

Geoff Bond
Nutritional Anthropologist
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Press Article

Genetic Meddling: Purple Tomatoes



Courtesy: John Innes Centre

"Most people do not eat 5 portions of fruits and vegetables a day" says Professor Cathie Martin from the John Innes Centre, UK. But Prof. Cathie has a fix – just genetically engineer an extra nutrient into the pitifully few servings they do eat!

This kind of reasoning makes my hackles rise. It's the same mentality that governments demonstrate when they ordain vitamin "fortification" of breakfast cereals, iodizing of salt, and the fluoridation of our water supplies.

It's the magic bullet mentality – and we are deluding ourselves. Such simplistic measures cannot have anything useful to contribute to the functioning of the infinitely complex operations swirling around inside our bodies.

On the contrary: I like to say that nutrition is like an orchestra, where you have to have all the elements present and in balance.

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So what exactly has Prof. Cathie done? She inserted genes from the snapdragon flower into a tomato. Not just any old gene, but the ones that give snapdragons their blue color. Now for the kicker: that color comes from micronutrients called "anthocyanins". They are the ones that give blueberries, raspberries and blackberries their color too.

Why might anthocyanins be important? Nature built our bodies on the assumption that anthocyanins will be available. Without them, our biochemistry spirals out of control leaving our defenses wide open to cancers, cardiovascular disease, obesity, diabetes and eyesight problems.

But do we need to eat purple tomatoes to get our ration of these micronutrients? Of course not! Anthocyanins are present in a huge variety of colored salads, vegetables and fruit. It is almost impossible not to get enough. Just continue to eat like I say (see my book *Deadly Harvest*) and your body's orchestra will be playing in perfect harmony.

Well-meaning Meddling

Now listen to the downside to this magic bullet mentality. In 1996 the U.S. Food and Drug Administration required that folic acid be added to flour, breads and other grains "to prevent birth defects". Although the government's target is only pregnant women, they are thus

forcibly medicating anyone who consumes these items (none of my readers presumably!). In Britain, most cereal manufacturers already “fortify” (I would say “adulterate”) their products with folic acid. The Food Standards Agency will make it mandatory in 2009. I bewail this mentality. We can never fully understand the ramifications of such meddling.

Now we have the reckoning. Professor Rachel Miller’s research, published in the Journal of Clinical Investigation, shows that we can have TOO MUCH folic acid! An excess during pregnancy primes the baby for asthma and allergies in later life. Nobody tells pregnant women about that trade-off!

The moral is this. Our body expects to receive tens of thousands of micronutrients – of which folic acid and anthocyanin are only two! We cannot second guess or micromanage how the body is going to work with these nutrients. When it comes to folic acid, your body gets just what it needs, and in the right proportions from what you eat: *foliage*! The same goes for the anthocyanins. All we have to do, and it’s not just pregnant women, is just eat up all those good plant foods: salads, fruits and vegetables and your body will get the micronutrient orchestra playing in perfect harmony.

GeoffBond@naturaleater.com

Geoff Bond is a nutritional anthropologist and a recognized authority on what it means to be human in lifestyle terms. He leaves next month on his annual speaking tour to America to instruct doctors about mastering the lifestyle diseases like cancer, heart disease, obesity and osteoporosis. Geoff is available for the occasional talk to interested groups.

Geoff’s latest book, *Deadly Harvest*, is the reference work for lifestyle anthropology and the connection with degenerative disease. It is stocked by all good bookstores in Cyprus.

More information about Geoff’s work on his website: www.naturaleater.com.

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