#### Geoff Bond Nutritional Anthropologist June 2009

Press Article

# Make Of Your Gut a Herb Garden (Part II)

Our evolutionary history designed us for life on the savannas of east Africa...

Last month I reviewed how nature designed our bodies to be hosts to trillions of bacteria in our colons. In a state of nature these bacteria are "friendly" types. Today, because of the foods we put down there, these bugs are "bad"; they undermine our health in many ways. Let's look at some more examples:

# **Inflammation and Auto-Immune Diseases**

Dr Yasmine Belkaid at the National Institutes of Health (USA) finds that good bacteria talk to immune system T-cells called "Tregs". They educate the Tregs into only attacking bad bacteria. In other words, without this education, the immune system would kill off its good bacteria with friendly-fire. At the same time, the Tregs tweak other T-cells into redoubling their killing power.

Dr Dan Littman at the NYU School of Medicine finds that even in the small intestine bacteria have a similar effect on immune cells. They regulate the balance between Treg cells and T-helper 17 (Th17) immune cells. Th17 cells encourage inflammation. An overload of fiery Th17 cells results in intestinal immunity, intolerance, and susceptibility to inflammatory bowel diseases.

Along with Dr. Eberl's studies which I mentioned last month, Belkaid's and Littman's studies indicate how, by upsetting bacterial regulation of the immune system, we allow inflammatory diseases like Crohn's Disease and Irritable Bowel to take over. Scientists have linked this phenomenon to many other auto-immune disorders too such as psoriasis, multiple sclerosis, inflammatory bowel disease, and Type I diabetes. Dr Li Wen, University of Chicago, finds that gut bacteria can actually prevent the onset of Type I diabetes.

Ironically, Type I diabetes is considerably more prevalent in the West due to over-enthusiastic hygiene, particularly in infancy. As a result, children's immune systems are not sufficiently "challenged" and so do not mature properly. One consequence is that out-of-control killer cells might attack and destroy the pancreas's insulin cells. Another consequence of extreme hygiene is that children are more likely to suffer asthma and allergies.

# **Bone Building**

More interestingly, Dr Gerard Karsenty, Columbia University, finds that it take guts to build bone. Most of us are familiar with the compound called "serotonin". It has received some notoriety for controlling brain function, notably mood. However, the gut also produces serotonin – and in much larger quantities. Karsenty has discovered that the more the gut produces serotonin, the more it depresses bone-building. Frustratingly, Karsenty has not been able to identify why the gut produces more or less serotonin. However, it would be surprising if the gut bacteria did not have something to do with it.

#### **Cystitis, Bladder Irritation and Pelvic Pain**

Dr David Klumpp at Northwestern University School of Medicine has discovered another, quite unexpected effect. Remarkably, he finds that the colon cross-talks with the bladder. When the colon feels irritation, it transmits the pain via bundles of nerves that are connected to the bladder area including the prostate. The bottom line is that if you eat spicy food like curry, pepperoni pizza, or chili con carne, then you are likely to feel

the pain in the bladder and surroundings. Most sufferers are women, who find cystitis symptoms much aggravated and sometimes have to urinate up to 50 times a day.

I have frequently pointed out the harm that strongly spicy foods do to the colon directly; now we find it also causes mischief at a distance.

# Feeding the Good Guys, Starving the Enemy

So what kind of diet sends down the right residues to our guts? Said very simply it is the one that our evolutionary designed for us. It is one rich in plant food (salads, fruits and vegetables) and low in animal protein.

The wrong kinds of residues come from foods that our bodies do not recognize: all starches (e.g. bread, pastas, potatoes, breakfast cereals, etc...); dairy products, especially milk and yoghurt; beans and lentils (including soy bean); and a high animal protein diet generally. It is all there in *Deadly Harvest* -- plus all the detailed guidance you could wish for!

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Geoff Bond is a nutritional anthropologist and a recognized authority on what it means to be human in lifestyle terms. American hospitals employ him to give in-service training to their doctors about mastering the lifestyle diseases like cancer, heart disease, diabetes and osteoporosis. The Walter T Stec Foundation supports Geoff in bringing his message into American schools. He is on the health panel of the UK think-tank Reform. Geoff's latest book, Deadly Harvest, is the reference work for lifestyle anthropology and the connection with degenerative disease. All good bookstores stock it.

Geoff is available for private consultations and the occasional talk to interested groups.

More information about Geoff's work on his website: <a href="www.naturaleater.com">www.naturaleater.com</a>.

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