



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

Bond-paleo Health: Bowled over! Nicole's Blood-work. **Evolutionary Misfit:** Fat Mom – Childhood Leukemia. **Paleo-conforming Restaurant:** Chris Burt – Paleo Chef. **Primal Brain Wiring:** Non-individuation of Out-group Faces. **Our Food Supply:** Quorn Protein better than Milk Protein to build Muscles. **Human Behavior:** Maternal Instinct is Female. **News Flash:** Chilies Linked to Dementia. **Our Savanna-bred Psyches:** Grandmother Therapy – Zimbabwe's 'Friendship Benches'. **Our Physical Heritage:** Barefoot Running. **Q&A:** Tomato best Cooked. **Hints:** Fish Roe best for Omega-3; Evening Bath for better Sleep. **Spreading the Word..**

Bond-Paleo Health

Bowled over! Nicole's Blood-work



Enlarge: <http://bit.ly/2m2rW19>

Nicole is a fully fledged Bond-Paleo practitioner and, as we can see from the image above, she is a highly active, fully functioning 82 year-old. She has a very trim BMI of 18.5 for a height of 5'-3" (160cm) and weight of 105lb (7st-7lb, 48.0kg). So far, so good. But what is happening to the parts we cannot see?

In the spirit of scientific enquiry, she recently had her blood tested for the conventional range of vital signs; she also did a specialized test for omega-6/omega-3 status:

Conventional blood-work: Results here: <http://bit.ly/2IDa7iN>. As expected, the overall picture is one of supreme good health. However we did pick up on a few issues: >2

Evolutionary Misfit

Fat Mom - Childhood Leukemia

Children born to obese mothers were more likely to develop cancer in early childhood [1].

The study of nearly 2 million birth records and 3,000 cancer registry records revealed that the fatter a woman was at childbirth, the higher the risk of her child developing leukemia within 5 years. Severely obese mothers – BMI above 40 – had children with a 57% higher risk.

Paleo-conforming Restaurant

Chris Burt – Paleo Chef



Enlarge: <http://bit.ly/2INfLig>

On a recent visit to England, I revisited the Mytton & Mermaid Hotel [2] in Shropshire. This was where I was a judge for the Paleo Products Awards in 2018. I met up again with Chris Burt, the resident master chef and also a Paleo judge.

The son of diamond-industry expatriate parents, Chris was brought up in Sierra Leone, Ghana and Gambia. So Chris's cooking is partly influenced by West African cuisine. For the last 10 years he has been a committed Paleo practitioner, with a heavily meat-oriented stance.

His menu at the Mytton & Mermaid artfully combines Paleo dishes with conventional dishes to suit all >2

Primal Brain-wiring

Non-individuation of Out-group Faces

In *In-Group, Out-Group, Deadly Harvest*, [ch 8](#), page 197, I describe how: "A stranger (by definition, from an "out-group") is a threat. If a stranger is on your territory, he is probably up to no good." And that the eminent geographer, Jared Diamond, says of the transition to cities: "People had to learn, for the first time in history, how to encounter strangers regularly without attempting >3

Our Food Supply

Quorn Protein better than Milk Protein to Build Muscles

"Mycoprotein", the protein-rich food source that is unique to Quorn products, stimulates post-exercise muscle building **TWICE** as much as milk protein [3]. So finds a University of Exeter study on healthy trained young men.

My View? I have slammed milk protein in the past, see: **Body-Building & High Protein Drinks**, [Feb 2013](#) [4] so of course, Quorn, being made from plants (a fungus) is much preferable. Moreover, compared to animal sources it has a much reduced carbon and water footprint. It is high in protein and fiber, and low in fat, cholesterol, sodium, and sugar [5]. See also: **Quorn comes to America**, [May 2002](#) [6]

Human Behavior

Maternal Instinct is Female

The hormone oxytocin is strongly linked to female behaviours, notably the 'tend & befriend response' when danger threatens. See: **In-group, Out-group, Deadly Harvest**, [ch 8](#), p. 198.

Now researchers have discovered a group of cells in the female brain (and not the male brain) which are activated by oxytocin [7]. The condition of the cells' oxytocin receptors are also related to post-birth depression.

Children of depressed mothers are "At risk for a wide range of cognitive, emotional, behavioral and medical problems". The researchers believe that their discovery will lead to drug treatments that target oxytocin receptors.

My View? >3

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Bowled Over! Nicole's Blood-work

Vitamin D3: this is the sunshine vitamin and, in spite of us living in a sunny Mediterranean island, Nicole's status is at the low end of 'normal'.

On thinking about it, Nicole admitted that she spends almost all her waking hours out



of the sun. The only significant exposure is when she specifically does one hour of sunbathing once a week.

As we have highlighted on so many occasions, sunshine starvation is a major factor in just about all the degenerative diseases from cancer, heart-disease and diabetes to Alzheimer's, MS, osteoporosis and depression. See: **Sunshine & Sunlight**, *Paleo in a Nutshell*, Ch 2, p29 [8]

Total Protein: Nicole's level was off the bottom of the normal range. She admitted that she had been skimping on protein-rich foods – not only calorie-rich nuts and nut products (such as her paleo bread and nut bakeries [9]) but also seafood and poultry – for fear of putting on weight.

Calcium: this is on the lowest range of normal. We are not worried by this from the bone-health point of view – Nicole has the bones of an ox – See **Stunning Bone Health**, *Oct 2016* [10].

But, since calcium fulfills a vital role in many biochemical reactions, it would be good to get the level up. I suggested that Nicole solve both the protein and the calcium insufficiencies by consuming sardines, canned salmon or even whitebait ([last month](#)) which, since one eats the bones, are rich in calcium.

Estradiol: sharp-eyed readers will have seen that Nicole has the female hormone levels of a pre-menopausal woman. That's the HRT kicking in...

[Next month](#) [11]: Nicole's Omega-3/Omega-6 status.

News Flash

Chilies linked to Dementia

In **Herbs & Spices**, *Deadly Harvest*, [Chapter 5](#), page 116 [12], I set out how hot spices like chili peppers are not human food, our bodies don't

know how to handle them, and they are a factor in a range of illnesses from leaky gut and irritable bowel to acid reflux, allergies, and colon cancer.

Now a Chinese study on adults over 55 who consumed 50g of chilies and more per day had **DOUBLE** the risk of dementia and **DECLINE** in memory [13].

My View? This is retrospective study over 15 years and can only show correlation and cannot prove causation. Nevertheless, it is easy to imagine that leaky gut (for example) could readily lead to brain damage.

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Chris Burt - Paleo Chef

...tastes. For example, his venison pie is served with the crust separate so that a purist can avoid eating it.



<http://bit.ly/2kFzJvk>

Other items on the menu, all deliciously and attractively garnished include bone marrow, wild boar burger, roast duck, and 'West African Mutton Chophouse' (below)



<http://bit.ly/2m3uYMj>

I would not normally eat mutton (not a good fatty acid profile (see **Feeding Sheep Right**, [Feb 2015](#) [14], but the dish is beautifully presented and we honour the skills of the chef.

The full English breakfast menu, in addition to the usual eggs, sausage (Maynard's Farm), bacon etc, also includes 'black pudding' whose main ingredient is pig's blood.

There is no way that I would normally eat pig's blood (I was brought up a vegetarian after all!), but this is very



<http://bit.ly/2IIRAlj>

Paleo – foragers make a fetish of drinking the blood of their prey – and, in the modern form of a small section

of salami-like sausage, was flavorful and easily swallowed.

Of course the dishes include the usual range of plant foods with some unusual features. The baby carrots and baby spring onions both braised with their edible stalks intact were particularly delicious and Paleo.

Spreading the Word: Chris is highly active in his region, participating in food festivals, where he hosts cookery schools, does chef demonstrations, and works with "free-from" producers. At Ludlow Food Festival [15] – he concentrates on the game fair and "grand designs", always focusing on paleo dishes that are very low or zero starch & sugars; see – **More about Carbohydrates** [last month](#) .

Chris is also an enthusiastic Twitter user, contributing daily updates on his latest doings and dishes. Follow him on: <https://twitter.com/chrisburtchef> (@chrisburtchef).

My View? Dedicated Paleo restaurants struggle to survive, so Chris is to be applauded for his successful restaurant operation and active promotion in the locality.

Perhaps his secret is to smuggle in seemingly conventional dishes to the general public without mentioning 'Paleo'. But Paleo-buffs can have the dish readily converted into a conforming one.

Our Savanna-bred Psyches

Grandmother Therapy: Zimbabwe's "Friendship Benches"



Friendship Bench: <http://bit.ly/2kr9d8Y>

In **Childhood**, *Deadly Harvest*, [Chapter 8](#), page 218 [16]. I wrote:

"...grandmothers played a vital role in the survival of humanity. [17] Grandmothers are strongly programmed to nurture their grandchildren."

Now, it seems, they are good at nurturing adults too. Zimbabwe is a poor benighted country suffering

terribly from corrupt, kleptomaniac and venal government. The people suffer from high rates of mental illness, depression and despair.

In a remarkable venture, psychiatrist Dr Dixon Chibanda instituted the system of 'Friendship Benches' [18], located in public parks, where grandmothers are trained to listen to anyone who comes to them with their troubles. They listen and nod and offer just an occasional word of encouragement [19].

Says Dr Chibanda: "When patients first get to the bench, we use an intervention which we call *"kuvhura pfungwa"* [opening of the mind]. They sit and talk about their problems and the grandmothers help them through it. Those who go to the grandmothers are **FIVE TIMES** less likely to have suicidal thoughts."

My View? This is a remarkable testament to the value of cherishing our human roots and rediscovering the ancient programmed systems that we have lost. Most notably in this case, the stability, wisdom, and comfort, which the grandparent generation is programmed to provide.

Our Physical Heritage

Dr Daniel Lieberman of Harvard University gave a keynote talk at the EHBEA conference, France [20] in [April 2019](#). He is an Evolutionary Physical Anthropologist specialising in how evolution has shaped our physical bodies. I had intended to speak of his lecture's highlights. But then I learned of his book "The Story of the Human Body" [21]. It is rich with even more insights so here goes with the first:

Barefoot Running

Lieberman running in the Kenyan Savanna.

Credit: Alice Reich

Lieberman's studies find that the human frame is exquisitely designed for long-distance endurance running. This enabled hunters to run down a large animal (like a 1 ton kudu antelope) over many hours until it collapsed from exhaustion.

This endurance running feature is a major factor in the survival of the human species. Lieberman wrote a



seminal paper about it published in the prestigious journal, *Nature*, in 2004 [22].

An important adaptation is the form of the foot – in particular the arches. These provide a springing action which **DOUBLES** running efficiency over hoofed animals. Even our closest cousins the chimpanzees and gorillas do not have this facility and struggle to run just a couple of hundred yards.

To illustrate his findings, Lieberman jogs barefoot and runs marathons.

Living in Boston, Mass. he wears "minimal shoes" in the winter but from the spring he



<http://bit.ly/2kN6XJp> runs barefoot: the skin on his soles gradually hardens up over the summer until he can run on almost any surface. See: **Minimalist Shoes Boost Leg & Foot Muscles**, [Nov 2016](#) [23].

Lieberman opines that 'flat feet' are an evolutionary 'mismatch' and that children should go barefoot when possible (or wear 'minimal' shoes) so that their feet, muscles and joints develop properly.

My View? Just so! Moreover, this is not the first time we have met Lieberman, see: **Running: Why the shoes? II**, [Feb 2010](#) [24]. **Foot Strength & Fitness**, [Jan 2015](#) [25]. Personally I have used minimal shoes (image above) for many years.

[Next month](#): More Lieberman Insights.

Questions

Tomato best Cooked?

Q. Is it true that tomato is best eaten cooked so as to get the maximum benefit from its nutrients?

A. Well, yes and no. Tomato has a reputation for being a rich source of the micronutrient 'lycopene'. And the body can absorb a higher percentage of lycopene when tomato is cooked. Is this important? Not as much as some hype makes out. Lycopene is thought to have anti-cancer properties, but nothing conclusive has been found so far and the FDA refuses such health claims [26].

There is some weak evidence that tomatoes can help with triglycerides, blood pressure and "endothelial function" (the membrane that lines the

heart and blood vessels) [27]. But this is tomatoes, and lycopene might not be the only (or main) agent.

Actually cooking is not the only or best way to increase lycopene absorption. Eating tomatoes with fats and oils (like olive oil in a salad) increases uptake by **SEVEN** to **EIGHT TIMES**.

My View? By all means eat tomatoes in all their forms, cooked and uncooked and just let their micronutrients, including lycopene, just work out as they will.

However, tomatoes have a dark side too. They are of the nightshade family and have their ration of lectins and plant toxins that can be harmful. See: **Tomato & Autoimmune Disease**, [Nov 2011](#) [28]. It is always best to eat tomatoes as **RIPE** as possible. See: **Tomato Toxin Tomatine**, [Aug 2012](#) [29]

Continued from Page 1

Non-individuation of Out-group Faces.

...to kill them." Our primal brains are highly attuned to detect strangers.

However, a study from University of California, Riverside, finds that it stops there: we are not hard-wired to detect differences in out-group faces like we are with members of our own race [30] "This process occurs in the earliest filters of our thought process".

My View: The researchers are having to dance around a sensitive subject but they do say that this explains how the cliché about other races: "They all look the same to me" has a basis in our brain wiring.

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Maternal Instinct is Female

My View? As far as we know, post-natal depression was unknown in foragers. There is strong evidence that it is related to lifestyle. As I wrote in **Essential Fatty Acid Connection**, *Deadly Harvest*, [Ch 9](#), p. 256:

"Post-natal depression is 50 times more common in countries with low levels of seafood consumption. Eskimos, when they abandon their traditional, omega-3-rich fish diet for industrial foods, suffer more depression. Another study on Finns, which compared high fish consumers with those who were not, had a similar result [31]."

That's just omega-3 connection, there are surely many other lifestyle links to post-natal depression too. All the more reason for new moms (especially) to live like nature intended.

Hints & Tips

Fish Roe best for Omega-3

Omega 3 fatty acids are present in all fish roe, but especially in the eggs of Atlantic bonito, mackerel, squid, cuttlefish, lumpsucker, hake, and salmon [32].

Interestingly, the roe of whitefish like hake, cuttlefish, and squid are rich sources of omega-3 in contrast to the fish itself which has virtually none.

Meanwhile 100 grams of salmon roe contains over 3.5 grams omega-3, of which 1.5 grams are EPA and 1.8 grams are DHA. This is more than in salmon fillet.

Greeks make a dip from fish roe called "Taramasalata". If made the traditional way, it is up to 40% fish roe (the rest is almond paste, plus herbs and spices) – so that's OK. But beware of low-grade, commercial, taramasalata

made with bread filler and dyed bright pink.

My View? It is quite hard to eat much fish roe at one go so just think of it as a useful adjunct to your normal fish oil intake.

Evening Bath for Better Sleep

In **Insomniac Tip from Prof. Walker, March 2019** [33], he advises to splash water on the face and hands before going to sleep.

Now a study finds that taking a warm bath some 90 minutes before going to bed significantly improves sleep [34]. This is not cold water – temperatures are 104°F to 109°F (40 to 42.5°C).

The bathing also increased the speed of falling asleep by 10 minutes.

All this is a little counter-intuitive, since the body has to dump heat from the core of the body to trigger the sleep reflex.

The researchers explain that the warm bathing stimulates the body's 'thermoregulatory system', causing a marked increase in the circulation of blood from the internal core of the body to the peripheral sites of the hands and

feet resulting in efficient removal of body heat and decline in body temperature.

My View? There is no forager template to support this activity – they had to fall asleep in night chill huddled close to the embers of a little fire. But if this modern trick works, then why not?

Held over for next Month

- Human Species Brain Shrinkage

Spreading the Word

UPCOMING EVENTS: Summer Recess

VIDEOS: Living the way nature intended

<https://youtu.be/HmKmL5oJvNM>

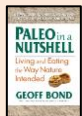
ADVANCE NOTICE: Lecture

Date: Feb 1, 2020

Time: 14:15 – 15:15

Title: The Paleolithic lifestyle for optimum health and fitness. Insights from our evolutionary origins.

At: ARTZ Symposium, Montabaur Castle, nr Frankfurt, Germany.



Paleo in a Nutshell: Geoff's latest work encapsulates, concisely and easily, current thinking on living the way nature intended. www.paleo-nutshell.com



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

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