

Article 7 - Health Begins With Good Digestion.

You would probably be surprised by how many people experience embarrassing wind, regular uncomfortable abdominal bloating, and irregular bowel habits which can range from constipation, to alternating constipation and loose stools, right through to intermittent diarrhea. All of these problems are an indication that the environment inside the bowel has been adversely affected in some way and can, with the right help, be put right or be greatly improved. Poor health and function of the stomach, pancreas, liver and both the small intestine and large intestine can contribute to these problems. This month we will look at the role that bacteria and other microorganisms (also known as gut flora) play in maintaining a healthy digestive tract.

So, what is gut flora? The gut flora is a collective of beneficial microorganisms that normally live in our digestive tract and the ways in which they contribute to the health of our bodies are many. Your bowel is populated by somewhere between 300 and 1000 different bacteria species, with 30 to 40 dominant species which make up around 99% of the population. Various fungi and protozoa also make up a part of the gut flora.

They are an important part of our immune system regulation, and are an integral part of the training our immune systems undergo when we are young. The gut flora also interact with the immune system, "teaching" it not to over-react to intruders that should be harmless, like allergens. It is estimated that approximately 60-70% of our immune system lines our digestive tract because this is the area most likely to be affected by exposure to outside substances. Our immune system is constantly sampling the gut environment to ensure that we are not exposed to things which could do us damage, and the gut flora are integral in maintaining the gut health by interacting with our immune system and preventing pathogenic species of microorganisms from "moving in". They actively protect us from the overgrowth of unfriendly bacteria, or the fungi which are implicated in repeat thrush and Candida infections for example, and in the case of food poisoning or traveller's diarrhea, I have used high doses of certain bacteria to significantly reduce the severity and length of the infection.

They produce certain vitamins for us such as vitamin K which stops us from bleeding abnormally, and biotin which is essential for fatty acid metabolism and energy production. They help us digest sugars which we otherwise couldn't. *Bifidobacterium longum* for example, has several hundred genes for breaking apart sugars found in many common human foods, including breast milk. Without the gut flora, those sugars would pass through the human digestive tract. With the flora's help, we can reap calories and energy from them. They also create energy for us by fermenting the unused carbohydrates which pass through our bowels, and they produce substances called short chain fatty acids (SCFAs) such as acetic acid, propionic acid, and butyric acid by a form of fermentation called saccharolytic fermentation. Acetic acid can be used by our muscle cells, propionic acid helps the liver produce ATP (energy), and butyric acid provides another form of energy to our gut cells and may also help to prevent cancer. In addition, the SCFAs increase our ability to absorb nutrients such as magnesium, calcium and iron from the bowel.

The "bugs" in your gut make up a significant 2.5 to 3kg of your body weight, which gives you some idea as to why health problems are likely to result if the numbers of good bacteria are reduced and replaced by bad bacteria or fungi. This is often the case with repeated or long term antibiotic use, chronic digestive problems, gut infections which disrupt the internal environment such as worms or giardia,

constipation, inflammatory bowel disorders, liver or gallbladder issues, or a diet which is low in fibre and/or high in sugary items.

When there is an over-growth of pathogenic flora it is usually best to clear these from the bowel and repopulate with species which facilitate the growth of the good ones. In the case of a significant over-growth, it is often not enough to simply start using a probiotic (capsules or powder which contain good bacteria) as the pathogenic flora are likely to prevent them from populating effectively. In these cases I use a gut rebalance program which is very simple and effective, and I have had many people who have subsequently experienced complete relief from years of bloating, flatulence, and bowel dysfunction. I have also used certain strains of bacteria to significantly improve inflammatory bowel conditions such as Crohns disease and Irritable bowel. This raises another point – that different gut bacteria do different jobs, and by choosing a particular strain or type to suit the situation, you will ensure a far better result. Because the gut flora interact with our immune systems in the way they do, many people find that other seemingly unrelated symptoms such as sinusitis and allergy problems improve as well when they go through the rebalance program.

What can you do to protect your gut flora? Firstly, if you need to use antibiotics ALWAYS use a good quality probiotic (which has been refrigerated and not kept on a shop shelf) during the course and for 1-2 months afterwards. This is very important for children too, and I have a good range of probiotics formulated especially for children. I often get asked if yoghurt can be used instead. While yoghurt is great for maintaining the bacteria populations once they are in good shape, it not generally enough to overcome an over-growth problem.

Get your digestive function in tip-top working order. The gut environment and therefore the flora, is directly affected by how well you break down your food. If you have digestive issues I can help.

Feed the “bugs” with good food. Eat a diet which is dominant in a wide range of fresh vegetables (especially dark green leafy ones and ones with the skins on) and eat lentils, beans, peas, chickpeas, brown rice, barley, whole porridge oats, bulgar wheat, buckwheat, raw nuts, bananas, apples, pears, kiwifruit, corn kernels, raw carrot, raw or steamed cabbage, broccoli, and beetroot regularly. The good flora require lots of fibre, especially soluble fibre to sustain them.

Keep refined foods, bread and sweet items to an absolute minimum.

Drink at least 8 glasses of water per day and don't substitute this for any other beverage. Water is used during every stage of your digestive processes, and it is the substance which ensures the membranes in your digestive tract are kept plump and well protected with the right amount of mucous. Thin mucous through dehydration equals a greater likelihood of gut and stomach irritation, and therefore disrupted flora.

Avoid foods or beverages which may be causing inflammation in your bowel. Testing for food intolerances and sensitivities is very helpful, especially for those with irritable bowel symptoms and a comprehensive test covering 90 different foods, food chemicals, environmental allergens and chemical substances is available through the clinic. If you would like to investigate getting this done, or would like to get the health of your gut flora checked, please call us at the clinic on 06 3048177 to discuss further.