

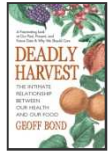


The Bond Effect The Bond Effect The Bond Effect

The Science and Art of Living the Way Nature Intended

The Bond Briefing

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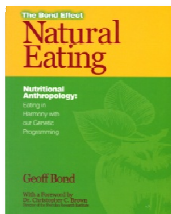
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Spreading The Word: Natural Eating 2nd ed on Kindle. **Deconstructing Humbug:** Analyzing Mercola's Evidence. **Longevity – Bond Protocol:** 99 and Still Going Strong. **Gut Health:** Bacteria Control Immune Cells. **Food Politics:** USDA Pyramid is now a Plate. **Q&A:** Bond Protocol – Can Farms Cope? Making Almond Butter; Micronutrients Defined; Teff Flour; Coconut Flour. **Darwin Label:** Rhubarb Ginger Airline Dessert **Evolutionary Behavior:** Die Young, Live Fast – Evolution of an Underclass. **Fish Oil:** Making more of Fish Livers; Canning and Cooking Fish; How Much Fish Liver Pâté? **Food Safety:** Plants – Internalized Germs.

Spreading the Word

Natural Eating 2nd ed. on Kindle



My first book is now available on Kindle. The English text is the updated and revised version used for the German, French and Russian translations, so it is an advance over the original English print edition. **Link:** <http://amzn.to/natural-eating>

Reminder: other Kindle links – **Healthy Harvest** <http://amzn.to/HealthyHarvest>

Deadly Harvest <http://amzn.to/DeadlyHarvest>

Deconstructing Humbug

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 how Mercola's few scientific references in the dross, don't actually make his case. Here are the last ones:

Mercola: "A recent Australian study[9] showed that microwaves cause a higher degree of protein unfolding than conventional heating".

Me: Is this good or bad? Mercola's tone suggests it is bad, but he offers no proof. The study scientists have no opinion [1]. Cook an egg... **Cont:** p. 4.

Bond Protocol Longevity

99 and Still Going Strong



Edith Morrey, one our greatest supporters, celebrated her 99th birthday recently at a party in Palm Desert, California. There's more about Edith and her secrets for longevity in: [February 2011](#).

Many thanks to Kathy Wade, another loyal supporter, for making Edith's party possible and for sending us the photo.

Gut Health

Bacteria Control Immune Cells
In 'All About Inulin', [March 2011](#), I highlighted the vital role of insoluble fiber in promoting good gut bacteria.

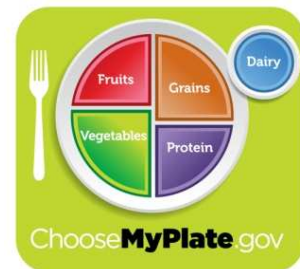
A new study finds that gut bacteria control the immune system's anti-inflammatory response [2]. In another study, good microbes produce butyrate, folate, and biotin, chemicals which suppress gut cells from going cancerous [3].

Says study author Professor Mackay of Sydney, Australia, "We are learning that, from the moment you're born, it's incredibly important to be colonized by the right kinds of gut bacteria. The kinds of foods you eat directly determine the levels of certain bacteria in your gut".

My View? Just so!

Food Politics

USDA Pyramid is now a Plate



In [February 2011](#) I reported on the new five-year update of the USDA's *Dietary Guidelines for Americans*.

It is a testament to the battles behind the scenes that it has only now published its 'MyPlate' graphic to go with them [4].

The pyramid has become a plate. Certainly it brings greater clarity; it also displays a subtle shift in the right direction from USDA's own written Guidelines.

Even so, grains still take up a quarter of the plate. [Dr Rita Stec](#), an assiduous supporter and campaigner, has written an excoriating letter to the New York Times which you can read on my ViewPoint page: <http://bit.ly/Stec-myplate>

Fruits and vegetables take up half the plate. That sets the bar high for most Americans: their intake is only ONE TENTH of that [5].

This raises a troubling question: if Americans' intake of fruit and vegetables increased tenfold (and grain intake reduced to zero), could farming cope? See: 'Bond Protocol: Can Farms Cope?' p. 2. **Cont. page 4.**

Questions

Bond Protocol: Can Farms Cope?

Q. I'm an agriculturist and I ponder the major upheaval if large numbers of people took your advice. If the suitable land (and much would not be suitable or too far from markets) were switched from cereals, milk, sugar and meat to fruit and vegetables, different equipment and many more hands would be required, leading to a big rise in the cost of produce. Would the world be able to afford it?

A. In prosperous countries I see no reason why people couldn't afford it (indeed people afford it now!). Back in 1901 the average American family spent 42% of its budget on food [6]. It spent only 3% of that on eating out.

Food has become so much more affordable. Today, on average, we only spend 13.3% of our budgets on food [7]. Moreover, nearly half of that is spent in restaurants.

I wrote about this aspect at length in: 'Price of Good Health', [July 2000](#)

With regard to the 'world', the question is different. As third-world populations become more prosperous they quite naturally move from consuming starches to meat and vegetables.

No, the pinch point comes as you hinted: the Earth's production capacity is reaching its limits.

As things stand, it would be impossible for everyone on the planet to eat like I say. I have no answer to that. We just have to be grateful that, at this time, it is in our personal power to take control of our lives and live this way.

I've written about it on several occasions. See 'Sustainability of Food Supplies', [April 2004](#); and 'Fish Stock Sustainability', [August 2009](#).

See also: 'Mediterranean diets: are they environmentally responsible?' <http://bit.ly/Bond-science> (Item 2).

Making Almond Butter

Q. Re your recipe for conforming bread ([last month](#)), where we live we cannot find almond butter, can we make it?

A. Yes. If you are starting with raw almonds, blanch them and peel the skins. Or just start with ready-made blanched and peeled almonds.

Either way, then puree the almonds in a blender. You might need to add a little olive oil until you have a buttery consistency. We'll have more detail for you [next month](#).

You can go on to make almond cream and milk, just dilute the butter with water to the desired consistency.

Micronutrients Defined

Q. I'm confused: what is the difference between micronutrients and vitamins and minerals?

A. 'Micronutrient' is the blanket term for the vast range of agents that we need in microscopic amounts in our food. So the term includes vitamins and minerals plus that myriad of compounds known as 'phytochemicals' (plant chemicals).

Phytochemicals include thousands of phenols, terpenes, organosulfides and more.

So when we talk about micronutrients we mean all of these things.

More in sidebar in: *Deadly Harvest*, [Ch 2](#), p.40.

Teff Flour

Q. Is teff flour all right?

A. No, teff is just another high glycemic cereal grass which happens to be grown in Africa.

It is gluten-free and contains some nutrients, qualities which sales-pitches use to entice you to buy it. Don't be taken in.

Coconut Flour

Q. Is coconut flour all right?

A. It appears to be promising. It is made from defatted and dried coconut meat.

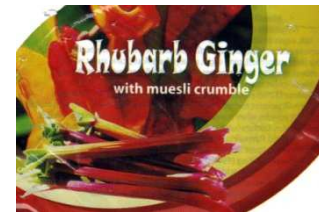
As such it contains little saturated fat and it has a high percentage (34%) of dietary fiber. It has a low glycemic index [8] and is gluten free.

It could be a valid alternative to almond flour in our recipes, and when we get the chance, we'll try it out.

Darwin Label

Only the fittest survive...

Airline Dessert: Rhubarb Ginger



It's almost unfair to take pot-shots at airline meals, but I can't resist telling you about this dessert served to us on a recent British Airways transatlantic flight.

It came in a container like a yoghurt pot. I was curious to know the ingredients, and the peel-off top referred me to the underside:



No, I couldn't read it either. I had to read the label under a strong magnifying glass when I got home.

The transcript of the full ingredient list as well as other information is posted on our Darwin Label pages: [direct link](#).

The upshot is that 92% of this dessert is a witches brew of laboratory chemicals, plus starches and sugars in various disguises.

AVOID (Like we did!)

Evolutionary Behavior

Die Young, Live Fast: Evolution of an Underclass

Evolutionary theory predicts that if you are a mammal growing up in a harsh, unpredictable environment where you are

susceptible to disease and might die young, then you should follow a "fast" reproductive strategy - grow up quickly, and have offspring early and close together before you become ill or die [9].

For a range of animal species there is evidence that this does happen. Now research suggests that humans are no exception.

In England, women from poor neighborhoods are likely to have their babies at an early age and in quick succession.

They have smaller babies and they breastfeed less, both of which make it easier to get pregnant again sooner [10].

Those who perceive their environment as risky or dangerous, and those that think they might die at a relatively young age, were more likely to become mothers while they were in their teens.

"If your dad died of a heart attack at 45, your 40-year-old mum has got diabetes and your boyfriend has been stabbed, you know you've got to get on with it", says one researcher.

Fathers in deprived neighborhoods are more likely to be following "fast" strategies of their own. These include risky activities designed to increase their wealth, prestige and dominance, allowing them to compete more successfully with other men for sexual opportunities.

Says the researcher, "I'm thinking about crime here, and other risky or violent behaviors that we know are typical of men in rough environments."

I write regularly about how modern living arrangements cut across our savanna-bred natures. See *'Procrustean Bed'*, [December 2010](#); and *Deadly Harvest*, [Ch 8](#), p 199 and p 204.

Fish Oil

Making more of Fish Livers

In the bad old days, when rickets was prevalent in our industrial cities, a daily spoonful

of cod liver oil was prescribed for children.

That's because its vitamin D content remedied the deficiency due to the poor diet and lack of sunshine.

Curiously, there were additional benefits that were unknown at the time. The chief of these is its super-high content of omega-3 fish oils.

For this reason, cod liver oil and various cod liver products, such as the pâté, are now back on the menu. (See *'Cod Liver: Load up on Fish Oil'*, [Nov 2010](#)).

But what about liver from other fish species? The fishing industry routinely discards the livers when the fish is gutted. Is this wasteful and should we be using those too?

A recent Spanish study has looked at a range of fish species from the Atlantic and the Mediterranean [11]. It finds that: "... in every species the fish livers were a richer source of fish oils than supplements".

Good, we don't like supplements on principle and they are much more expensive. Maybe we will soon find a range of fish-liver products in the shops.

Canning and Cooking Fish

Does canning destroy the fish oils? No it doesn't. See *'Conserving Fish Oil'*, [April 2004](#). Neither does cooking, according to a number of studies [12].

Canapé Tip



You don't eat conventional bread, so on what do you spread the cod liver pâté? Try using slices of large white mushrooms (above) - or a slice of our almond bread ([last month](#)).

How much Fish Liver Pâté?

You don't need to eat much. A quarter of a can (25 grams) of pâté (as on the three canapés above) provides 3 grams of omega-3 fish oil. That's as good as a small salmon fillet.

It also provides a full daily ration of iodine and vitamin A plus, of course, vitamin D.

Food Safety

Plants: 'Internalized' Germs

At the beginning of the deadly E-coli outbreak in Germany, the authorities exhorted us to wash our fruit and vegetables and peel them where possible. Would this do any good?

As I described last month (*Myth of a Germ-free World*), washing with soap and water does the best job. Nevertheless it is not perfect. Indeed the problem is intractable.

Agro-industry is fully aware - and scared - of the issue. It has mobilized immense resources to find ways to disinfect produce: washing, rinsing, chlorination, sulfur dioxide gassing, and many more. But still bad bugs slip through.

And that's not the whole story. Bacteria and viruses can be sucked INTO the plant through its roots. They are 'internalized' throughout the plant tissues (including its seeds), so no amount of washing and disinfectant will remove them.

The only sure fix is to cook the plant - not good news for salad producers and eaters!

At the time of writing, the German outbreak is traced back to bean-shoots grown from imported beans. It is likely that the E-coli was internalized in the bean under some tropical sun. But no one says so!

Whether you buy local or even grow your own bean-sprouts, our globalized food chain means that we are ever more at our produce suppliers' mercy; of their diligence, or lack of it.

From Page 1
Deconstructing Humbug

[Me] Cook an egg... Protein unfolding is very common. Anyone who boils an egg unfolds the proteins in the egg white. That is what happens when it goes from transparent to opaque. So what's the big deal?

Mercola: "...In 1992, Quan found that microwaved breast milk lost lysozyme activity, antibodies, and fostered the growth of more potentially pathogenic bacteria.

Me: What on earth is anyone doing microwaving breast milk? It seems that frozen breast milk is used in a hospital's intensive care baby unit. The study was conducted to examine this highly specialized situation [13].

Mercola doesn't offer any evidence which applies to everyday life.

Mercola: *One scientist (Kakita 1995) demonstrated that microwaves are capable of extensively fragmenting and destroying viral DNA [DNA of viruses], something that cannot be accomplished by heating alone.*

Me: I would have thought this is a good thing – it kills the bacterium! (Not virus as Mercola incorrectly says).

But Mercola is being disingenuous too. The study finds that it is still heat that does the job – it just

does it better from a microwave oven than an ordinary oven! [14]

Truth in Science

My objective is not to defend microwave ovens – it is to defend truth in science. This is a never-ending battle against the tendency towards humbug and hokum. Just search those words on my website's search box! Zoë Harcombe, [Feb 2011](#), was just the most recent baloney peddler.

Summing Up

Microwaving is an aggressive form of heating but for most foods it is not significant. The main concern is what it might do to certain vegetables but even then, it is still better than boiling, frying, or roasting [15], [[June 2007](#)].

Microwaving is still better than frying and roasting vegetables

Until there is hard logical evidence to the contrary (and we've had 40 years experience now) I consider the microwave a useful tool, albeit with drawbacks, to make our busy lives a little more convenient.

From Page 1
Food Policy

USDA Pyramid is now a Plate

...Now returning to the current American low consumption of vegetables: it gets worse. Most it is potato – and French fries at that. The fruit intake is equally dire – most of it is orange juice!

Dairy isn't on MyPlate at all – it hovers on the edge like an uninvited guest at the wedding. Are they preparing to drop it altogether?

The devil is in the detail as usual. On inspection, the USDA classifies potatoes as a valid vegetable – so Americans can reach the target just by upping their intake of French fries!

Just as retrograde, the USDA allows (beans, lentils, soy etc.) as both proteins and vegetables.

Finally, this MyPlate graphic has nothing to say about the various types of fats nor of the various sugars and sweeteners.

Still a long way to go!

Next Month: The USDA's conflicted role as gamekeeper and poacher.

Web News

Revamped Home Page

We have tidied up the home page on www.naturaleater.com. And trust you find clearer and easier to navigate.

Notably, there is a new site-search facility which is much more effective than the old one.

Happenings

End June: Geoff's on a three week tour in UK and Europe, including the *Evolutionary Behavior Conference*, Montpellier, France.

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