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

Our Evolutionary Heritage: Sunshine – Dosage for Vitamin D? Stingless Bees – Honey Benefit. **Hints:** Healthiest ways to Cook Fish. **Breaking News:** Nutritional 'Dark Matter'. **Quote:** Dr Jordan Peterson. **Q&A:** Canola oil vs Coconut oil; Side-effects of changing Diet. **Breaking News:** Motherhood Overrides the Brain's Decision-making; High Cholesterol? Eliminate Carbs not Fat; Statistics and Round Numbers; Night-time Protein – Morning Sugar Spikes; Sugar Worsens Brain Function; Getting DHA into the Brain; Youth Obesity – Alzheimer's Risk.

Our Evolutionary Heritage

Sunshine: Dosage for Vitamin D?



Nicole gets her vitamin D3
<https://bit.ly/3hO7vG0>

A well designed and controlled study from the University of Wyoming, Laramie, USA has homed in on the safe amounts of sunbathing that are effective in developing a healthy vitamin D3 response [1].

Vitamin D3 is the version of vitamin D which is vital for our biochemistry; it also goes by the name of 'cholecalciferol'.

The untanned, white-skinned (types II & III - see [2]) participants exposed themselves to full summer sunshine, at midday, for 15 minutes on each side (front and back).

Based in Laramie, the sunbathers were at an altitude of 7,200 feet (2194m), a latitude of 41°N, and dressed in such a way that about 42% of their skin was exposed.

Only one subject showed signs of mild sun over-exposure with "erythema" (reddening of the skin),

The researchers found that this level of exposure was within the limits for safe sunbathing while producing 'significant' improvements in vitamin D3 status.

They also found that ageing reduced Vitamin D3 production by 13% per decade. Even so, > p4.

Our Evolutionary Heritage

Stingless Bees: Honey Benefits



Stingless Bee 'Trigona' [3]
<https://bit.ly/339Hlml>

We all think of honey as coming from the honey-bee (which is definitely capable of stinging!).

But there are some 500 species of **STINGLESS** bee that also live like honey bees and also produce honey.

These bees occur in most tropical and sub-tropical areas of the world. Their honey has developed a reputation for being healthy, even medicinal.

Now an Australian study has nailed a rare and hitherto little known sugar called "trehalulose" as the chief component of this honey [4].

Trehalulose has a low glycemic index, is 70% as sweet as sugar, and is 'acariogenic', which means that it doesn't cause tooth decay.

In diabetic male rats this honey prevented blood-sugar spikes, and prevented increases in total cholesterol, triglycerides, and LDL.

Other studies find that it has antioxidant and antibacterial properties [5]. This honey is also prized for its flavor and is in demand from chefs.

My View? Interestingly, foragers make use of honey from stingless bees in a big way. > p2

Hints & Tips

Healthiest ways to Cook Fish

Seafood is nowadays considered one of the safest – and healthiest – ways to consume "animal matter". However, it only contributes to health if we can preserve its vital omega-3 oils.

The main consideration is to avoid high heat – which destroys the omega-3 fish oils. That means avoiding deep frying and high-heat baking.

Studies find that the best ways are poaching, light grilling, light sautéing, steaming, and microwaving (yes – microwaving! See: **Microwave OK for Brassicas**, [June 2007](#) [6]; **Microwave Ovens OK**, [Oct 2005](#) [7].)

Of course it is also possible to consume raw fish which is common in Japanese cuisine. However, it does carry the risk of catching parasitical (and harmful) gut worms – unlike the helpful hookworms which we speak of in **Hookworm helps MS patients**, [July 2020](#) [8]

Breaking News

Nutritional 'Dark Matter'

Researchers are on the hunt for what they have dubbed 'nutritional dark matter'. In other words, the tens of thousands of nutrients present in microscopic amounts, mainly plant foods, and that are largely unrecorded [9]. They suspect that these unrecorded micronutrients perform > p3

Quote

"Humans are basically chimpanzees driven crazy by self-awareness".
Dr Jordan Peterson, Clinical psychologist, **Personality Lecture 02** [10]

Questions

Canola oil vs Coconut oil

Q. *Why do you like Canola (rapeseed) oil over coconut oil?*

A. Canola (rapeseed) oil has the special characteristic that it is:

a) rich in the omega-3 fatty acid "ALA", so it can help correct the current deficiency in the Western diet (see: **Getting DHA into the Brain**, p.3); **Cooking Canola (Rapeseed) Oil**, [Dec 2010](#) [11]; **Canola versus Flax Oil**, [June 2005](#) [12]; **Fats & Oils**, *Natural Eating*, [Ch 5](#) [13]; **Testing the Cretan Diet**, [Deadly Harvest, Chapter 4](#), p. 94.

b) rich in monounsaturated oil which has no unhealthy impact on the body's biochemistry.

However, the omega-3 "ALA" is fragile and does not withstand high heat very well. We do not recommend high heat cooking (e.g. deep-frying), but if it does occur, olive oil is better.

On the other hand coconut oil is a saturated fat of an unusual kind, not prevalent in our savanna homeland.

Coconut oil is not helpful for human health, see: **Coconut oil – Poison?** [Aug 2018](#) [14], **Coconut oil Overhyped**, [May 2020](#) [15].

However, coconut oil does have the advantage of being solid at room temperature so we sometimes use it in baked goods.

Summary: we encourage Canola (rapeseed) oil for its health-giving properties; we tolerate coconut oil for its useful culinary properties.

Side-effects of changing Diet

Q. *In eliminating grains & beans (gradually) I am experiencing some itchy skin parts. Is this a normal reaction to eliminating foods that might be toxic?*

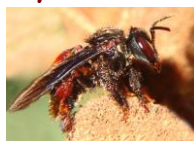
A. It is possible. There are many side effects that can happen when the body has to readjust itself to changes in diet and lifestyle.

Your body has learned to put up with irritants and, now, it has to learn how to live without them again.

Continued from Page 1

Stingless Bees: Honey Benefits

For example, Frank Marlowe [16] found that some 55% of the honey eaten by



the Hadza comes from stingless bees [17].

This is a revelation: in **Is Honey all right after all?** [Nov 2014](#) [18] we pondered the paradox that the Hadza's sizeable intake of high-glycemic honey is incompatible with good health let alone with Paleo principles. However, all this becomes understandable if over half the honey is actually **LOW** glyceic.

So stingless bee honey appears to be a useful addition to our diet – if you can afford it – it currently retails at around \$70/lb (\$150/kilo)!

Breaking News

Motherhood Overrides the Brain's Decision-making

"Cocaine use by new mothers is a serious health problem that has a tragic impact on the mother's ability to properly care for her child, with life-long consequences for both the mother and her child." So opine researchers from Rutgers University, New Jersey [19].

However, there is hope. In experiments on rats, they find that motherhood hormones operate on a part of the mother's brain call the '*infralimbic cortex*'. These hormones changed her **BEHAVIOR**.

They changed her decision-making bias from pleasing herself (with cocaine) toward pleasing the offspring's well-being by stopping the drug.

Say the researchers: "understanding how maternal motivation can provide resistance to drug use is highly pertinent for the development of intervention strategies to prevent drug relapse in new mothers".

My View? It is not surprising that evolution has provided for a shift in the selfishness spectrum from the mother towards the new-born. Indeed it is almost a commonplace to suggest that new mom's personality undergoes major changes with motherhood.

However, these insights still beg the question: what can we do about those rare moms whose selfish pleasure-seeking behavior is **NOT** overridden by motherhood?

High Cholesterol? Eliminate Carbs not Fat.

For decades, people diagnosed with high cholesterol have been instructed to minimize their consumption of saturated fats. But a study published in the prestigious journal *BMJ* found no evidence to support those claims [20].

According to author Prof. David Diamond, University of South Florida, a more heart healthy diet is one low in sugar, not saturated fat. Following a low-carb diet is most effective for people at increased risk of heart disease, such as those who are overweight, hypertensive and diabetic.

Indeed Diamond finds strong evidence that food that raises blood sugar, such as bread, potatoes and sweets, should be minimized, rather than tropical oils and animal-based food.

My View? Join the club! As we have pointed out time and again, the reason most people have high cholesterol levels is due to the high glyceic diet (bread, pastas, cereals, potatoes and sweets) driving a high insulin response which, in turn, causes the liver to over-produce cholesterol.

Statistics and Round Numbers

Numbers are all pervasive in the field of scientific enquiry. In these pages we quote percentages of this or that, likelihoods of having such and such an outcome.

In our field of health science, such numbers are inevitably "rough". But they are rarely reported as such. On the contrary, the vast majority of reports give an unrealistic level of precision.

But it appears that the ordinary punter has a healthy scepticism of this precision. Imagine these headlines:

"A vaccine has been developed that is 91.27% effective." Or:

"A vaccine has been developed that is 90% effective."

A study finds that people believe the 90% figure **MUCH MORE** than the 91.27% figure [21].

The research showed that people find non-round numbers unique and jarring. Because they are not easy to comprehend people regard them negatively.

My View? I too, have a healthy scepticism about over-precise numbers. In the health field most of the parameters are highly subjective and open to flaky measurement errors. It is totally misleading for 'scientists' to give results to quite unwarranted levels of precision.

So one of my important editorial functions is to report studies with suitably 'rounded' numbers. These numbers I estimate after careful consideration of the details published in the scientific article itself.

Night-time Protein: Morning Sugar spikes

Consuming a 63 gram protein snack at 4 am caused a 9 am breakfast to raise blood sugar to damaging levels [22].

This is a surprising result: it goes against the common wisdom which says that, if anything, protein blunts sugar spikes.

The researchers hypothesize that the body doesn't know what to do with protein in the middle of the night so it converts it into sugar. This is still in the bloodstream when a classic glycemic breakfast of cereals, toast etc, just piles on more blood sugar.

My View? It might come as surprise to readers that protein can be turned into sugar. But it sure can under certain conditions.

Here we have a trick of biochemistry for which our ancestors' lives in a state of nature did not prepare us.

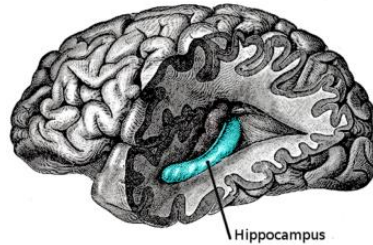
It is a warning to those who do get up in the middle of the night and have a snack. There is no costless way of doing it!

Sugar Worsens Brain Function

A study finds that excessive early-life consumption of sugar changes gut bugs which in turn undermine brain

wiring for mental agility ("neuro-cognitive function") [23].

Translation? Drinking too many sugar-sweetened beverages (SSBs) in childhood makes you dumber in later life.



In particular such sugar intake altered the profile of bacteria in the gut which, in turn, caused changes in the hippocampus (a major region of the brain involved with memory). These changes resulted in impaired memory during adulthood.

Yes! Gut bugs can powerfully modify the workings of the brain!

My View? What more is there to say? Sugar was never part of our evolutionary past, our bodies don't know how to handle it, and it damages us. What a time-bomb we are storing up for the future!

Getting DHA into the Brain

We've known for a long time that the brain has a greedy demand for omega-3 oils and notably "DHA". DHA is normally thought of as a fish oil although the body can make it (with uncertain efficiency) from "ALA" present in vegetable oils like Canola (rapeseed), chia, hemp, and flax.

DHA is an important ingredient in neurons and brain-cell walls. In addition, the brain converts DHA into a wide range of compounds (like neurotransmitters) to regulate many vital brain functions. See: **Brain Health, Deadly Harvest, Chapter 9**, p.251. [24]

We further know that people who have poor brain health with, for example, Alzheimer's, Parkinson's, depression and other conditions, are usually chronically deficient in omega-3 oils.

Researchers have therefore investigated medicating such conditions with omega-3 and notably

DHA supplements. However, the results have not been encouraging.

Now a study finds that this lack of success is probably due to an insufficient dosage of DHA [25]. Typically, such earlier trials used dosages of 1 gram/day or lower.

This study finds that it needs a dosage of at least 2 grams/day of DHA to give enough 'pressure' to get the DHA molecule to go through the blood-brain barrier.

My View? This finding reinforces our tub-thumping in favor of drastically upping consumption of omega-3 oils. I have always recommended at least one portion of oily fish per day.

However, for healthy people, I don't see it necessary to get to the levels used in this study: that was for medication and would mean eating, for example, a large (5oz, 170g) salmon fillet every day.

See also: **Fish Oil/Cognitive Flexibility, July 2015** [26], **The Waterside Ape, Sept 2016** [27], **Fish Oil – Alzheimers & Cognition, June 2017** [28]

Youth Obesity: Alzheimer's Risk

There are many lifestyle factors contributing to an increased risk of developing Alzheimer's. Now the US POINTER study carried out by the Alzheimer's Association fingers obesity at age 20 [29].

It finds that for both men and women, dementia risk in later life increased 1.8 times for those who, at age 20, were overweight (BMI 25-30) and 2.5 times for obesity (BMI 30 and more).

My View? The rise in obesity in the young is truly a time-bomb for their future health and for the huge burden of health care on the nation.

Continued from Page 1

Nutritional 'Dark Matter'

... a vital role in the body's healthy functioning and which have been overlooked until now.

My View? I say again and again that we cannot second-guess the full value of the nutritional content of the food we eat – but we do know that we need to eat **FOOD** to get the full benefit of the nutrients that are in it.

All its nutrients, most of which are unknown, work together like an orchestra to achieve a harmony of expression. See: **Doc Rethinks Food/Disease Links**, [Aug 2010](#) [30]

Continued from Page 1

Sunshine: Dose for Vitamin D?

say the researchers, even a 120-year-old (!) would still be making enough vitamin D3.



On the other hand there were one or two 'non-responders' who had little or no vitamin D response in the blood to sunshine. One subject was obese and his body was probably taking the vitamin D and storing it in his body fat.

The others already had good vitamin D status before their sunshine exposure, so the body just didn't make any more of it.

In conclusion, the researchers say that exposure of this kind about once a week is good enough to maintain

healthy vitamin D status. They also point out that **TANNING BEDS** are 8 times more efficient at producing vitamin D [31] (but that sunshine is free).

What! The researchers have a favourable view of tanning salons? Yes, indeed. See **Sunbeds OK after all**. [Feb 2018](#) [32]. **Tanning Salons are Useful**, [Aug 2004](#) [33].

My View? Notice how the researchers are careful to itemise all the "variables" involved in sun exposure: skin type, latitude, altitude, season, time of day, length of exposure, and even level of obesity.

Indeed, this study was carried out at high altitude where one might expect a higher intensity of UVB rays.

The latitude of 41° is so-called 'moderate'. It corresponds to European hotspots like Rome and Barcelona; and in USA of Chicago, and New York. In the southern hemisphere, all of Australia is closer to the equator as is the North Island of New Zealand.

What are we to make of it? In my view the touchstone is this: get sunshine to the point where reddening starts and then tan up regularly as often as you can.

For those who want to work out exposure using the researchers' "variables", Dr Michael Holick has set out advice in his publication: "*Vitamin D Deficiency*" [34]. We also summarized Dr Holick's advice in: **How Much Sunshine?** [April 2011](#) [35], **Sunshine is Human Food**, [Oct 2003](#) [36], **Tanning is Nature's Dimmer**, [Oct 2010](#) [37]

Spreading the Word

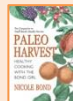
All speaking events are cancelled until further notice

Book Review

Reader *Ellensue Spicer* has posted her review of [Natural Eating](#) on her website:

<https://www.menopause.info/natural-eating-by-geoff-bond/>

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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1 Vitamin D Synthesis Following a Single Bout of Sun Exposure. Chalcraft JR, *Nutrients*. 2020 Jul 27;12(8): E2237. doi: 10.3390/nu12082237.

2 **Skin Type II:** white, fair; blond or red hair; blue, green or hazel eyes; usually burns, tans minimally. **Skin Type III:** cream white, fair with any hair or eye color; sometimes mild burn, tans uniformly

3 José Reynaldo da Fonseca / CC BY-SA (<http://creativecommons.org/licenses/by-sa/3.0/>)

4 Mary T. Fletcher. Stingless bee honey, a novel source of trehalulose. *Sci Reports*, 2020; 10 (1) DOI: 10.1038/s41598-020-68940-0

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10 Jordan Peterson, 2015 Personality Lecture 02: Historical Perspectives - Mythological Representations. <https://youtu.be/9fkZPRAPT1w>

11 <http://bit.ly/eqq9Og>

12 <http://bit.ly/1eoHBYu>

13 <http://bit.ly/2l6jXEL>

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16 See: **RIP Frank Marlowe**, May 2020, <https://bit.ly/36FNrBY>

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