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

From the Labs: Early HRT Helps CVD. **Web News:** Video Clip – The Work Appetite Balance. **Evolutionary Biology:** Chewing Reduces Dementia. **Quote:** Ancient Dental Wisdom. **Advance Notice:** Lecture – Scripps. **Human Genetics:** Evolution of the Gene Pool. Stem Cells the Real Culprit Behind Hardened Arteries. **Lifestyle/Disease Links:** High Starch Diet – Colon Cancer. **Odds & Ends:** Belly Fat Provokes Osteoporosis; Pregnant Moms' Choline Boosts Child's Genetic Resistance; Killer Whale Grandmothers; Gut Worms help Colitis; Injected Antibiotics Disrupt Infant Gut Flora. **Sunshine is Human Food:** Low Vitamin D3/Type I Diabetes; Low Vitamin D/Alzheimer's; Low Vitamin D/Multiple Sclerosis. **Evolutionary Behavior:** Social Psychologists' Intolerance; Ethnically Homogeneous Neighborhoods Healthier.

From the Labs

Early HRT helps CVD

Back in [August 2002](#) ('*Hormone Replacement*') I wrote about the scare concerning HRT. The popular press had hyped up the alleged dangers thrown up by the Women's Health Initiative study [1]. However, anyone closely reading the study would see that it was hedged about with qualifications. Nevertheless, many women (and some doctors) were confused and many women stopped taking HRT.

Now a 10 year Danish study reverses those conclusions [2]. The authors find that women treated with long term HRT immediately after menopause "had significantly reduced risk of death, heart failure, or heart attack, without any increase of cancer, deep vein thrombosis or stroke."

Unintended Consequences

So far so good. However, as a result of the aforementioned Women's Health Initiative study, many of this Danish study's women gave up HRT. They then suffered higher rates of death than those who carried on.

Moral. Even the most prestigious studies are hedged about with ifs and buts. One can't rely on the media to provide a true picture.

Vital Point. In the Danish study, the women began HRT EARLY in menopause... **Cont:** page 4

Web News

Latest Video Clips Uploaded

Evolutionary Medical Anthropology: 10. The Work-Appetite Balance. <http://youtu.be/-T9tP2Qczy4>

Evolutionary Biology

Chewing Reduces Dementia



It never ceases to surprise me how simple biological activities carried out by our ancestors over eons, become intimately interlocked with seemingly unconnected functionalities.

For example, I speak of the link between chewing and the proper formation of jaws. See '*Your Jaws are what you Chew*', [Aug 2011](#).

I also argue about appetite signaling, mouth flora and sugar rushes in '*Juicing – What are Teeth for?*' [May 2004](#).

Now a Swedish study on people aged over 76 years finds that those who have difficulty chewing hard food such as apples had a significantly higher risk of dementia [3]. Well-fitting dentures are as good as natural teeth to chew well.

Brain Blood Flow. The authors put forward the idea that poor chewing reduces blood flow to the brain [4].

I admit this made me sit up – is there anything in such a claim? Sure enough, studies find that proper chewing increases blood flow to the brain by up to 28% [5,6]. The researchers say that thorough chewing of food, or sugar-free gum, "would be very effective in stimulating brain function." **Cont:** page 4

Quote

Ancient Dental Wisdom

The ancient Greeks knew about tooth decay, and Aristotle put his finger on one cause:

"Why do figs, which are soft and sweet, destroy the teeth? Do they, owing to their stickiness, penetrate into the gums and, because they are soft, insinuate themselves into the spaces between the teeth and quickly cause decay?" [7]

True enough: figs did not exist in our Pleistocene homeland, so our teeth and gums didn't have to get used to them.



Our ancestral fruits, such as fig, igwa, ochona, grewia berries (pictured), ivory- and baobab-fruit [8], are NOT soft, sticky and full of sugar. On the contrary, they are fibrous, unsweet and often bitter [9].

That is why we need to be a little careful after eating modern fruits. For the full inside story, see: '*Keep Tooth Enamel Healthy*', [Aug 2006](#).

Advance Notice

LECTURE: Open to public

February 04, 2013
At: Scripps Center for Integrative Medicine, La Jolla, CA, USA.

Time: 07.30 a.m.
Updates:

<http://bit.ly/bond-event>



Human Genetics

Evolution of the Gene Pool

"...in Pleistocene times, high-status men would have many offspring and low-status men few or none.

"The kinds of genes that make for high status in Pleistocene times included those for risk-taking, bravery, strength, aggressivity, heroism, female protection, ingenuity, and hunting skills.

"In the Western world, for over 1,000 years now, genes in low-status men have been spread at the same rate as those for high-status men. No one knows what this means for the future."

So I wrote in *Deadly Harvest*, [Chapter 8](#), p. 212.

Now Dr Gerald Crabtree raises another interesting point about the gene pool [10].

He finds that humans are slowly but surely accumulating mutations that are harmful to cognitive and emotional ability.

He suggests that the rot set in with the agricultural revolution some 11,000 years ago and subsequent city-living. This process weakened the power of natural selection to weed out these mutations.

Dr Crabtree estimates that just in 3,000 years (120 generations) we each have, on average, acquired two or more mutations harmful to mental stability.

But all is not lost. The process is slow and, in the future, says Dr Crabtree optimistically: "we may be able to magically correct any mutation... and thus the brutish process of natural selection will be unnecessary."

My View? "Magical"? That doesn't sound like a plan. Who knows how things will work out – but it won't stop policies like that of Singapore which gave preference to baby-making by university graduates.

Stem Cells the Real Culprit Behind Hardened Arteries

Within the walls of blood vessels are newly discovered STEM CELLS [11]. These stem cells are 'multipotent' meaning that they can develop into many different types of mature cell.

So it is that they not only make artery cells, but can also make nerve, fat, cartilage and bone cells.

In other words, arteries are becoming hard and brittle because they are turning into bone and cartilage! The question is, why would they do that?

Inflammation: The answer appears to be the usual suspect: inflammation. In particular, when the artery wall is damaged and scarred, this triggers the stem cells into misbehaving.

What generates inflammation? High insulin levels, omega-6 oils, some saturated fats, high salt levels, and beer bellies amongst many factors.

But none of this need happen if you just follow the Bond Precepts.

Lifestyle/Disease Links

High Starch Diet - Colon Cancer

A study by Jeffrey Meyerhardt and colleagues at Dana-Faber Cancer Institute, Boston, MA found that colon cancer survivors with a typical "Western" diet, marked by high intakes of refined grains, and sugar desserts, were three times more likely to have a cancer recurrence than those whose diets were least Western [12].

More Starch Worse Risk.

Survivors with the highest dietary levels of glycemic load and carbohydrate intake had an 80 percent increased risk of colon cancer recurrence or death compared with those who had the lowest levels.

Insulin Culprit. The researchers blame high insulin levels which: "increase the proliferation of cells and prevent natural cell-death in metastasized cancer cells."

My View? This is familiar territory. We've known for a very long time that high insulin levels depress the immune system and mess with cell function.

See: '*Cancer*', *Deadly Harvest*, [Chapter 9](#), page 229.

Odds & Ends

Belly Fat Provokes Osteoporosis

Deep belly ('visceral') obesity is a risk factor for bone loss and lower bone strength in men [13].

Say the authors: "It is important for men to be aware that excess belly fat is not only a risk factor for

heart disease and diabetes, it is also a risk factor for bone loss."

The authors don't venture an explanation, but nothing daunted we will offer our own: in a word – INFLAMMATION.

The beer belly is a prolific generator of inflammatory molecules called cytokines which it pumps out all around the body. And inflammation is a sore decayer of those valiant bone-building cells, the osteoblasts.

Pregnant Mom's Choline Boosts Child's Genetic Resistance



Many people are deficient in the nutrient called choline. Choline? It's been known since the 1860s but it was only in 1998 that it was recognized to be essential [14]. So if your nutritional education dates from before that time, you might not know about it.

In fact choline is a kind of B vitamin – and chronic choline starvation increases risk of liver disease, cardio-vascular disease, and cognitive and nerve disorders.

Now a new study finds choline is a vital factor in building healthy DNA in the fetus – notably the epigenetic markers which switch genes on and off [15].

A mom, who has healthy choline status during pregnancy, gives birth to a child whose genes produce less cortisol – a stress hormone. The child will have a lifelong resistance to stress-related illnesses, mental health disturbances, and hypertension.

Why would people be deficient in choline? Because the Western diet focuses on choline-poor foods like pasta, bread, cereals and potato. Vegetarians are particularly vulnerable.

In contrast, eggs, cod, Brussels sprouts, broccoli, shrimp and salmon are good sources.

In other words, eat like we say, and choline intake will work out just fine (DON'T EVEN THINK about taking supplements!)

Killer Whale Grandmothers



Most animals must survive on their own as an adult but in a small number of species, including Killer whales, chimpanzees and elephants, post-menopausal mothers continue to care for their sons even when grown up.

The explanation is akin to the 'grandmother hypothesis' to account for the grandparent generation in humans. See: 'Forager Longevity', [Sept 2011](#).

Killer whale mothers give birth in their thirties but they live for another 50 years.

Remarkably, researchers find that for a male whale over 30, the death of his mother brings a 14-fold increase in likelihood of death within the following year. For daughters, the death risk was increased 3-fold [16].

What is happening? Seemingly the mothers protect their sons when they get into fights and help them with their hunting – but it will take more work to fully understand.

Gut Worms Help Colitis

After a slow start, the idea that gut worms might be a factor in good health is gaining ground.

Now a new study finds that infection with the whipworm *Trichuris trichiura*, significantly reduces colitis inflammation [17].

The researchers think that the worms improve symptoms "by restoring the balance to the microbes that are attached to the intestinal wall."

So this is further confirmation that humans co-evolved with such gut worms to the point where our bodies don't function as well without them.

My View? Even so, I would have to develop Crohn's disease, IBS or similar to even THINK about deliberately infecting myself with these parasites!

See: 'Type I Diabetes, Dairy, Grains, and Antibiotics', [Aug 2012](#)

Injected Antibiotics Disrupt Infant Gut Flora

I fondly believed that it was only oral antibiotics which wiped out gut bacteria. But I now learn that injected antibiotics can be just as devastating.

Babies injected with broad-spectrum antibiotics (Ampicillin, Gentamicin) within 48 hours of birth still had a radically diminished gut bacterium diversity 8 weeks later [18].

In particular, the potentially disease-causing Proteobacterium became dominant. Say the authors, "Altering the gut flora and thus the immune system, boosts the risk of developing in the long term asthma, allergies and obesity."

They go on to say that the focus should be on the use of targeted, narrow-spectrum antibiotics for the shortest time possible.

See: 'Gut Bugs Mature Immune System', [Aug 2012](#)

Sunshine is Human Food

We are still tropical creatures and, if we don't get our sunlight, things go wrong.

There are 5 varieties of vitamin D of which only D2 and D3 are important. The body converts D3 (and D2 less readily) into their active form, the hormone *calcitriol*...

Low Vitamin D3/Type I Diabetes

Deficiency of Vitamin D3 is a factor in Type I Diabetes [19]. This study found no connection with deficiency of vitamin D2.

The researchers say that an intake of just 4000 I.U. (100 mcg)/day is about right.

Our View? No need to micro-manage intake. Just get your sunshine and your body makes the type and amount of vitamin D just fine. **See:** 'Type I Diabetes, Dairy, Grains, and Antibiotics', [Aug 2012](#)

Low Vitamin D/Alzheimer's

Alzheimer's patients who were not using medication had very poor stores of vitamin D2 [20].

Say the authors: "The vitamin was either non-existent or in such low quantities that it could barely be measured."

Low Vitamin D/Multiple Sclerosis

Yet another study, this time on pregnant women, confirms that the

risk of multiple sclerosis (MS) drops markedly with improved vitamin D levels [21].

Famously Eskimos didn't suffer from MS even though their sunshine exposure went from feast to famine. However, they had high intakes of vitamin D3 from their copious seafood diet.

Evolutionary Behavior

Social Psychologists' Intolerance

Says a Dutch study, the vast majority of social psychologists are politically on the left [22]. For them, tolerance, diversity and fairness are important values.

Yet they drop these values in their own profession. They admit to discriminating against conservative colleagues in decisions ranging from scientific reviews to academic hiring. The conservatives hide their views because they correctly perceive the field as hostile to their values.

Say the authors, a lack of political diversity in psychology leads to a number of pernicious outcomes, including biased research and active discrimination against conservatives. They conclude that "ideological bias among social psychologists has serious implications for psychology as a scientific discipline."

My View? This is an interesting example of how, over time, groups self-select to the point where all the members are surrounded by people like themselves.

Not surprising really – that is when we feel most comfortable – and it harks back to our origins where our forebears felt at home in their like-minded, ethnically homogeneous, forager band.

See: 'Birds of a Feather: Cooperation' [Last month](#).

See also: Next article.

Ethnically Homogeneous Neighborhoods are Healthier

African-American seniors living in a county with 50% or more of their own kind were 46% less likely to report heart disease and 77% less likely to report cancer than those who lived in a neighborhood where they are in a minority of less than 25% [23].

Likewise, Mexican-Americans living in a county with 50% or more of

their own kind were 33% and 62% less likely to report heart disease and cancer, respectively.

These are startling improvements which deserve some explanation. The social psychologists who carried out the research suggest that high ethnic density promotes close-knit family structures with their obligations of mutual support. Sounds familiar! I would add another factor – lower stress levels. Just like for our forager forebears, it is stressful to be isolated in an out-group.

See previous article: 'Social Psychologists' Intolerance'.

Continued from Page 1

Chewing Reduces Dementia

In passing they also mention that blood flow to the jaw muscles increased 100%. The sub-text is that this develops a good jaw-line which is judged to be more attractive.

Yet more studies find that increased brain blood flow reduces stress levels [24].

How much chewing are we talking about? It is not necessarily a lot. The main study used 90 seconds of chewing every 15 minutes for an hour.

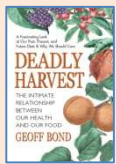
Moral. Choose chewy food (which, as a Natural Eater, it mostly is) and get your teeth or dentures fixed! See 'Get Your Teeth Fixed' [May 2004](#).

Continued from Page 1

Early HRT helps CVD

In the Women's Health Initiative, the women didn't start until 10 years after menopause.

My View? Taking HRT is certainly deflecting the course of Nature. So this must be a decision for the woman to make. The risks of appropriate HRT are not great and against that are the unspoken benefits of wrinkle prevention and rejuvenated sexual function.



Deadly Harvest: Geoff's latest work encapsulates current thinking on lifestyle anthropology. *Deadly Harvest* is an easy read yet is solidly referenced and is a work that doctors can trust.

www.deadlyharvest.com



Healthy Harvest Cookbook: Nicole has created and tested a comprehensive collection of over 90 delicious, fully tried and tested recipes all carefully conceived to conform to The Bond Effect precepts.

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