacer, canned chicken, pre-cooked rice, canned tomatoes, tuna, GF pasta, fruit cups and fruit juice and my recipe box.

My cooler will contain homemade hamburger buns and bread, mayonnaise, mustard, catsup, ghee, margarine, jelly, pre-cooked bacon, packaged chicken sausage, hamburger patties,

Gabes

My road trip is going pretty good, this is my first road trip holiday since MC diagnosis 8 years ago. I have been eating out and so far so good - no major issues with digestion.

The main thing I have noticed that has changed in the last 7 years is that getting 'safe ingredients' and 'safe meals' is way, way easier. Awareness of dietary intolerances has grown big time, and being able to eat out is much easier compared to 5-7 years ago. Menus and food

chocolate, waffles, almond milk in 8 oz. plastic containers, soda pop (for my husband), relish, and steak sauce.

I have one suitcase which will contain two electric burner plates, a small microwave and a toaster oven. I'm packing dishes, storage bowls and cooking, baking and eating utensils along with cleaning items.
In addition, I've looked up the chain restaurants along the route where I've safely eaten which offer GF menus. A GPS would be a definite plus. I found a website that lists GF restaurants around the country. It would be great to tap into that while traveling. Having a laptop also helps a lot because I can look up restaurants and GF grocery stores.

I am planning on preparing my own breakfast and lunch, but eating dinners out. Hopefully that will placate my husband.
We've only stayed at motels which automatically provide a microwave and a refrigerator. I only used the microwave twice: once to cook broccoli for my soup and once to make hot rice cereal. I put two freezer packs in the freezer for the next day's trip and take all of the food out of the coolers and put it in the refrigerator. I washed the Rubbermaid drink containers and other dirty dishes in the dishpan I brought. The motels have all offered a free breakfast for my husband, so I didn't have to deal with bringing my own breakfast to a regular restaurant.

places are much more receptive to dietary requests. In larger cities thanks to interest in keto eating plans, I was able to get high protein meals such a breakfast that was just eggs, bacon and avocado.

When eating out, I am using an intolerance complex product that helps the body digest gluten and dairy to minimize inflammation in case I accidently ingest them. I have also increased Vit D3 and magnesium.

As it is summer here in Australia, I am getting accommodations with decent size fridges so I can carry some 'safe staples' such as cold meats, avocado, etc. This means that I have been able to stick to high protein MC safe eating plan while travelling. Tonight we are in an Air BNB option that is a house with fully decked out kitchen. I have cooked steak and vegies for dinner, and have some left-over vegies to have with my breaky tomorrow. For $32 worth of ingredients I have done yummy dinner for two people (good quality steak and vegies), and have ingredients for breakfast for two people with vegies, bacon, eggs.

Once home a check with my functional practitioner and I was not toxic nor 'gut breeched' (functional term for no excess inflammation in the gut) I was really chuffed with this given I was also having treats of red wine. All the hard work, changes and sacrifices of the first years post diagnosis are totally worth it!

Breakfast was easy and the same as I ate at home. Lunch was the most difficult, as always, primarily because I try to rotate eating sandwiches. I haven't cooked any dinners, even though I packed utensils so that I could, if necessary. The biggest hindrance is that a road trip, by definition, means that you're on the road and we were seldom checked into a motel before dinner.

All in all, the trip was a success. I expected to have a reaction here or there, and I did. I don't know if I could do this for two weeks. I think you'd have to have an RV for an extensive trip, or travel to a destination and stay there, as some have said they do. Traveling with a special diet is a lot more work than it was before MC, but so far it is doable. Every time there is a mishap, I tell myself that this trip is a learning experience and that's why we're taking it.

Amazon Smile offers a wonderful way to support the Microscopic Colitis Foundation. Every time you shop with Amazon through Amazon Smile, a portion of your purchase will be donated to the charity of your choice at no cost to you.

.

Robly