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The Science and Art of Living the Way Nature Intended

The Bond Briefing

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Masterclass - Deconstructing Humbug: 5-a-day is a 'Myth' – Part IV. **Food Ideas:** Conforming Bread. **Viewpoint:** Myth of a Germ-free World. **Getting out the Message:** Wheel of Fortune. **Evolutionary Behavior:** Are Good Looks More Employable? **Recipe:** Conforming Bread. **Questions:** Milk or Coffee-Mate? Grapefruit – Pink or White? How much Sunshine? **Hints:** Mouthwash Drawback. **Microwave Ovens:** Analyzing Mercola's Evidence. **New Findings:** How Skin Resists UV Damage; Lithium Fountain of Youth? **Happenings:** Human Behavior and Evolution Society Annual Conference 2011.

Masterclass: Deconstructing Humbug

5-a-day is a 'Myth' - Part IV
In The Daily Mail, a UK tabloid, Zoe Harcombe, a self-proclaimed nutritionist, claims that the drive to eat 5-a-day fruit and veg is a deceit and quite pointless [1].

Continuing from [last month](#):

Zoe: "... As for minerals, there are only 16 of them..."

Me: Wrong. Zoe is clearly just relying on what food nutrient tables decide to include.

Actually, there are at least 21 minerals involved in human health and the list is lengthening. It already includes obscure trace elements such as molybdenum, vanadium and boron [2] - and lithium too! See: '*Lithium - Fountain of Youth?*' Page 3.

Zoe: "...and fruits are good for only one of them, potassium..."

Me: Wrong. Actually, fruits contain many minerals including the trace element boron (see '*Boron for Bones*', [Feb 1999](#)).

Zoe: "... potassium is not a substance we are often short of, as it is found in water."

Me: What! We need an intake of at least 5g potassium/day [3]. See also *Deadly Harvest*, [Chapter 4](#), page 108.

On average, mineral water contains 1 to 5 mg of potassium per liter [4]. So Zoe would have to drink, EACH DAY, at the very least, 250 gallons (1,000 liters) of mineral water to get her quota of potassium! Clearly Zoe can't do the math... **Cont. p. 4**

Food Ideas

Conforming Bread



[Last month](#) we promised a recipe for conforming bread which contains no flour, sugar and other bad things. Good news! It looks good, tastes good and toasts well. Nicole is delighted to bring you this recipe on **Page 2**.

Viewpoint

Myth of a Germ-free World

I was really uncomfortable when, back in the 1970's, manufacturers started putting antibacterial chemicals into hand wash soap. Incredibly, in USA, they even put in antibiotics!

I had two concerns:

- That we would be killing off 'good' bacteria on which our organisms depend to function properly.
- That bad bacteria would become resistant.

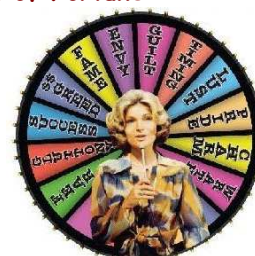
My strongly held view is that we should keep powerful antibacterials – and especially antibiotics – in reserve for the time when we really need them.

Moreover we know that ordinary washing with soap is just as good, often better than, washing with antibacterial agents [5].

So why are we doing this? The answer is, as usual, "Follow the money!" **Cont. page 4.**

Getting out the Message

Wheel of Fortune



During our recent USA tour we were privileged to meet Susan Stafford, the original hostess of *The Wheel of Fortune*.

We explored the possibility of some kind of collaboration, possibly a hard-hitting TV show exposing food industry shenanigans.

See my Amazon review of Susan's uplifting autobiography, *Stop the Wheel I Want to Get Off!* <http://amzn.to/bond-stafford>

Evolutionary Behavior

Are Good Looks More Employable?

Should you include your headshot on your CV? It depends on whether you are male or female and who does the screening [6]. Attractive men received **TWICE** as many interviews as plain men.

In contrast attractive women had **33% FEWER** interviews than those who submitted no photo. Curiously, plain women who submitted a photo had only **20%** fewer interviews.

What's going on? Clue: 96% of HR screening staff were young women! Observe the researchers: "They show well-documented female jealousy to attractive competitors in the workplace".

Food Ideas

Conforming Bread



Yield: Approx 16 slices

3 eggs, large, omega-3
 3/4 cup roasted almond butter
 2 tablespoons olive oil
 2 tablespoons water
 1/2 cup almond meal
 1/2 teaspoon salt
 1 teaspoon baking powder
 1 teaspoon xanthan gum
 olive oil spray

1. In a large mixing bowl beat the eggs with an electric hand-mixer. Mix in the almond butter, olive oil and water.

2. Blend in the almond meal, salt, baking powder and xanthan gum and mix to obtain a smooth consistency.

3. Spray a loaf pan (about 7.5 x 4- inches) with the olive oil and fill with the mixture.

4. Bake in a hot oven (340°F - 170°C) for about 50-55 minutes. Check the center for doneness.



5. Allow the bread to cool down before de-molding.

Comment:

1. The success of the recipe is somewhat sensitive to the exact nature of your particular ingredients. Do not hesitate to experiment a little.

2. The xanthan gum provides the 'stickiness' that gluten would otherwise provide to trap the

effervescence and cause the bread to rise. The same role is provided by chia flour which is naturally 'sticky' (see 'Conforming Bread on its Way', [Jan 2011](#)) and we hope to publish this alternative recipe soon.

Questions

Milk or Coffee-Mate?

Q. I love coffee and have it white with milk and [Coffee-Mate](#) (a 'non-dairy' creamer) in mid-morning and black with sugar after lunch (Italian style). What if I drop the milk and sugar but keep the Coffee-Mate to balance the bitterness?

A. This is a nice challenge to the art of prioritizing! First let's look at Coffee-Mate. I first featured it in my *Darwin Label* column, 'Only the Fittest Survive', in [October 1998](#).

Since then, the ingredients have got even worse [see ref 7]. It is 32% glucose and 65% hydrogenated vegetable oil – so a teaspoon of it (3g) contains 1g of the former and 2g of the latter.

Even for a condiment quantity this is too much so, in a choice between two evils, I would opt for a splash of skimmed milk over that dreaded Coffee-Mate!

With regard to sugar it is, of course, best to eliminate it. However, if you need a crutch, the lesser of two evils is an artificial sweetener (yes really!) See *Deadly Harvest*, [Chapter 6](#), page 154)

Grapefruit - Pink or White?

Q. Is there any advantage in using pink grapefruit rather than white?

A. Yes, a small advantage. Pink grapefruit gets its color from the essential micronutrient 'lycopene'.

Lycopene is quite common in most colored vegetables, notably tomatoes, so you are probably getting plenty already.

Grapefruits – of all colors – are a good food. They are a rich source of rarer micronutrients

such as 'spermidine' a chemical involved in slowing cell ageing.

See also: 'Degenerative Disease and Plant Flavonoids', [May 2003](#); 'Saliva repairs enamel', [March 1999](#)

How Much Sunshine?

Q. I was at your recent talk and liked your message about how sunshine is essential. But how much should we get?

A. The short answer is: as much as you can without burning.

The detail is a little more complicated since the effectiveness of sunshine depends on the latitude, the time of day and your natural skin pigmentation.

To take extremes, Africans toil in the fields under a tropical sun all year long and that works for them.

As a child in London (latitude 54° north), we played outside all year long. In the winter our skins were pale. As the season advanced our skins tanned up, keeping pace with the sun's rays. By the end of the summer we were brown as berries. That worked for us.

However, we confuse things now. We are indoors most of the time and only receive sunshine in sudden bursts when we go on holiday, often to a more severe exposure in a Mediterranean or tropical climate.

In contrast, dark-skinned people now live in gloomy northern cities and suffer much more severely from sunshine deficiency.

In his book *The Vitamin D Solution*, Dr Michael Holick, has developed tables that match skin color with location, season and time of day [8]. For a sample, see my report 'Sunshine is Human Food', [Oct 2003](#), p 5.

Don't forget too that, in a major u-turn, seven major health institutions [9] urge Britons to spend up to 15 minutes in the

midday sun WITHOUT SUNSCREEN. See: '*Rickets Girl Wore Sun Factor 50*', [Jan 2011](#)).

Yes, sunscreen CONTRIBUTES to skin cancers! It does so by:

- removing the alarm, burning
- allowing skin damage to go unhindered
- blocking sunshine's anti-cancer activity!

See: '*Sunscreen and Sun Protection*', [May 2007](#) and '*How Skin Resists UV Damage*', p 3.

See also: '*Sunshine Beats Cancer*', [May 2005](#) and Marc Sorenson's book: *Solar Power for Optimal Health [10]* in the '*Editorial*', [May 2007](#).

[Next Month](#): Vitamins, micro-nutrients, minerals, defined.

Hints & Tips

Mouthwash Drawback

Over our evolutionary history, 'friendly' bacteria in our mouths have adapted to perform important functions for us, see '*Mouth Flora in Evolutionary Perspective*', [October 2008](#).

In my article, '*Breast Milk: Nitrite Boon*', [Dec 2010](#), I spoke about how nitrate is a precursor to nitrite – a molecule performing many vital functions – including making muscles work more efficiently[11].

The kicker? Friendly mouth bacteria start the process of conversion of nitrate to nitrite. If we use powerful antiseptic mouthwashes, we kill the friendly bacteria and block nitrate's beneficial effect.

So far there is no suggestion that conventional tooth-brushing has this drawback.

See also: '*Myth of a Germ-Free World*', page 1.

Microwave Ovens

Analyzing Mercola's Evidence

Continuing dissection of Dr Mercola's evidence in his demonization of microwave ovens (<http://bit.ly/hyYRmh>).

[Last month](#) we saw that most of Mercola's 'references' were not

scientific at all. They were newspaper op-eds, campaign-group diatribes, self-opinionated blogs, and even one fake article.

Quite honestly, this is enough for any reasonable enquirer to reject Mercola's arguments out of hand.

However, Mercola does also have a few authentic scientific citations. So let us look at those too – we might yet learn something.

Mercola: "*In a study of garlic, as little as 60 seconds of microwave heating was enough to inactivate its allinase, garlic's principle active ingredient against cancer.*"

Me: Actually, the same study also went on to say that equivalent baking in an oven has the same effect [12].

Moreover, the study says that allowing crushed garlic to stand for 10 minutes before cooking prevents this loss – a useful tip!

Prioritization: How many of us deliberately microwave garlic? Mostly we have it raw in a salad dressing or as a condiment in stews and roasts – when it does indeed lose some of its potency.

Fine: we know that plant food is best eaten raw, and we make trade-offs when we cook it. See *Sterilizing with Microwave Oven*, [February 2011](#).

Mercola: "*A Japanese study showed that just 6 minutes of microwave heating turned 30-40 percent of the B12 in milk into an inert (dead) form [13].*"

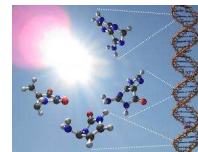
Me: The flip reaction is to say, "So what – who cares about milk anyway!". More seriously, we can point out that 60% to 70% of the B12 is still there – and that's after a massive 6 minutes of microwave heating!

But we don't need milk to get B12 anyway. It's abundant in all animal products including eggs. Anyone who eats the way we say will be getting plenty.

[Next Month](#): Last three citations and wrap up.

New Findings

How Skin Resists UV Damage



Ultra-violet light has the potential to rapidly degrade DNA. So how come ultra-violet doesn't harm it?

In a remarkable piece of research, using the new science of 'quantum chemistry', scientists have discovered that DNA components (picture) defuse the rays and render them harmless [14].

My View? We know that humans evolved with ever-present sunlight. So our bodies must have developed ways to use sunlight safely. And so it does, provided we live like nature intended. See '*How Much Sunshine?*', p.2.

Lithium – Fountain of Youth?

The mineral lithium is an effective treatment for various mood disorders including depression, schizophrenia and bipolar disorder. Now it seems to prolong life too [15].

Researchers studied over a million Japanese living in 18 districts and found that long-term, low-dose exposure to lithium "unambiguously DECREASES mortality".

Where did the lithium come from? It was measured in the tap water. However, plants take up lithium, and most people receive the major part of their lithium intake from vegetables.

How can you ensure a good lithium intake? Eat plenty of vegetables! Some will have a high content and some low, but the average will work out fine. By the way, lithium status can be measured in your hair [16].

As for our 'expert' nutritionist, Zoe Harcombe (page 1), vegetable-borne lithium is one more mineral that, patently, she is ignorant about...

**From Page 1
Masterclass:
Deconstructing Humbug**

5-a-day is a 'Myth' - Part IV

Zoe: "There is far more vitamin A in liver than in an apple..."

Me: So what? This is a mindless non sequitur. For that matter, apple has FAR MORE flavonoids than liver – so there!

Zoe: "The fact is we can't even digest fiber. How can something we can't even digest be so important to us nutritionally?"

Me: That's the whole point! Undigested fiber feeds vital friendly bacteria in our colons. They gobble it up and multiply. See: 'All About Inulin', [March 2011](#).

And so Zoe grinds on, spouting her extraordinary drivel. She has fallen into the trap of what I call 'painting by numbers' [the child's educational toy]. See '2005 Food Pyramid - part 4,' [July 2005](#).

But Zoe's approach is even more flawed: many of her numbers are missing and she muddles up the colors.

Dr Mozaffarian explained this trap well in a remarkable insight (for a doctor!) – that USDA Dietary Guidelines make the same error ([Aug 2010](#)). They focus on an

ever-widening range of nutrients instead of the only thing that really counts: the whole food with all its components working together in mysterious harmony.

What about the *Daily Mail* which published this rubbish? Well, JUST A FORTNIGHT BEFORE they published another article claiming the OPPOSITE: that we should boost our intake of plant food from 5-a-day to 8-a-day! [Ref 17]

But here's the kicker: both articles drew their opposing conclusions from the SAME study! "An ongoing European investigation into diet and health, looking at 300,000 people in eight countries." [Ref 18].

Daily Mail readers can be excused for feeling confused!

**From Page 1
Viewpoint**

Myth of a Germ-free World

... It fits in with the national obsession with killing micro-organisms; it sells product!

But it gets worse. Now many of these chemical are in the environment and polluting our rivers, streams and bodies.

For example, a common anti-microbial chemical 'triclosan' is present in 60% of USA streams

and in 97% of American women's breast milk [19].

Does it matter? Yes. Triclosan is a known 'endocrine disrupter' (it messes with our hormones), notably affecting sexual and nerve development.

Perspective: In our ancient past we didn't wash at all. At that time our organisms were in a stand-off with familiar germs. Now we live in promiscuous proximity with new and belligerent germs; we cannot ignore this fact.

But now we know that all we need to do, for normal day-to-day hand-washing, is to use ordinary soap (see 'Is Washing Necessary?', [Sept 2007](#)).

See also: 'Mouthwash Drawback', page. 3.

Happenings

EVOLUTIONARY BEHAVIOR CONFERENCE

At the end of June I will be attending the annual conference of the Human Behavior and Evolution Society in Montpellier, France. This is at the cutting edge of the exciting field of evolutionary behavioral psychology, an area in which I take passionate interest. Readers will have noticed that my articles are often suffused with these ideas and I look forward to passing on the latest findings.

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