



The Bond Effect The Bond Effect The Bond Effect

The Science and Art of Living the Way Nature Intended

The Bond Briefing

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Rational, evidence-based comment for an intelligent general public and for all health professionals. Independent of commercial pressure, we say exactly what we think.

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Question of the Month

Water Intake for Child Athletes in Hot Weather

Q. What should be children's water intake, when sports training in hot weather? The consensus seems to be 500 ml in the hour before training, 200/250 ml each 15 minutes during training, and 500 ml after training.

A. Quite frankly it is impossible to be specific – there are so many variables! - size of the child, heat, humidity, the degree of exertion...

Furthermore, I am leery of trying to micromanage the body's processes – doing it by numbers so to speak.

In the past I have questioned the obsession with guzzling water at every opportunity ([Sept 2002](#), [Aug 2003](#)). As kidney expert Dr Heinz Valtin says, "I find it difficult to believe that evolution left us with a chronic water deficit that needs to be compensated by forcing a high fluid intake" [Ref 1].

After the deaths from "water intoxication" of runners in the Boston marathon, Dr Almond found [Ref 2] that some athletes had 11 pints more in them at the end of the run than at the start ([July 2005](#)).

On the contrary, heat-stress tests on athletes show that thirst quickly intervenes long before harmful dehydration occurs [Ref 3]

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Letter of the Month

Lisa Rediscovered Youthful Figure



"I've been on your diet for 15 months, lost 11 lb, and I'm feeling great! With any luck it will inspire other women who are in their 50's to know it's possible." – Lisa Brown, Florida.

Sunshine is Human Food

Latest news flashes on the sunshine factor, vitamin D.

Vaginal Discharge

Vitamin D deficiency is linked to bacterial vaginosis in pregnant women [Ref 4].

Heart Disease & Diabetes

Spending more time in the sun would help older people reduce their risk of getting heart disease and diabetes [Ref 5].

Intensive Care Morbidity

With the patients in an intensive care unit, the lower the levels of vitamin D, the sicker they were. The three with the lowest levels died [Ref 6].

Food Policy

New USDA Food Pyramid 2010

The United States Department of Agriculture (USDA) is preparing its five-year update of its Dietary Guidelines for Americans to be published in late 2010. The review panel is open to comment from interested parties. This is what I submitted:

"I study the origins of the human species and the type of feeding pattern to which we are naturally adapted.

We now know that we are still living in bodies that our evolutionary history designed at that time: our biochemistry, our digestive arrangements and even our mentalities are designed for life back then in the Pleistocene.

We now know that grass seeds (grains) – which are of the monocot group - are not human food. They are glycemic, contain harmful antinutrients and are poor in micronutrients. We know that sugar in all its forms (including "natural" honey and maple syrup) was never a significant part of our ancestral heritage. The rise in consumption of some 4lb per year in 1800 to over 160 lb per year is a disaster for the health of the nation.

We know that milk (and dairy products in general) are only for the young of the species - they are a biochemical and digestive disaster for adult humans. **Cont: Page 4**

Recipe

Nicole has been trying out chia flour (see [last month](#)). After several experiments, this is her first recipe.



Chia Banana Cookies

Yield: 14-16 cookies
(2-inches diameter)

3 tblsp. raisins (1½ - 2 oz)
1 tblsp. dark rum
1 medium banana (about 4 oz),
ripe
1 teaspoon lemon juice
5 tblsp. diabetic apricot jam
2 eggs
2 teaspoons vanilla extract
3 tblsp. olive oil
1¼ cup Chia seed meal (about
2½ oz) - more or less so as to
make a dough-like consistency
½ cup chopped almonds (about
2½ oz)
olive oil spray

1. In a small bowl soak the raisins in hot water for about 10 minutes. Drain the raisins, add the rum and mix well. Set aside.
2. With a fork mash the banana. Mix in the lemon juice and apricot jam. Add the raisins. Set aside.
3. Beat the eggs in a medium-size mixing bowl using a fork or electric mixer. Mix in the vanilla extract and olive oil.
4. Add the Chia meal and blend well to obtain a smooth paste.
5. Add the chopped almonds.
6. Add the raisin and banana mixture.
7. Spray a cookie sheet with olive oil. With a spoon (or by hand)

shape the cookies and lay out on the baking sheet.

8. Bake at 360° F (180° C) for 15-18 minutes. Check for doneness. Store in the fridge.

Comment:

Chia flour gels on contact with liquids including olive oil (see Hints, p 3). This requires new types of recipe and a special technique for mixing it. Chia also has a slightly bitter overtone and we choose ingredients that combine well with it.

In this recipe we sweeten with a diabetic jam which contains the sweetener sorbitol. But you can replace it by different sweeteners like fructose, stevia etc.

Thanks to Homer Hartage, head of Nuchia Foods www.nuchiafoods.com for supplying the chia flour. There is enough to produce more recipes yet!

You can savor nearly 100 recipes in Nicole's cookbook *Healthy Harvest*.

[Info.](#)



Questions

Narcolepsy

Q. I gave *Deadly Harvest* to my 70-year-old brother who suffers from narcolepsy (uncontrollable bouts of sleepiness).

He now reports sleeping better and has less trouble with cataplexy (loss of muscle control brought on by sudden events). Otherwise he is in excellent health.

On a fishing trip he discovered to his delight that he was able to set the hook while fly fishing without the cataplexy causing loss of muscle control.

Any thoughts?

A. Some studies indicate that a "ketogenic" diet - one which is very low in starches - is helpful [Refs 7,8]. Does that sound familiar!

He should align other aspects of his lifestyle to ones the body

recognizes too. For example fresh air, sunshine and physical activity; and, of course, a sleeping habit which reproduces the ancestral one: slowly unwind after sunset with low light levels and relaxing levels of mental stimulation.

Coconut

Q. I have "*Natural Eating*", "*Deadly Harvest*" and your news letter, but have not found information about coconut.

A. I have written about coconut products on several occasions. See "Coconut Oil" [June 2006](#) and "Why Coconut Milk in Recipes?" [March 2008](#).

I wrote about the origins of coconut in *Deadly Harvest*, [Page 64](#). Since humans evolved in Africa, and coconuts in Asia, the two never met until recently. The coconut played no part in our evolution, and so its unusual saturated fat, "lauric acid", is a problem for our biochemistry.

Coconut oil and cream are not health-helpful and I class them "Green-Amber" in *Deadly Harvest*, [Page 153](#). The amounts of lauric acid in coconut milk and grated coconut are small enough for us to use them in modest amounts in recipes.

Porphyria

Q. I have a friend that has porphyria. Any suggestions?

A. There are several sorts of porphyria, some of which are genetic. It is due to various enzymes not operating properly. One major form of porphyria affects the nervous system with symptoms of hallucinations, gut pain and depression; another affects the skin with symptoms of photosensitivity and itching.

For some types of the latter, a high fruit and vegetable diet helps [Ref 9]; for others a high fish-oil intake helps [Ref 10]. Does that sound familiar?

Take comfort from the recovery from madness of King George III. It is now thought he had a form of porphyria.

He suffered with it for many years and then it disappeared as mysteriously as it came. Maybe his chef put salmon on the menu again!

Vegetarians and Vitamin B1

Q. *I am a vegetarian on your program, would I need to supplement with thiamine (vitamin B1)?*

A. No. A wide range of foods contain thiamine, and yeast and most nuts are particularly rich in it.

In my vegetarian childhood, it was an article of faith that we should consume yeast extract like Marmite or Vegemite to "get our B vitamins." These, or yeast flakes, are good to consume if you want to make assurance double sure.

But it is an irony that the bad American diet, with its intake of pork, bacon, sausage and beef, has a high intake of thiamine. See also Burke & Wills in next article.

Cooking Helped Evolution?

Peter Harris, Melbourne, Australia writes:

Q. *Richard Wrangham, primatologist at Harvard argues in his latest book that "cooking contributed to the evolution of human species".*

But some of the specific arguments seem a bit clunky; that Pleistocene humans were 'starving'; that cooked food is higher density and softens food and is therefore better; that 'cooking gives us more energy', that 'cooking creates the risk of theft around the fire place because it is so delicious, which lead to the forming of social rules'; that 'if we ate like a chimpanzee we would starve (who says we were ever eating like a chimp?); that 'Burke and Wills [explorers of Australia] died because they didn't cook their food'; and that we can evolve through culture and that a recent example is a 'lactose digestion gene'.

A. Richard Wrangham has some useful things to say about

primate violence in his book "demonic males" and I quote him in [Chapter 8](#). But I think he is losing perspective in his latest pronouncements.

Burke and Wills died because they didn't eat like Aborigines! Their terrible diet of flour, sugar, salt and dried salt beef ensured they had a fatal lack of micro-nutrients, notably thiamine. See "Vegetarians and Vitamin B1", preceding article.

A band of aborigines rescued the only survivor, John King, and he lived with them for several weeks with them until help arrived. See my review of "The Dig Tree" in newsletters [Jan 2007](#) onwards and [Amazon](#)

It is an incredible lesson: the explorers passed the whole of their 2,000 mile journey through a landscape where Aborigines went about their lives normally and in great health. Yet the explorers died of malnutrition. Contrary to Wrangham's ideas, the only well-fed people in that drama were the aborigines living a Pleistocene lifestyle!

Most of Wrangham's views on cooking are fanciful in my view. Creatures from chimpanzees to baboons have complex social rules without the benefit of cooking for example.

Evolution 'through culture' is not to be wished for. The herders of prehistory had many youngsters die from milk intolerance. The few survivors had bodies with a lactose digestion gene.

But today, who allows a fast-food fattened child, sick with heart disease and diabetes, to die of these conditions?

Our Evolutionary Heritage

Make of Your Gut a Herb Garden - Part VI

[Last month](#) What happens when we kill ALL the colon bugs. This month I look at attempts to colonize the colon with good bugs - and what works.

Probiotics

What about the so-called "probiotics". These are foods or

pills that contain one or both of the following two "good" bacteria: *Lactobacillus* and *Bifidobacterium*. The promoters allege that they will restore the healthy biomass in the colon.

There are number of objections to this. When consumed as a food then the stomach acids kill the bacteria before they can reach the colon. Yogurt is useless even on this score!

Secondly, doctors prescribe probiotic capsules to accompany an antibiotic medication. They are designed to survive the stomach acids and only release their contents in the colon. So far so good: but that is only two species out of the several thousand that our bodies need!

Finally, it is futile to "seed" the colon with good bacteria if we don't provide the conditions for them to thrive - otherwise they simply die off. We have to NOURISH them in the right way. That is where we go next.

Feeding the Good Guys, Starving the Enemy

So what kind of diet sends down the right residues to our guts? Said very simply it is the one that our evolutionary past designed for us. It is one rich in plant food (salads, fruits and vegetables) and low in animal protein.

The wrong kinds of residues come from foods that our bodies do not recognize: all starches (e.g. bread, pastas, potatoes, breakfast cereals...); dairy products, especially milk and, yes, yogurt!; beans and lentils (including soy bean); and a high animal protein diet. It is all there in *Deadly Harvest!*

Hints & Tips

Chia Flour Thickener

Eating the way we do, we used to be at a loss to find alternatives for common thickeners like flour or corn starch. Now we have a solution: chia flour.

Chia flour thickens into a gel in contact with liquids and is ideal for thickening soups and sauces.

Often just a couple of teaspoons will do the trick.

If you cannot find chia locally, check out www.nuchiafoods.com

See Recipe, page 2.

Viewpoint

Alienation of Modern Life

Most of the population today is living like aliens in a dysfunctional environment. They are sucked into ways of life which are seductive yet ultimately destructive.

They trade soul-nourishing natural landscapes for the convenience, buzz and money of concrete cities; they buy gewgaws on credit and live enslaved to debt; they eat and drink addictively and trash their health; they are wage-slaves beholden to a power structure; and they live in a Kafkaesque bureaucracy where the State usurps natural responsibilities and imposes arbitrary, alien ones.

It is not easy to lead life the way nature intended – so much is no longer under the control of the individual. But you now have the route map to leading a more authentic life – and you will feel better for doing so!

Future planning

USA Tour 2010

Continuing Medical Education (CME) lectures for hospital physicians in south California: Feb 10 – Mar 16.

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Question of the Month

Water for Child Athletes Weather

My view is that you should, of course, make sure that water is available and allow the children a water break every 15 minutes. Children's thirst reflexes are usually highly sensitive (it can diminish with ill-health and with age), and you can rely on those to make sure they drink enough.

Food Policy

New USDA Food Pyramid 2010

We know that our biochemistries rely on a modest supply of omega-6 and omega-3 fatty acids in balance. Our bodies do not know how to handle transfats, hydrogenated fats and, with the exception of stearic acid, saturated fats. A dysfunctional fatty acid profile plays havoc with our health.

We also know that dicot plant food which is low glycemic and rich in micronutrients should supply some 75% of the volume of what we eat; animal matter, with a low fat content and with the right fatty acid profile, some 25% of volume.

This is all thoroughly documented in the scientific literature, and summarized in my book *Deadly Harvest*.

But get that past the entrenched food lobbyists!"

Link to the relevant web-page: <http://www.cnpp.usda.gov/DietaryGuidelines.htm> (scroll down to "View Comments").

Upcoming Events

London Antiageing Medical Conference

www.antiageingconference.com

Geoff Bond speaks on:

WORKSHOP: Friday Sept 11, 15:30 to 17:45

Insights from our Evolutionary History: Unlock the vital secrets programmed by our ancient past to retain and restore health, vitality and longevity with age.

PANEL DISCUSSION: Friday, Sept 11. 18:00 to 18:30

LECTURE: Sunday Sept 13th, 10:00 to 11:00

The Latest Insights on Ageing from our Evolutionary Biology: Our ancient past programmed our organisms for a long life lived in good shape to the end. How it went wrong, why we get degenerative disease, and what we can do about it.

PANEL DISCUSSION: Sunday Sept 13th, 13:00 to 13:30

At: The Royal Marsden Education and Conference Centre, Stewarts Grove, South Kensington, London.

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From The Blogs

Every month we discover people writing about us [Ref 11]

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