



The science & art of living the way nature intended

The Bond Briefing

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RATIONAL EVIDENCE-BASED COMMENT FOR THE GENERAL PUBLIC & HEALTH PROFESSIONALS. WE SAY EXACTLY WHAT WE THINK

Humbug Watch: "Everything is all right in Moderation" [Really?]. **Counter-intuitive:** Soybean Oil is Obesogenic. **Hints & Tips:** Weigh Daily for Weight Loss. **Q&A:** Ganoderma – a Magic Mushroom? **Health Policy:** Dealing with Obesity Stigma. **News Flashes:** Antioxidants Boost Melanoma; How Hunger Controls Bone Mass; Myopia and Time Indoors; Short sleepers Catch Cold; Muscle Molecule Builds Bone; Diabetes linked to Bone Health; Antibiotics Linked to Diabetes. Upcoming Events: Palm Springs; Bucks, UK; Oxford, UK.

Humbug Watch

"Everything is all right in Moderation" [Really?]

This is a platitude – and one that I frequently hear to my irritation. Why? Because it is a cop-out. People use it as justification for eating a whole range of unsuitable foods 'in moderation'.

Now a group of researchers has put some rigor into the argument [1]. They found that after 10 years, those subjects who had the most 'varied' diet had the worst health outcomes – 120% increase in obesity, reduced metabolic health and increased risk of diabetes.

What was going on? Of course, the greater variety also meant an intake of a greater variety of UNHEALTHY foods: "sweets, sugar-sweetened beverages, crackers, cookies, cakes, salt, trans-fats, processed meats, desserts and soda."

Say the researchers: "An unexpected finding was that participants with greater diversity in their diets actually had worse diet quality. They were eating less of the healthy foods, such as fruits and vegetables, and more of the unhealthy foods."

Senior author, Dr Mozaffarian said: ""Americans with the HEALTHIEST DIETS actually eat a relatively SMALL RANGE OF HEALTHY FOODS."

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Counter-intuitive

Soybean Oil Obesogenic



Soybean oil out-fattens fructose

A diet high in soybean oil causes more obesity and diabetes than a calorie-equivalent diet rich in fructose, coconut oil or corn oil according to scientists at the University of California, Riverside [2].

At least, that goes for mice. Those on the high soybean oil diet showed increased weight gain, larger fat deposits, a fatty liver with signs of injury, diabetes and insulin resistance. Fructose in the diet had less severe metabolic effects than soybean oil although it did cause more negative effects in the kidney and a marked increase in prolapsed rectums, (a symptom of inflammatory bowel disease – "IBD")

The mice on the soybean oil-enriched diet gained almost 25% more weight than those on the coconut oil diet and 9 percent more than those on the fructose diet.

The mice on the fructose diet gained 12 percent more weight than those on a coconut oil rich diet. **Cont: page 4**

Hints & Tips

Weigh Daily for Weight Loss



*My weight chart November 2015
Enlarge: <http://bit.ly/1Yoysl>*

"Weigh yourself only once a week" is the often heard advice. But why? The thinking is this: that it takes a week to lose a measurable amount of fat, say, 1 lb (0.5 kg).

However, it is my experience that one's weight bounces around a lot (see graph above). I imagine this is due to changing weights of food and drink IN TRANSIT in the gut – after all, drink a US pint and, straight away, your weight goes up by 1 lb.

Or, for example, if you are thirsty and have lost 2% of your bodyweight in water (see: '[Official-Drink to your Thirst](#)', [July 2015](#) [3]), then a 150 lb person will be 3 lb LIGHTER than when they are fully hydrated.

With this in mind, I was not too disheartened to see my weight shoot up between day 16 and day 23 – I felt sure it would come back down again.

This was a week when we entertained house-guests and...

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Questions

Ganoderma - a Magic Mushroom?

Q. What do you make of the Ganoderma mushroom (Reishi) as a remedy? It is heavily promoted as useful in treating cancers, immune disorders, cholesterol, and glycemia.

A. Yes and a host of other ailments too – including antiaging! The scientific literature simply says that there is insufficient evidence to state categorically that it has any meaningful curative powers [4].

I don't dismiss such herbal remedies out of hand. When I got malaria, I was extremely grateful that quinine had been found in the bark of the chinchona tree; we are all grateful that aspirin was discovered in willow tree bark.

But when it comes to dealing with the disorders that Ganoderma is alleged to heal, even if it has some effect, it is just papering over the cracks. One has to deal with the ROOT CAUSE of these illnesses (cancer, immune etc) by correcting lifestyle errors.

Live the way we say!

Health Policy

Dealing with Obesity Stigma

How obese people feel about themselves has much to do with how they experience social stigma and it can change over time [5]. So finds Andrea Bombak of the University of Manitoba, Canada. She identified four types of response:

- **Hopeful:** Try to lose weight and, by showing willpower, hope to have less stigma and more public acceptance.
- **Despairing:** Blame themselves and see only a remote possibility of losing weight.
- **Resigned:** Abandoned the goal of losing weight, feel stigmatized, but are indignant about it.
- **Acceptor:** Don't accept that obesity is unhealthy and adopt

the 'Health-at-Every-Size' position.

Says Bombak: "These ideas will help health professionals create a less stigmatizing approach to obesity that takes better account of individuals' own knowledge, struggles and priorities."

My View? Hunter-gathers don't get fat. They are lucky – they do not live in an 'obesogenic' environment like we do.



A long walk with the family's dinner

The terrible fact about obesity is that, once entrenched, it requires superhuman efforts to get rid of the fat and KEEP IT OFF.

There is a reason: In another study, the researchers found that obese people who had lost weight in a crash course had hunger hormones rising in rebellion [see footnote*]. They generated excruciating cravings and upset chemical balances in such a way as to demand that weight be put back on [6]. This urge-to-eat effect lasted until at least A YEAR after the dieting had finished.

Hmm... the best plan is not to get obese in the first place...

News Flashes

Antioxidants Boost Melanoma

In mice, at least, antioxidant supplements DOUBLED the rate of melanoma metastases (spread) [7]. The researchers aren't sure just what is going on.

We do know that antioxidants sabotage the immune system's

*For the technically minded:

"Adverse differences in levels of leptin, peptide YY, cholecystokinin, insulin, ghrelin, gastric inhibitory polypeptide, pancreatic polypeptide, and hunger."

firepower – the free radicals that it fires at cancerous cells to kill them. See: 'Antioxidants Boost Cancer II', [May 2015](#) [8] and 'Antioxidants Boost Lung Cancer', [May 2014](#) [9].

Skin cream, sun lotion peril

However, this study does have something new to say: antioxidants (like vitamin E and beta-carotene) are often contained in skin creams and sun lotions – and so, paradoxically, these too can increase melanoma metastasis.

My View? Just another lesson that we cannot second-guess the chaotic nature of chemical interactions – and what a good example of The Law of Unintended Consequences!

How Hunger Controls Bone Mass



AgRP brain neurons

This is a new idea: being hungry builds bones! Researchers have discovered that special neurons in the brain, called 'AgRP' control not only appetite but also bone mass [10].

"The less you feel hungry, the worse your bone density", say the researchers.

It is not fully understood how the neurons do this but, according to the researchers, several pathways seem to be involved, including a role for the 'sympathetic nervous system' – this is the complex of nerves which maintains the body's processes in equilibrium (homeostasis).

Other pathways include AgRP acting on the thyroid, on the adrenal glands and on the gonads.

My View? My oft repeated message is that feeling hungry is part of the Paleo Lifestyle.

It is not a popular message but here is yet another powerful reason to feel hungry from time to time!

See: 'Muscle Molecule Builds Bone Mass' this page; and 'Diabetes linked to Bone Health', this page.

Myopia and Time Indoors

Chinese researchers find that 6-year-olds who spent 40 minutes extra per day out-of-doors compared to their counterparts who did not, were 30% less likely to develop myopia by two years later [11].

This is just one more study treading a well worn path: humans are not designed to live indoors: if they do it too much, vision is compromised. See: 'Outdoor life for Eyesight', [Aug 2013](#), [12]

Short Sleepers Catch Cold

As we saw last month foragers, apparently, sleep some 7.5 hours a night on average ('Sleep in a state of Nature', [Oct 2015](#) [13]).

There is a vast literature suggesting that people who sleep much less than this are prey to many diseases.

Now UC San Francisco researchers find that subjects who slept less than 6 hours a night were 4.2 times more likely to catch cold [14].

Muscle Molecule Builds Bone

We had a good knowledge of how physical activity, by creating micro-fractures in the bone, stimulated bone reconstruction. This is 'mechanical stimulation' and is good for bone health.

Now researchers have discovered a second mechanism. When exercised, muscles produce a molecule called 'Irisin' [15].

Irisin is a specialized protein called a *myokine* which in turn is a kind of *cytokine*. They all have multiple functions.

The study finds that irisin directly STIMULATES the bone

building cells called 'osteoblasts'. This is 'chemical' stimulation – and is good for bone health.

My View? The intricacies of Nature are boundless and we have to remain humble in our ignorance of the 'unknown unknowns'.

In this instance we have a process linking muscle wastage with osteoporosis, both of which often occur together. It highlights the importance, particularly with old people, of regular strenuous exercise and building good muscle-mass.

See next item

Diabetes linked to Bone Health

It is a well known phenomenon (which I have preached for a long time) that high blood sugar levels depress bone building (*Deadly Harvest* [Chapter 9](#), page 270 [16] and ref[17]).

Now researchers have identified one of the mechanisms [18].

Hyperglycemia REDUCED THE SENSITIVITY of osteocytes (bone cells) to mechanical stimulation (see previous item). It "suppressed the osteocytes' secretion of proteins and signaling molecules that help build stronger bone."

So now we know – all the more reason to stick to the Bond Precepts and keep blood sugar levels within bounds.

Antibiotics Linked to Diabetes

Swedish researchers, looking at a cohort of over 1.3 million people found that diabetics had used 60% more antibiotics than non-diabetics [19].

It is known that antibiotics drastically alter the gut flora in ways that favor diabetes [20]. Nevertheless, it is also possible, opine the researchers, that diabetics, being prone to sickness, get prescribed antibiotics more frequently.

My View? Avoid these conundrums by avoiding diabetes altogether!

See: previous item.

Upcoming Events

For details and updates:
<http://bit.ly/bond-event>.

LECTURE: (Open to the public)

January 20, 2016 at 6:30 p.m.

Venue: The Learning Center, Palm Springs Library, CA, USA

Title: Our Ancient Past

Programmed us for a Long Life and Lived in Good Shape to the End: How it went wrong, why we get diseases like cancer & heart disease, and what we can do about it.

LECTURE: (Open to the public)

March 5, 2016

For: The Paleo Society Conference.

Venue: TBA in Bucks, UK.

Title: TBA

LECTURE: (Open to the public)

March 16, 2016, Oxford, UK

For the Speedwell Trust,

Venue: Green-Templeton College, Oxford University, UK

How to Grow Older Without

Feeling Old: Insights from our ancient origins. Knowing how to grow old helps you to stay young.

Continued from Page 1

"Everything is all right in Moderation" [Really?]

"...These results suggest that, in modern diets, eating 'everything in moderation' is actually worse than eating a smaller number of healthy foods."

My View? Pretty obvious really – the number of foods that are right for humans is smaller than the total number of foods on offer. The more you dilute the human foods with junk, the worse the outcomes.

We have met Dr Mozaffarian before. He had some useful things to say in: 'Doc rethinks Food/Disease Links', [Aug 2010](#) [21]

However, we took issue with him in: 'Doc: Eat as much fat as you like [really?]', [July 2015](#) [22].

I wonder if he has changed his mind in the light of his latest study!

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Soybean Oil Obesogenic



So what is going on? The researchers find that the soybean oil SWITCHED ON ('upregulated') genes involved in obesity, diabetes, inflammation, cancer and mitochondrial function.

(The mitochondria are the 'power-plants' of the cell but they also maintain certain chemical balances and, very importantly, play a role in the suicide of pre-cancerous cells.

Is it a coincidence that soybean oil in USA is genetically modified? The researchers also tested a high oleic acid version of soybean oil called 'Plenish'. In spite of its more favorable ratio of

monounsaturated oil it too had the same drawbacks. Plenish is also GMO.

My View? I hold no brief for soybean oil, and certainly not GMO. It makes up 60% of edible oil consumed in USA but if you don't buy it in the bottle and you don't eat industrial food, you will happily remain soybean oil free.

See: '*Not all Calories are the same*' [May 2013](#) [23].

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Weigh Daily for Weight Loss



...if we were not eating Nicole's sumptuous, three course Paleo dinners, we were eating out (carefully) in restaurants.

So my guts filled up with high volumes of food in transit but, after that week, they emptied and my weight returned to its lower range.

A two-year study from Cornell University confirms the daily weigh-in stratagem [24].

The researchers suggest that tracking one's weight daily acts to reinforce helpful behaviors, such as eating less and going for a walk.

"We think the scale also acts as a priming mechanism, making you conscious of food and triggering you to make choices that are consistent with your weight," said prime researcher David Levitsky PhD. He added: "It seems to work better for men than women, for reasons we cannot figure out yet."



Deadly Harvest: Geoff's latest work encapsulates current thinking on lifestyle anthropology. www.deadlyharvest.com

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