



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

Food Policy: Futuristic Fresh Food Farming; Autism. Mercury Connection. **News Shorts:** Meat Substitutes Revisited; Vitamin C Norms too low. **Our Genetic Heritage:** Book Review – The Genetic Lottery part II. **Hints & Tips:** Filling Half of Kid’s Plates with Plant Food helps Intake; Teeth & Gum Health Revisited. **News Shorts:** High-processed foods harm Memory, Omega-3 helps. Low Protein – more Dementia; Small Gut Flora & Ageing; Covid Jabs – Lower Death Rate. **Did You Know?** Branding the Generations.

Food Policy

Futuristic Fresh Food Farming



<https://bit.ly/3rXwsrr> [1]

For more than a decade, companies have been developing ‘vertical farming’ for growing herbs, salads, spinach, kale, tomatoes, peppers, basil and strawberries.

The photo shows the grow hall at Nordic Harvest, a 14-storey vertical farm on the outskirts of Copenhagen, Denmark. Instead of relying on sunlight and soil to grow its crops, it grows them in a nutrient-rich gel [2].

Meanwhile, the plants soak up light from LEDs and, as with conventional greenhouses, carbon dioxide is pumped in to stimulate growth. Pesticides aren’t needed; water use is virtually zero; fertilizer use is “phenomenally reduced”.

Moreover, such vertical farms can be located near every major city thus hugely reducing transportation.

My View? Clearly this method of production has tremendous advantages, including the fact that it is organic. However the methods are artificial and we ought to know how the nutritional qualities compare with crops produced the conventional way.

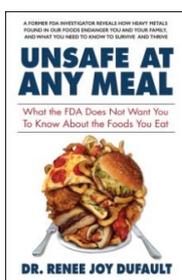
Nevertheless, I am of the view that, if the produce is healthy (and tasty), then likely it is healthy for us too.

Food Policy

Autism/Mercury Connection

Over the years, I have reported on many factors implicated in the meteoric rise of autism. This condition has been connected to: bad gut bugs [3], mother’s gut bugs [4], mothers who smoke [5], high glycemic diet [6], and gluten and dairy allergens [7].

One major authority even argues that mild autism is a useful trait that evolved in our forager past [8].



<https://bit.ly/3oPGLfa> <https://bit.ly/31Xw8y6>

Enter Dr Renee Dufault who whistled on her employer, the FDA, for suppressing her work on the connection between **MERCURY** residues in food and autism. Much of these residues originate from the consumption of High Fructose Corn Syrup (HFCS) because mercury is used in its manufacture.

She cites the work of the Center for Disease Control (CDC) which has twice reported dangerous levels of heavy metals (like mercury and lead) in the USA’s processed baby foods.

It is the steady intake of these heavy metals – along with high-fructose corn syrup (HFCS), Dufault asserts, that has contributed to the increase of autism, ADHD, and various other childhood behavioral problems in recent years. She makes >p 2

News Shorts

Meat Substitutes Revisited

In [Sept 2021](#) [9] we reported on how meat substitutes mostly have a completely different nutritional profile to the meat they replace [10]. That means that those who use them should make up any nutritional deficits. As an example

Nutrition per 100g	Vegan “Salmon”	Atlantic Salmon
Calories	86	142
Sugars	4.8	0.0
Fat	4.4	6.3
Protein	0.3	19.8
Fibre	1.0	0.0
Salt	0.7	0.1

Source: Vegex, USDA, Nandos

These are both healthful foodstuffs but the vegan salmon is almost completely **DEVOID** of protein whilst it has rather more salt.

On the other hand:

Nutrition per 100g	Vegan “Chicken” burger	Grilled Chicken burger
Calories	502	438
Sugars	5.7	4.6
Fat	17.8	8.9
Protein	23.7	35.8
Fibre	4.7	3.1
Salt	2.3	2.2

Source: Vegex, USDA, Nandos

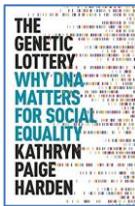
Here the vegan burger has a good protein content but still far less than the chicken burger. It has a lot more fat (and calories) and both have high salt levels. For the usual reasons, we wouldn’t recommend either!

Vitamin C Norm too low

It was WWII in UK and food was scarce. England’s war leaders needed to know: in a lifeboat, > 4

Our Genetic Heritage

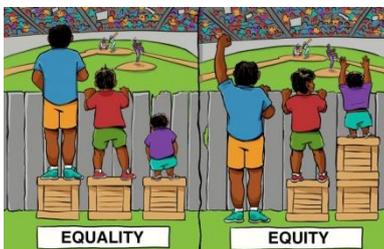
Book Review - The Genetic Lottery, Part II:



Paige: <https://bit.ly/3dQ1gCm>

Book: <https://bit.ly/31OVQFk>

Last Month [11]: we saw how Paige reinforces the scientific findings that many human traits are genetically inherited and determined and that, “well-intentioned efforts to improve people’s lives, without taking into account genetics, fail to make any difference at all, and often make things worse.” She goes on to say: f) This leads on to the notion that, in order to give a ‘leg-up’, sociologists should base their policies on compensating for the inadequacies that disadvantaged people **INHERIT**. She illustrates the point with this image from the Interaction Institute for Social Change:



[12] [13]

This means accepting that **GENETICALLY** some people are, variously: disorganised, improvident, feckless, weak, violent, uncontrolled, and cognitively challenged.

Others are sociopathic: reckless, deceitful, impulsive, aggressive, and without remorse.

Social polices should be designed around these **GENETICALLY DETERMINED** facts, uncomfortable as they may be to some.

It is highly likely, says Paige, that her readership is limited to those who have won the ‘lottery of life’.

To them (us?) she says: “...you might be faced with the realization that many of the things you pride yourself on, your high vocabulary,

your quick processing speed, your orderliness and your “grit”, the fact that you did well in school, are the consequence of a series of lucky [genetic] breaks for which you can take no credit...”

Your success in life is due to: “a series of lucky [genetic] breaks for which you can take no credit...”

And: “what sort of society would you want if you didn’t know what the outcome of the genetic lottery would be?”

My View? Our forager forebears would be baffled by all this navel-gazing. No doubt the full range of personalities was present in the typical forager band. But they just got on with life as it had done from time immemorial.

The sorts of personalities important in Paleolithic times (for men: skill in hunting, muscular protection of wife and children. For women: skill in foraging) are hardly relevant today. No, today, we have grasped a tiger by the tail. We have huge agglomerations of alienated populations living in highly complex societies for which our natures and our personalities were not designed.

So we have to muddle through as best we can. Non-Paleo innate attributes in marketing, public relations and negotiation are the ones that are more successful today. So if you have these traits, then you are a fortunate exception to ancient brain programming.

Meanwhile, Paige (looking over her shoulder at her vehemently anti-genetic, academic colleagues) concludes with the view that: “Equity of outcome should trump equality of opportunity.”

Hints & Tips

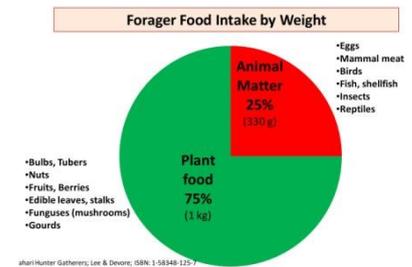
Filling half of kid’s plates with plant food helps intake

Filling half of a child’s plate with fruits and vegetables increases kids’ consumption of vegetables by 41% and of fruit by 38% [14].

This was done by **INCREASING** portions of vegetables and fruits in the child’s meal by 50% and **REDUCING** portions of other foods (e.g. burgers, pizzas, deep-fried burritos) by an equivalent weight.

The researchers say that although the kids’ intake of plant food was significantly increased, the majority still did not reach the USDA minimum for their age-group.

But on average they did better than the average American child where 60% don’t eat enough fruit and 93% don’t eat enough vegetables.

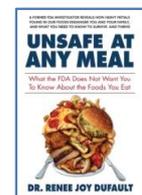


<https://bit.ly/3E93ZBy> [15]

My View? The Paleo rule of thumb, derived from eons of forager evolution, is that plant food should be some 75% of intake by weight. So don’t hesitate to heap up your kid’s plate with plant food – and don’t even **THINK** of serving burgers, pizzas or deep-fried burritos!

Continued from Page 1

Mercury/Autism Connection



... her case eloquently in her book **Unsafe at any Meal** [16], Dufault not only explains the science but also teaches how to live in today’s world minimizing exposure to the intake of food-borne toxic heavy metals. More information here [17].

My View? As we have reviewed, many factors are fingered in the development of Alzheimer’s. Dufault has introduced yet another lifestyle factor: mercury and heavy metal poisoning.

It makes sense to listen to Dufour’s advice to avoid mercury in HFCS. That’s two birds with one stone, for High Fructose Corn Syrup is also a health danger in its own right. See anti-sugar warrior, Dr Robert Lustig in **Fructose Revisited – Part II, June 2016** [18]

For a general view on pollutants and toxins see: **The Best Health Plan is ... Not to Get Sick in the First Place!** [May 2010](#) [19]

Hints & Tips

Tooth & Gum Health Revisited

In **Tooth and gum Health**, [Dec 2020](#) [20], I spoke of how even back in the 1930s, dentist Dr Weston Price explored indigenous peoples around the world and was astonished to find that they had excellent dentition and no gum disease, even though they had no formal methods of maintaining tooth hygiene.

He put down the poor oral health of industrialised peoples, rightly, to the consumption of 'fermentable carbohydrates', that is: sugars and starches.

Those who thoroughly follow the Paleo way of life do indeed find a vast improvement in oral health. Nicole said that it fixed her gum disease, **Food & Ancient Plaque Bacteria**, [Apr 2013](#) [21].

However, today, it is impossible to live **EXACTLY** like a forager used to do, even when excluding fermentable carbohydrates – for example our food is far less chewy and fibrous – and so the question of good oral health care still remains.

Now researchers have studied what does work [22]. Yes, indeed regular brushing is the mainstay for tooth health and manual brushes are as good as power brushes.

On the other hand, for gum health, interdental brushes and water-piks are very effective whereas, probiotics, dietary supplements and most mouth washes are ineffective. The benefits of flossing (believe it or not) are unproven.

Some mouthwashes are positively harmful, such as those containing triclosan (see: **More Triclosan Mischief**, [Sept 2012](#) [23]).

The only mouth rinses shown to reduce plaque were: chlorhexidine gluconate (CHX), cetylpyridinium chloride (CPC) and Listerine.

However, we advise caution in the use of such mouth rinses since they also **DESTROY** the beneficial mouth flora. See **Mouthwash Drawbacks**

[Oct 2019](#) [24]; **Mouth Flora in Evolutionary Perspective**, [Oct 2008](#) [25]

My View? Even those of us on the Paleo mission should still, twice daily, brush our teeth and use interdental brushes or a water-pik. And, perhaps, visit the periodontist a couple of times a year for deep de-scaling just to: "make assurance double sure".

News Shorts

High-processed foods harm memory, Omega-3 helps

Four weeks on a diet of highly processed food led to a strong inflammatory response in the brains of aging rats that was accompanied by memory loss and inattention to danger signals [26].

The deterioration would quickly lead to neurodegenerative diseases like Alzheimer's.

Meanwhile a high intake of the omega-3 fatty acid, DHA, prevented memory problems and reduced the inflammatory effects almost entirely.

The study diet mimicked ready-to-eat human foods that are packaged for long shelf lives, such as potato chips and other snacks, frozen pasta & pizza dishes, and deli meats containing preservatives.

The diet activated powerful inflammatory genes which affected the brain's hippocampus and amygdala.

Say the researchers, "The fact that we're seeing these effects so quickly [4 weeks] is alarming ... consumers should cut down on convenience food and increase consumption of omega-3-rich foods like salmon."

My View? Just so! Eat Paleo-clean and, every day, eat a portion of oily fish (sardine, herring, mackerel, salmon, trout...).

Low Protein - more Dementia

Older people who have a protein-poor diet are more likely to develop dementia. So finds a study from Japan [27].

The amino acid starvation promoted neuro-degeneration, neuronal death, and poor connectivity of neurons. Brain inflammation and deposits of tau plaques were increased. (Tau plaques are implicated in Alzheimer's disease.)

Interestingly these effects were reversed by the administration of seven [28] of the nine essential amino acids.

The researchers suggest that older people might inadvertently cut down on protein intake for several reasons including reduced appetite, reduced chewing ability, and gum disease.

My View? The study doesn't specify what they mean by a 'low protein diet'. However, there is a broad recommendation for older people to up their protein intake to about 1.2g per kg of body-weight. See: **Protein in Focus**, [Jan 2016](#) [29].

For us Paleo eaters, the usual sources of protein are all good: nuts, seafood, eggs, game birds, organic poultry and game mammals.

As you know, we do not advise protein-rich legumes such as lentils and beans. They are not Paleo due to their content of anti-nutrients to which human biology is not adapted.

Indeed soybean, due to its anti-nutrients, is implicated in **ENCOURAGING** dementia. See: **Legumes**, [Deadly Harvest, Chapter 5](#), page 130 [30].

Small Gut Flora & Ageing

Almost without exception, reports on gut bugs refer to studies on the feces from the **LARGE** gut (colon). However the **LITTLE** gut which, after all, is some 20 feet long, also has its own flora (microbiome).

It is of course much harder to obtain samples from the small gut which is why its study has been much neglected.

But now scientists have done an extensive study on small gut flora from subjects aged 18 to 80 [31].

They find that as one ages the diversity of bacteria drops and the ones remaining become more inflammatory.

The situation is more extreme for the vast majority of oldies who have lifestyle diseases like diabetes, cancer, CVD, cholesterol, high blood pressure, and obesity and who, on top of it, are on a multiplicity of medications which also wreck the stability of the microbiome.

My View? This is all very new and is still work in progress. For example,

the researchers didn't take into account diet or lifestyle. They admit that for most people these might have changed with age.

It is clear that living the way we say, free from lifestyle diseases and their fellow medications, we should be maintaining our youthful small gut microbiome well into old age. We will keep watch on this exciting new area of knowledge.

Covid Jabs - lower death rate

America's Centers for Disease Control (CDC) finds that people vaccinated with covid-19 jabs are three times **LESS** likely than the unjabbed to die of other causes too [32]. "The result is bewildering, especially for its scale."

Researchers tried to control for all likely variables: people who are unjabbed maybe a) already sick with something else, b) are less careful about their lifestyle, c) fearful of catching Covid in a doctor's waiting room...

When all is eliminated there is still a large number unaccounted for. Maybe the boosted immune system nixes other conditions too?

My View? Who knows? This is a topic which we trust will, in the fullness of time, be clarified.

Did you know?

Branding the Generations

Marketeers have fun dividing the population into generations and it bedevils scientific studies too. Here is one of their definitions [33]:

Generation	Born	Age
War, pre-war	Pre-1945	77+
Baby Boomer	1945-1965	56-76
Gen X	1966-1979	42-55
Millennial	1980-1995	26-41
Gen Z	1996-2010	11-25

Continued from Page 1

Vitamin C Norm too low

... how much vitamin C did a person need to avoid the deadly disease scurvy?

So the "shipwreck" experiment was carried out at the Sorby Research Institute in Sheffield. The goal of the Sorby investigators was to **PREVENT** scurvy, not to promote best health. Participants were assigned to zero, 10 or 70 milligrams of vitamin C a day for nine months.

Even though two trial participants developed life-threatening heart problems, none of the subjects was permanently harmed.

The Sorby researchers said 10 milligrams a day was enough to

ward off signs of scurvy. Partly based on these findings, the WHO (World Health Organization) recommends 45 milligrams a day. Now a re-analysis of the Sorby data suggests that the WHO's recommendation is far too low [34]. "Robust analyses reveal that 95 mg is required for 97.5% of the population." The study also found that recovery from a vitamin C deficiency takes a long time and requires higher levels of vitamin C.

My View? It is incredible that nutritional norms can still be based on experiments carried out under wartime conditions some 80 years ago. But it is the best we have. The researchers admit that ethics committees would not allow such an experiment to be done today. The new recommendations are based on the same 80 year old experiment, but using modern statistical techniques to extract a more meaningful recommendation.

As for us Paleo practitioners, we need not fear underconsuming vitamin C. Just eat up all your plant food like we say! See: **Filling half of kid's plates with plant food helps intake**, page 2.

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



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1 Credit: Alastair Philip Wiper

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