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The Bond Briefing

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

Listen to your Body: Glycemia & Runners' Wall. **Biological Adaptation:** Morning Sun keeps off the Pounds. **Q of Month:** Are Red Wine and Chocolate not so Healthy after all? **Recipe:** Spinach Quiche. **Q&A:** Do Apples Lower Blood Sugar? Washing Fruit; Antioxidants Boost Lung Cancer; Insect Nourishment. **From the Labs:** Sunlight lowers Blood Pressure. **Human Society:** How the Farming Revolution Allowed Despotism to Arise. **News Shorts:** Australia Officially Debunks Homeopathy. **Video Clips:** Ugg Caveman on Paleo. **Event:** July 11th 2014.

Listen to your Body

Glycemia and Runners' Wall



I was 23 minutes into a 1 hour run when, suddenly, just as I was going past the world's first steamship, Brunel's 'SS Great Britain', I was overcome by intense fatigue and a spinning head. I just had to stop and sit down for several minutes.

It was the feeling that long distance runners get when, after a couple of hours, they hit 'The Wall'. That phenomenon is due to glycogen depletion – but it was far too soon to explain my case.

What was different about my run this time? I was wearing a new pair of 'barefoot' shoes (see 'Barefoot Running', [Feb 2012](#)) but they could hardly be the cause. I thought back to earlier in the morning.

I was in Bristol for the EHBEA Conference [1]. I had snacked at the hotel buffet on the fruit on offer.

'Borderline' glycemic was the best I could do: apple, orange and a greenish banana. What the heck – not such a great lapse surely? But that was the only explanation I could come up with. So I put it to the test.

Cont p 3

Biological Adaptation

Morning Sun keeps off Pounds



Savanna Sunrise

Sleeping out of doors, our ancient ancestors woke up to the bright tropical morning sunlight. So, over the eons, did our bodies come to rely on it being there?

"Yes", says a recent study [2]. It finds that the timing, intensity, and duration of light exposure we get regulate how fat we get.

People who had good light exposure in the morning were significantly trimmer than those who did not – even though they ate the same number of calories!

Today, say the researchers, most people do not get enough light in the morning since they work indoors. The measurement of light intensity is the 'lux'. The minimum required to achieve the effect is some 500 lux. Even an overcast day provides 1000 lux, whereas artificial lighting is no more than 300 lux.

It is all to do with the internal body-clock. Light is essential to synchronize it with the daily bio-rhythms which in turn regulate energy balance. **Cont p 3**

Question of Month

Are Red Wine And Chocolate Not So Healthy After All?

Q. An article in Forbes Magazine [3] talks about a study[4] that finds no link between resveratrol intake and mortality. In passing they briefly mention the "French Paradox" as you do in [Deadly Harvest](#). Is this another bogus study about resveratrol?

A. Resveratrol is a micronutrient found, amongst others, in red wine and chocolate.

However, I take the view that it is futile to single out just one micronutrient among the tens of thousands and expect it to have miraculous powers.

This is more a comment on the supplement industry in its incessant search for 'magic bullet' products.

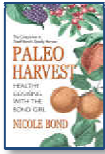
So yes, this study is a red herring, blown up by a journalist to make a story.

The only honest approach is to consume volumes of micronutrient-rich foods - just like our Pleistocene ancestors.

Our bodies require a symphony of ingredients working in harmony and only food can do that. See also my report on Dr Mozaffarian's study in [Aug 2010](#) : 'Doc Rethinks Food/Disease Link'.

My View? Enjoy the glass of wine and the dark chocolate for what they are - and if they do some good on the way, so much the better!

Recipes



Nicole's latest cookbook [Paleo Harvest](#) has over 170 new and updated recipes using the latest ingredients. Here is one of them:

Spinach Quiche

Yield: up to 8 servings



This simple recipe is a tasty way to prepare spinach – your kids will love it! It keeps well and can be served reheated or cold for that un-programmed snack.

- 2 cups sliced mushrooms (about 4 ounces)
- 1 tablespoon olive oil
- 2 cloves garlic, crushed
- 1 cup frozen chopped spinach, thawed and squeezed dry (about 8oz)
- salt to taste
- ground black pepper to taste
- 3 eggs, omega 3
- 2 pinches nutmeg
- 5-10 drops Tabasco sauce, or to taste
- 1 'Savory Paleo Crust' (see [Last Month](#)), pre-baked.

1. Sauté the mushrooms in a non-stick frying pan, without any oil or water, on medium-high heat, stirring constantly all the time, until they release their juices. Stir in the oil, garlic and spinach and salt and pepper to taste.
2. Meanwhile beat the eggs with an electric hand mixer in a medium-size mixing bowl. Season with nutmeg, Tabasco sauce and salt and pepper to taste.
3. Fill the pre-baked crust in the baking dish with the spinach-egg mixture.
4. Bake in a hot oven at 340°F (170°C) for about 30 minutes, or until the eggs are cooked and the crust golden brown.

Questions

Do Apples Lower Blood Sugar?

Q. I was looking on the Internet and found a website which says that apples lower blood sugar [5]. I am diabetic and since having an apple a day blood sugar is OK.

A. Don't believe everything you see on the Internet! Actually, that website is trying to do a worthy job – they just have faulty thought processes.

They have been seduced by a scientific article [6] which finds that apple skins have a compound in them ('*alpha-glucosidase inhibitor*') which slows glucose absorption; ergo, apples lower blood sugar levels.

Not so! That is where the Glycemic Index comes in. Its beauty is that it measures the glycemic impact of EVERYTHING in the apple INCLUDING the *alpha-glucosidase inhibitor*.

So, in spite of this glucose inhibitor, apples (depending on variety etc.) still have a GI of 35-45 [7]. This is 'Borderline' by my lights, so I go easy on them. Indeed I do even though I have normal glucose metabolism. Apples put me into a state of hyperglycemia which showed up when out for a run. See: '*Glycemia and Runners' Wall*' page 1. See also: '*GI – Pros and Cons*', [April 2014](#)

Washing Fruit

Q. I can't get organic fruit so I rinse regular fruit, soak it for 20 minutes in diluted grapefruit seed extract and rinse again in filtered water. Now I read that none of these procedures gets rid of pesticides etc. Would it be better to stop eating fruit?

A. While I think it important to wash fruit and raw vegetables (see '*Veggie Wash*' [Oct 2003](#)), I also think it is possible to be too obsessive. Studies show that WASHING OFF the bugs and whatnot is better than trying to DISINFECT them. See '*Myth of a Germ-free world*', [April 2011](#).

Personally we use a soapy veggie wash spray and then quickly rinse it under tap-water. If you can't find a dedicated veggie wash spray, use a 5:1 dilution of a clear washing up liquid (basically they use the same, food-grade, detergent). See '*Simple Veggie Wash is Most Effective*', [June 2008](#).

I tend to be rather relaxed about pesticides – most of them are extracted from vegetables in the first place and our bodies know how to deal with them. See '*Dietary Pesticides 99% Natural*', [Sept 2010](#).

The one area for concern relates to the germs that the plant sucks in through the roots. This was big news when many Germans suffered food poisoning from fenugreek sprouts grown from infected seeds imported from Egypt [8]. See: '*Plants: Internalized Germs*' [May 2011](#).

No amount of cleaning by the unsuspecting German cultivator extirpated the bugs growing within the seeds and in the subsequent grown sprouts.

Even so, get these risks into proportion – you risk your life far more if you get sucked into the sickness factories we call hospitals!

My View? The important thing is to get the fruit inside you and not be OTT about cleansing.

Antioxidants Boost Lung Cancer

Q. Is it good to supplement with antioxidants to help beat lung cancer?

A. Probably not. It has been a puzzle that, while consuming micronutrient-rich food is good, individual supplements seem to make things worse.

Now a study suggests why [9]. The antioxidant vitamin-E does its job quenching free radicals. But guess what? The immune system MAKES free radicals to shoot down cancer cells!

So in this case, the antioxidant supplement cripples the immune system's anti-cancer attack.

Insect Nourishment

Q. *Some Paleo buffs are claiming that insects like termites and locusts were a major part of our ancestral diet and we should be thinking about eating them too.*



A. If we go far back enough in the mists of time – some 70 million years – we find an ancestor, a lemur-like creature (*'Euarchonta'*), for which insects were the staple food.

And he had a digestive system to match. In particular he secreted the enzyme chitinase to digest the insect shell. That's the thing about insects – they have this 'exoskeleton' – an external shell.

Now if nature had designed humans to eat insects on the scale of a lemur, we would secrete chitinase too – but we don't – we lost that ability millions of years ago.

So relax: eating Paleo doesn't mean you must eat large volumes of insects. As I say in *'Paleo – no easy Options'*, [Feb 2014](#), beware of all the fanciful, make-believe interpretations of what it is to eat Paleo.

Having said that, foragers would eat almost anything and, if a tasty insect presented itself, they would certainly eat it. However they would still have to peel the larger ones just as we peel a prawn today.



Witchetty Grub

More commonly, foragers eat the immature insect, for example the caterpillar. In Australia, I was familiar with an Aboriginal delicacy, the Witchetty Grub

which, roasted, tastes like sweet corn. Even Nicole had a go...

Insects are a good source of nourishment and they form a routine part of the diet in many societies today. There is even a move to promote insect consumption in the West as an alternative to beef and pork. See *'Food Scarcity – mini-livestock here we come'*, [June 2008](#)

Continued from Page 1

Morning Sun Keeps off Pounds

It has long been known that people who desynchronize the body-clock – e.g. by regularly working night shifts or crossing time zones (jet lag) – struggle more with obesity, diabetes and other conditions.

The message is to get more natural light between 8 a.m. and noon. At least 20 to 30 minutes but the more the better.

The question remains – how does sunlight make calories disappear? That so far is unknown. But we do know that *'Not all calories are the same'*, [May 2013](#).

My View? There are so many unknown unknowns in nature! This is another piece of the jig-saw leading us to the optimum lifestyle.

It reinforces yet again the principle that we divorce ourselves from our natural origins at our peril.

See also: *'Sunlight Lowers Blood Pressure'*, later.

Continued from Page 1

Glycemia and Runners' Wall

I tried a run again with the same fruit snack on several days.

On other days I ate a low glycemic breakfast of scrambled eggs, grilled tomatoes, mushrooms and onion.

Later, I also tried a snack of low glycemic berries.

Result: during a run, the borderline fruits put me into hypoglycemia every time. The other two meals, not at all.

Moral? This is a graphic illustration of how, unwittingly, we can put ourselves into a state of hyperinsulinemia. Presumably, the borderline fruits had shot my insulin levels up and blocked the release of glucose from fat stores.

Aargh! High insulin levels provoked by hyperglycemia! And I wouldn't have known it without the exertion.

From the Labs

Sunlight lowers Blood Pressure

It has long been noted that people's blood pressure drops in summer months. It has also been noted that it drops the closer one lives to the equator.

10 years ago Dr Martin Feelisch and his team in UK had already found that UV rays increased blood levels of nitrite (nitric oxide). Nitrite is a *vasodilator* – it relaxes blood vessels – so reducing blood pressure.

Their latest study finds that the body stores nitrite in the skin, by a mechanism still unknown. The UV rays release the nitrite into the bloodstream [10].

Interestingly, nitrite in the diet did not increase nitrite in the bloodstream. Also interestingly, the vasodilation had nothing to do with the sun's creation of vitamin D.

Feelisch comments: "Avoidance of sunlight may be a new risk factor for cardiovascular disease."

My View? Hardly a month goes by when we don't discover yet another unsuspected vital activity dependent on the sun. See: *'Morning Sun Keeps off Pounds'* p. 1.

See also: *'Mouthwash Raises Blood Pressure'*, [March 2014](#), where, by killing mouth bacteria, we depress their nitrite production and so increase blood pressure.

Human Society

A highlight from the EHBEA Conference 2014

How the Farming Revolution Allowed Despotism to Arise

Karl Marx observed that, through some quirk of circumstance, a few people get to control the resources of a community. These despots (he called them capitalists) then work the others (he called them 'proletariat') at the minimum wage that he can get away with. The despot creams off the 'surplus value' created by the proletariat.

In contrast, in forager societies, there are no resources to control and it is hard for any one person to impose his will on the others. If there is a bully, the ones bullied either gang up on him or just 'move away'.

In this study, the researchers investigated the transition from forager living to farming communities to find out how despotism could arise and why people put up with it [11].

They find that, with the farming revolution and as communities increase in size, a leader becomes necessary. Then a preference for following a leader can readily evolve when surplus production increases prosperity.

If it is easy for a follower to 'move away' then the leader has to share much of the surplus with followers in order to keep them. This leads to relatively egalitarian groups.

However, as it becomes harder for a follower to 'move away', leaders divert more of the surplus into reproducing their own family. This creates a marked social stratification with a hereditary ruling class.

Finally a civilization (such as the Babylonian) is formed where a

despotic clan rules over a population of serfs.

This dynamic tension between what the leader wants to keep for himself, and what the others will let him get away with, creates a social stratification that is with us to the present day.

See also: '*Social Stratification Begat Male Homosexuality*' [Dec 2013](#)

News Shorts

Australia Debunks Homeopathy

Back in 2005 I reported on a Lancet study [12] which finds that homeopathy worked no better than placebo. '*Harmless Homeopathy*', [Sept 2005](#)
Now a monumental Australian examination of the evidence finds the same thing [13].

My View? Most ailments will clear up by themselves but the user credits the homeopathic remedy.

And then there is the placebo effect. No doubt many users do get a boost from this phenomenon. And that is probably the best argument for homeopathy – it is medically harmless and might help a little.

[Next Month](#): How do Placebos Work?

New Videos

Ugg Foods Information Series



Watch this quirky video-clip with Ugg's resident caveman, Health and Fitness Director George Anderson, telling us why the paleo diet is the best way to combat the fallout from our fast-food, processed living.

<http://youtu.be/ZnTP-Anlihc>

Upcoming Events

<http://bit.ly/bond-event>

ACADEMIC LECTURE

Is Cancer Optional? *Our evolutionary history gives us revolutionary insights for avoidance and remission.*

Date: Fri July 11th at 11:30

At: 5th International Medical Conference RAHMS, Azia Hotel, Paphos, Cyprus. July 6 - 12, 2014

Info: www.rahms-medicine.org/

NOTE: The item on the rise of gluten intolerance promised [last month](#) is postponed to [next month](#).



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



Paleo Harvest Cookbook: Over 170 delicious, Bond Precept conforming recipes www.paleo-harvest.com

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1 European Human Behavior and Evolution Association, Conference 2014. <http://ehbea.com/>

2 Phyllis C. Zee et al. Timing and Intensity of Light Correlate with Body Weight in Adults. PLoS ONE, 2014; 9 (4): e92251 DOI: 10.1371/journal.pone.0092251.

Full text: <http://bit.ly/Bond-science#148>.

3 JAMA Intern Med. 2014 May 12. doi: 10.1001/jamainternmed.2014.1582. Resveratrol Levels and All-Cause Mortality in Older Community-Dwelling Adults. Semba RD1 et al

4 Forbes Magazine <http://onforb.es/1p6CY6v>

5 Whfoods.org <http://bit.ly/1neDb6X>

6 J Med Food. 2010 Dec;13(6):1313-23. doi: 10.1089/jmf.2009.0273. Epub 2010 Sep 27. Varietal influences on antihyperglycemia properties of freshly harvested apples using in vitro assay models. Barbosa AC et al.

7 www.glycemicindex.com

8 Wikipedia: <http://bit.ly/1h9zbFl>

9 V.I. Sayin et al., "Antioxidants accelerate lung cancer progression in mice," Science Translational Medicine, 6: 221ra15, 2014.

10. D. Liu et al., "UVA irradiation of human skin vasodilates arterial vasculature and lowers blood pressure

independently of nitric oxide synthase," Journal of Investigative Dermatology, doi: 10.1038/jid.2014.27, 2014.

11 The transition from leadership to despotism in Neolithic human groups, Simon Powers, Laurent Lehmann, EHBEA 2014. <http://ehbea.com/>

12 Lancet. 2005 Aug 27-Sep 2;366(9487):726-32. Are the clinical effects of homoeopathy placebo effects? Comparative study of placebo-controlled trials of homeopathy and allopathy. Shang A et al

13 National Health and Medical Research Council of Australia. **Full text:** <http://bit.ly/1peMl4f>