

Stress and The Bowel

To fully understand stress, Dr. Robert Sapolsky, author of Why Zebras Don't Get Ulcers, always takes us back to that meeting with that lion. Basically, in extreme stress all operations of the body give in to the flight-or-flight responses and all blood and energy are diverted to the muscles. At that time, basically, we are not interested in the ingestion of more food. Digestion shuts down. Saliva and all other juices are diverted to the circulatory system, so our mouths go dry and all that intestinal liquefaction is reabsorbed back into the blood stream. The body stops secreting digestive enzymes and the processes of food absorption. Peristalsis, the muscular undulation that moves food through the digestive system for use elsewhere, also stops. All blood flow leaves the digestive system for use elsewhere. What if all this happens on the way home from Thanksgiving dinner and you had three helpings of Aunt Milly's apple pie waiting to begin the digestive process? Why are there lions running around city streets anyway?

Basically eating is a parasympathetic activity that relies on calm for optimizing digestion (which is why I never do business over lunch!). I treat an awful lot of Crohn's Disease, Colitis and Irritable Bowel Syndrome and believe me the bowels have a lot to do with stress, perceived or otherwise. But the digestive system has many parts, so it may be best to start at the stomach and work our way down.

Ulcers, Old and New Standards

Under full blown sympathetic reactions like the lion, the body secretes no acid into the system to break down food (weak digestive systems are often belied by the presence of undigested food in the stool). Under ongoing stress let's just say that the acid secretion is weak, which may be the time that the naturopath tries to give you HCL capsules. Normally, your stomach lining invests a lot in creating a thick mucous lining with lots of buffers that help you withstand the onslaught of a rich acid bath, but for the last month or so, while under stress, it hasn't had to. The ulcer most often happens when the stress abates and a full complement of acid returns to an environment unable to handle it as if to say that your stomach is caught with its pants down.

Under normal circumstances blood supply to the digestive system brings with it a rich oxygen supply that in turn can produce oxidative reactions which as anyone who reads health journals today realizes is the cause of a type of cellular deterioration or fast aging. To combat this the body normally supplies the stomach lining with lots of oxygen radical scavengers. Again, these become scarce under stress because oxygen is less and they are not needed, but when stress abates and normal circulation returns the oxygen radicals do a lot of damage, little infarcts in the stomach walls, while the scavengers work hard to catch up. This again is a weak part where a full complement of acid can do some damage.

For awhile it was thought that one certain bacteria that can live in this rich acid environment called *Hylobacter Pylori* had exclusive rights to the causes of ulcers. But lately science has come back to thinking that this is only opportunistic when the cascade of problems that started an ulcer has already begun usually under the sequence of circumstances that we talked about above. Personally, I feel that if you deal with the real

problem, namely the stress, you won't need the antibiotics. If you take the antibiotics alone studies are showing that you'll go back to them time and time again.

IBS, Colitis and Crohn's Disease

Part I. Diarrhea

Remember that part when the lion came and you evacuated your bowel so that you didn't have to carry the extra weight on your flight from near death. Well there was no way that what emitted from your bowels wasn't some form of diarrhea. Your large intestine has to get rid of food that has been digested so it is in your large bowel for one reason and that is to get rid of the extra water in the mix and reduce it to a relatively solid stool for evacuation. Under stress the bowel may want to contract or spasm and begin the job prematurely. I am quite familiar with this and have entered into many competitive endeavors with a thoroughly eliminated large bowel.

Part II. Constipation

While the large intestine spasms and evacuates under pressure, the small intestine is inclined to do just the opposite. Like the stomach, the small intestine stops working in its tracks in the midst of a stressor. The body gives no energy to peristalsis of the small intestine with a lion on your tail or a proverbial monkey on your back. So, the food just sits there waiting for something to happen. What may continue is some sort of bacterial or enzymatic breakdown which of course could result in the formation of a gas. The problem with some people is that with a slower state of peristalsis or none at all, this gas may not have anywhere to go blocks up and bloats and potentially causes some form of pain.

For a lot of Crohn's patients the solution is some sort of antibiotic that stops the breakdown that stops the gas.

Part III. The Ulcerative Part

So we see that depending on what becomes affected the response could be either constipation or diarrhea. Ultimately, they may become uncoordinated at best and while our large intestine wants to evacuate as a response to stress, the small intestine may not be letting anything through, so we go and we go but nothing happens. A day later we may not be able to stop going.

Anything that attacks the body does so when our defenses are down, so that whatever organisms that want to attack the system, are largely opportunistic. When this happens, the body will form an inflammation to isolate and destroy the offending organisms. This almost happens pervasively. In fact while some immune substances are promoting inflammation, others inhibit it as a constant effort of homeostasis. The real failure here, is the inability of the body to maintain balance in the immune equation due to stress (see the soon to be written, Stress and Immunity).

If the inflammation cycle lasts too long it may become a problem in itself as it can form a blockage, but if it cannot mount an inflamed response the organisms that are attacking it may become opportunistic and, just like those *Helicobacter pylori* bacteria in the stomach, something is eating up the lining of our bowel or even making a hole in the darn thing, which is called a fistula and can go right through to another organ. In the case

of Crohn's Disease, regardless of what we get over in this regard, there is always the scarring which can, in itself, cause problems and blockages in the bowel down the line.