



The science & art of living the way nature intended

The Bond Briefing

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Briefing: Sunscreen – Unintended Consequences. **Resources:** Darwin's 'Descent of Man' 150th Anniversary. **By the Way:** Prince Philip's Cause of Death. **News Shorts:** Eczema – Restoring Skin Microbiome. **Evolutionary Physical Activity:** How Geoff stays Paleo-fit III. **News Shorts:** Stair-less Homes less Healthy; Parental Burnout in the West; Covid worse if Gut-health Poor; Low Glycemic peas?; Childhood diet has lifelong Impact. **Ancestral Physical Activity:** Persistent Hunting (Daniel Lieberman). **Did You know?:** Huge Virus load in our guts.

Briefing

Sunscreen – Unintended Consequences



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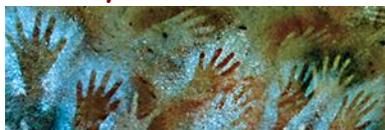
Believe it or not, sunscreens are a very recent invention. I was only conscious of them from the age of about 10 years old when we had B&B holidays on the French Riviera. By that time, two newly developed sunscreens, *Ambre Solaire* and *Piz Buin*, were heavily marketed and their use became widespread. Meanwhile, Coppertone in America was doing the same.

The manufacturers bragged about how, by using these sunscreens, one could spend hours under an intense sun without burning, yet turn a lovely golden brown. Not surprisingly, these products became extremely popular – it seemed that we could both “have our cake and eat it”!

It was only much later that we learned of the dark side: these sunscreens were only filtering **PART** of the sunlight – the part that is called “Ultraviolet B” (UVB). It is the UVB which provokes reddening and burning when exposure becomes too great. But that is UVB's purpose! It is nature's **ALARM** to tell you when you are over-exposed, see **Tanning is Nature's Dimmer** [1]. >p2

Resources

Darwin's "Descent of Man" 150th Anniversary



Darwin's '*Origin of Species*' and his later, even more sensational work, '*Descent of Man*' are foundational documents for our understanding of humanity – and they are my inspirational re-reading from time to time. This year is the 150th anniversary of the publication of '*Descent of Man*'.

In celebration, primatologist and ethologist, Frans de Waal and others have written a paper to review all the interesting developments that have built on Darwin's insights. It is 'open access' and can be seen here: <https://bit.ly/3bLEhYe> [2]

By the Way

Prince Philip's Cause of Death

In **Cliff-edge Mortality and Compression of Morbidity**, [Oct 2016](#) [3], I describe how foragers who survive to old age, remain fully functioning until the last few days of life. There is no 'cause of death'; they pass away from a state of 'general system failure'.

However, most people in the modern world die of something specific: heart attack, cancer and so forth. Rarely does someone just die of 'old age'.

It is even rarer for doctors to certify a death as 'old age' see: **Causes of Death and 'Old Age'** [May 2018](#) [4].

Prince Philip was 99 years old when he died. I was therefore pleased to see that his doctor, > p3.

News Shorts

Eczema: Restoring Skin Microbiome

Why has eczema become so prevalent today? Many scientists finger too much hygiene, see **Allergies: Hygiene Good, 'Old Friends' Germs, Good**, [Nov 2012](#) [5].

When it comes to the skin, we have been oblivious to the idea that, in a state of nature, humans have a microbiome on the skin which we disturb at our peril. I explored this question in: **Is Washing Necessary?** [Sept 2007](#) [6].

Now, in a small study, researchers have experimented with restoring missing 'good' bacteria in a hand cream [7]. They had good remission of eczema. Larger trials are now planned to see if the treatment works for longer periods.

My View? Foragers never washed. Our wartime generation only bathed once a week and just soaped our armpits and private parts on an occasional basis – it didn't do us any harm!

Be that as it may, this is not the first time we have heard of restoring the skin microbiome, see: **A bacterial skin spray in Natural Products Expo West**, [Feb 2019](#) [8].

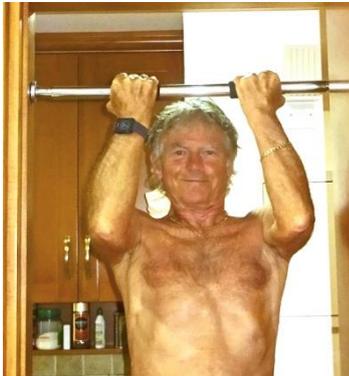
Eczema has also been tied to dysbiosis in the gut, see: **Soil Bacteria nix Allergies**, [Feb 2020](#) [9]. **Baby Formula**, [Nov 2008](#) [10]

Diverse Gut Flora Nix Allergies, [Jan 2012](#) [11].

Fish Oils, Probiotics in Pregnancy reduce Childhood Allergies, [Nov 2018](#) [12].

Evolutionary Physical Activity

How Geoff stays Paleo-fit III
Continued from [last month](#) where I set out my jogging and stretching schedules:



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Strength:

To these I add on alternating days:
a) Squats 2x18, b) Buttocks 1x12, c) Press-ups 2x12, d) Planks 2½ to 3 mins, see [13], e) Chin-ups 2 x 5.

I have a chin-up bar installed in the bathroom doorway so I can do them when the fancy takes me. It is also one of the best ways to improve grip-strength.

I also like to give importance to upper body strength since Nicole and, apparently, women in general, are attracted to this bodily feature more than any other, see Ref [14] and **Strength and Fighting Ability Revealed In Male Faces**, [Dec 2008](#) [15]. See also: **Masculinity and Mating Strategy**, [Aug 2006](#) [16]

Load Carrying:

Finally, wheeled luggage has become ubiquitous and I am the rare traveler who still carries his bags.

I use a shopping basket instead of the supermarket trolley. When golfing I walk the course and carry the 30lb bag. See [17].

So that is the **BASIC** daily 'exercise' routine.

In addition, according to weather and state of the sea, I power-swim for 10 to 20 minutes. This can be quite often in the summer but rare in the winter.

So, even though the rest of my day is largely sedentary, I get in at least 10,000 steps, some strength building, some load carrying, some hill-climbing, and at least 450

minutes per week of aerobic activity. This is three times the minimum recommended (see: [18]). Even so that is 3 times **LESS** than the average forager [19]

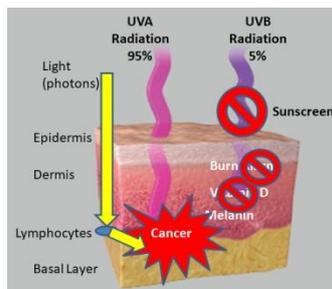
All this is a "best efforts attempt" to emulate as closely as possible that same physical activity as a hunter gatherer, albeit within the straitjacket of the modern world.

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Sunscreen - Unintended Consequences



So, by **TURNING OFF** the alarm, you are **OVER-EXPOSING** yourself to the **OTHER** part of sunlight, the 'bad' "Ultraviolet A" (UVA).



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This is a very insidious matter: UVA rays penetrate deep into the skin and cause damage to cells and to the DNA in cells. This damage shows itself in skin cancers and premature skin ageing.

The skin **CAN** repair damaged DNA: see **Skin's Self Repair Mechanism** [20], **How Skin Resists UV Damage** [21]. However, these mechanisms can be overwhelmed by the massive over-exposure thanks to the **FALSE SENSE OF SECURITY** given by sunscreen.

We are now living through a time when the damage, caused **DECADES AGO**, is now expressing itself in older populations. See **Sunscreen CAUSES Skin Cancer** [22].

A further unintended consequence is this: it is the UVB rays which produce vitamin D in the skin. So, by blocking it with sunscreen, we are threatening severe deficiency of this multi-function vitamin (see **Rickets Girl Wore Sun Factor 50**, [Jan 2011](#)

[23]). Indeed Vitamin D's purposes in human biochemistry are so all-pervasive that it is also classed as a powerful hormone.

I am surprised that there have been no class action law-suits against the sunscreen manufacturers for knowingly causing such harm.

Be that as it may, they have realized this terrible flaw in their products and are now providing "broad-spectrum" sunscreens. These are supposed to filter UVB & UVA in equal measure.

But so what? Even this measure is still duping you into spending more damaging time in the sun while still depriving you of vitamin D and other benefits – for example: **Sunlight Boosts Immune System** [24] and **New-found Factor in Sunlight helps Multiple Sclerosis**, [25].

[Next Month](#): Ingredients of Sunscreen

News Shorts

Stair-less Homes less Healthy
[Last month](#), in **Paleo Fit II**, I talked of the inclusion of stair and hill-climbing in my exercise protocol and to several studies in support of it [26].

Now a study finds that older people who live in bungalows have much faster declines in "Instrumental Activities of Daily Living" (IADL) – such as (without using arms) getting up from a chair, getting out of a bathtub or, indeed, climbing some steps [27]. This phenomenon has been dubbed 'bungalow leg'.

Say the researchers: "The beauty of having stairs at home is that it engages the four muscle groups and keeps the joints strong.

"It works the thighs, buttocks, hamstrings, calves, and ankles. It helps coordination to ensure the feet land properly on the step. Having stiff ankle joints is common in older adults who moved to bungalows."

My View? Foragers did not live in two-storey homes either. But their lifestyle involved giving their legs a good work-out nevertheless.

In our sedentary society we have to seek out opportunities, such as hill- and stair-climbing as an equivalent.

Parental Burnout in the West

In **Childhood, Deadly Harvest**, [Ch 8](#), p 218 [28] I speak of how all the members of the forager band would take part in raising the children. It is a phenomenon called ‘alloparenting’, see: **Childhood: Forager Indulgent or Modern Discipline? Part I**, [Sept 2011](#) [29]

Now a study has looked at the phenomenon of “parental burnout” around the world [30].

Unsurprisingly to us, they find that parents in the West are most likely to suffer burnout.

Say the researchers: “Parenthood in these countries is a very solitary activity, unlike in African countries, for example, where the entire village is involved in raising children.”

My View? Just so. In order to get back to bringing children up in the way that nature intended we should be working to involve the extended family. It means going against the prevailing current, see **Extended Family goes Nuclear**, [Apr 2012](#) [31].

Children also need to feel embedded in a rich context of extended family relationships, see **The “Nested” Human**, [Dec 2017](#) [32] and also **Childhood Social Life**, [Feb 2018](#) [33]; **Grandmothering key to human life-span**, [Feb 1999](#) [34] and Kirsten Hawke’s **Grandmother Hypothesis** [35]

Covid worse if Gut-health poor

A study finds that those with a leaky gut are more likely to suffer more drastically from Covid-19 infection [36]. They find that leaky gut enables “the virus to access the surface of the digestive tract and internal organs. These are vulnerable since they have a target for Covid on their surface”.

Say the researchers: “The pandemic of Covid-19 is bad enough, but the pandemic of damaged gut microbiomes is far more serious now”.

My View? Live like nature intended, avoid a leaky gut, and give maximum resistance to Covid-19. See: **Leaky Gut**, [March 2003](#) [37]

Low-glycemic peas?

It has become a commonplace that peas give sharp blood-sugar spikes and that diabetics (in particular) should avoid them.

In view of this, experiments have been going on for several years to find varieties of pea that are low-glycemic [38].

The latest study has identified a naturally mutated pea that is indeed low-glycemic [39]. It is like this because most of its starch is not easily turned into blood sugar – it is ‘resistant’, see: **Resistant Starch**, [Jan 2014](#) [40].

My View? Watch out for this special pea when it comes on the market. Although it is a legume it is low in antinutrients, it is rich in dietary fiber and can be a useful addition to our vegetable options.

Childhood Diet has Lifelong Impact

Eating too much fat and sugar as a child can alter your microbiome for life, even if you later learn to eat healthier [41]. The study had mice eat the equivalent of a kid’s Western diet. The number and diversity of gut bacteria were significantly impaired. The effect lasted at least 6 years after puberty.

Another study confirms that high levels of added sugar in childhood alter the gut microbiome such that the bacteria “induced cognitive deficits” [42].

In particular the increase in the bacterium “*Parabacteroides*” impaired the development of the brain’s hippocampus. The hippocampus is involved in learning and memory and is vulnerable until it is fully formed in early adulthood, see: **Immature Adolescent Brain Wiring**, [April 2019](#) [43]

My View? By now, we are thoroughly informed of sugar harms and even of its effects on the brain: see: **Fat & Sugar Gut Bug/Brain Link**, [July 2015](#) [44].

About half the excess sugar intake is from soft drinks and the rest is mostly in processed foods. See also **Big Sugar: Scotch’d the Snake not Killed it?**, [Mar 2014](#) [45]

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Prince Philip’s Cause of Death

Sir Huw Thomas, did indeed certify Prince Philip’s cause of death as “old age” [46].

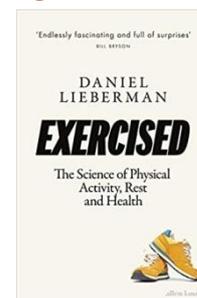
My View? We should all aspire to live in great shape to the very end. And the way to do **THAT** is by living the way our bodies recognize – the way nature intended.

Ancestral Physical Activity

Persistence Hunting



Credit [47]



Professor Daniel Lieberman, whom we have met on several occasions [48], specializes in studying how evolution shaped the human body for physical activity. His latest book is called ‘Exercised’ [49]. I will highlight interesting snippets over the next few months.

In **Paleo-fitness today**, [Feb 2021](#), [50] I speak of how hunters could run down, over many hours, a large animal till it collapsed from heat exhaustion.

Lieberman has published papers about this remarkable ability [51] and, in his book, adds an interesting personal anecdote.

There is a “Man against Horse” cross-country race where men race horses (with riders) over a 25 mile course through the Black Hills of the Arizonan badlands.

Lieberman, who does run marathons, took part in this race a few years ago when he was 52 years old.

He relates how, at the start of the race, the horses all galloped off into the distance until they were lost to view. He and the other runners just kept jogging along at their own pace. Then, at the 20th mile, he passed the first horse which had stopped, exhausted and needed to cool

down. By the end of the race Lieberman had passed 40 of the 53 horses which had started the race. He adds modestly, that his time of 4:20 is 'unremarkable'.

My View? As Lieberman shows, there is evidence that man has been able to hunt like this for at least 2 million years. This is quite unlike our genetic cousins, the chimpanzee and gorilla. They are quite incapable of scampering more than a hundred yards.

Yet that is not the whole story. Hunting like this can only work if the hunter has incredible tracking skills. He has to be able to keep track of the animal even though it is out of

sight and maybe several miles away.

Even after he has made the kill, he is not finished; the hunter then has to find his way home after running 25 miles in a zigzag path! See: **Male/Female Wayfinding Update, last month** [52].

Did you know?

Huge Virus load in our Guts

Researchers have found more than **140,000 species** of virus in our guts [53]. Half of these have never been identified before.

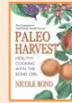
Say the researchers: "not all viruses are harmful but represent an integral component of the gut ecosystem."

Indeed many of the viruses are "bacteriophages" which infect not us but our gut bacteria.

My View? A whole, new, unexplored world is opening up before us. We have absolutely no idea what to make of this data or how to make sensible use of it. All is to be discovered!

It seems that these viruses are a normal feature of human existence. We have to fall back on the basic principle of living like nature intended and trust that our 'virus ecosystems' work out in a healthy way.

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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