



We have progressed as a species in technical development but our health could benefit from taking a number of steps backward to our origins in the African savannas. Evolutionary lifestyle anthropologist **Geoff Bond** looks at what we can learn from our ancestors' way of living

Health and beauty are often linked. Beauty is the brain's way of saying something is attractive, that this is probably beneficial, that this benefit is probably healthy and so probably "fit for purpose". In one important sense, beauty is health.

What is this "purpose"? It is to be fit for life in our ancestral homeland, the savannas of East Africa.

This big breakthrough came from an unexpected quarter: genetics. Studies of DNA show that everyone is descended from a small group of people who lived just 60,000 years ago (some 2,000 generations) in that area.

Crucially, we are still living with bodies and brains designed for that kind of life. We still have the same physiology, digestive system, biochemistry, and mentalities.

The key question is: what is this savanna lifestyle that has shaped us humans? Our ancestors lived in forager bands of eight

to ten families. Each band had a territory of about 200 square miles. They camped for a while in one place and when they were done, they walked 10 to 15 miles to the next foraging area. Every day the women went off foraging, carrying children on their backs. After a few hours, the women returned carrying some 15 to 20 pounds of food.

The men went off singly: trapping, scavenging or occasionally hunting. They provided about 20% of the band's food supply almost entirely in the form of animal matter. Taken both together, people ate two to three pounds plant food per day and eight to twelve ounces of animal food.

Our foraging ancestors didn't suffer from obesity, cancer, heart disease, diabetes, osteoporosis, arthritis, and all the other diseases of civilisation. They didn't suffer from body-image ailments such as varicose veins, acne, cellulite or crooked, cramped teeth.

Despite eating more cholesterol than Westerners, their blood cholesterol levels are low; their blood pressure remained low even into old age. All these conditions—from major metabolic diseases to the smaller ailments—are due to the mismatch between the lifestyle designed for us by our evolutionary history and the way we live today.

Plant food

Our ancient ancestors were consuming large volumes of a particular kind of plant food rich in micronutrients and fibres: soluble, insoluble and downright inedible. It was strongly alkalising. Our bodies came to expect a high throughput of that kind of

plant food. By micronutrients we mean not only vitamins and minerals but also "phytochemicals"—those tens of thousands of flavonoids, carotenes, terpenes and the like. Our biochemistry came to depend on them. We are not like a cat, which can manage without most phytochemicals. For us micronutrient starvation is a factor in a great many diseases. It even affects attractiveness: our brains are programmed to detect health through complexion. Attractiveness correlates with a healthy complexion which correlates with high micronutrient intake.

We now know that nature designed our bodies to rely on a healthy biomass in our colons, for which a plentiful supply of fibre is vital. Without it, things go wrong—from an undermined immune system to a leaky colon to disturbed biochemistry, which is happening today. Instead of a herb garden, we are creating a toxic sewer, leading to diseases such as irritable bowel, Crohn's, diverticulitis and cancer.

Moreover, this toxic sewer is often backed up by constipation, a major factor in varicose veins. Throughout the history of mankind, humans squatted on their haunches to relieve themselves. The modern practice of sitting on a toilet seat can contribute to varicose veins.

Foragers' food was chewy. Remarkably, new research has found this is important in triggering proper growth of our jaws. Modern soft diets are one reason weak jaws and cramped teeth have become common in the past few decades.

Throughout history, our diet has been low glycaemic and our bodies simply don't know how to handle today's high blood sug-

ar spikes. This is now commonplace, but the corollary is that humanity's diet is low insulinemic, too. Today, most people are in a state of hyperinsulinemia. This is a problem because insulin is a powerful hormone, and when it dysfunctions it creates havoc: it depresses the immune system (allowing cancers to flourish), it depresses bone building, increases histamine, depresses mood, increases blood clotting and has many other adverse effects. It is one of the main reasons we have high cholesterol; it is even a factor in acne.

Origin

Our diet started to go wrong when we began farming around 11,000 years ago. People began to eat grass seed—cereal grains. First, grains are starchy, and starch is just another form of sugar: a slice of toast hits the blood stream faster than a teaspoon of sugar, tipping us straight into the mischief of hyperinsulinemia. The extra sugar goes straight to fatten hips and thighs.

Second, grains are poor in micronutrients. By eating grains, we are starving our body of the tens of thousands of compounds that it expects for it to work properly.

Third, grains contain anti-nutrients, which our bodies do not know how to handle. Gluten is an obvious example; others are lectins, alkyl resorcinols and many more. They all conspire to subtly undermine our health.

There is a tuber that Shakespeare hardly knew which has come to dominate our diets in the last 200 years. It's the potato. Like grains, the potato is just as insulinemic, just as micronutrient poor, and it contains some nasty plant poisons—the glycoalkaloids.

Then there is sugar itself. Hunter-gatherers consumed only about four pounds per head per year of sugar in the form of honey. That was everyone's ration until just 250 years ago. With the advent of cheap sugar, its consumption has rocketed to 160 pounds per head per year in the USA—a 4,000 per cent increase.

We all know that sugar is a menace: it is highly insulinemic, fattening and devoid of micronutrients.

The savanna environment was not particularly low fat for us humans—some 25% of calories—but much more importantly it had a particular fatty acid profile. Two fatty acids were always there, such that our bodies came to depend on them: they are essential and without them we sicken and die.

The body uses them to make powerful hormones called eicosanoids. What one fatty acid's eicosanoids do, the other fatty acid's eicosanoids undo. For example, one increases blood clotting, the other decreases it; one builds bones, the other dissolves them, and so on.

For good health these two fatty acids—the omega-3s and omega-6s—need to be present in equal amounts. Each uses the same machinery to be metabolised. So if one is using it, the other one cannot. Under savanna life, the machinery would oscillate between the two like a see-saw. Today this is significantly unbalanced.

In my lifetime omega-6 oils, typically corn oil, peanut oil, sunflower oil, safflower oil and many more, have come to dominate the diet. They are good for us but not in excess. As a result of this imbalance, we are over-producing a wide range of powerful eicosanoids (prostaglandins series II, thromboxanes, leukotrienes), which are factors in many conditions: acne, arthritis, allergies, cancer, high blood pressure and many more.

Meanwhile omega-3 oils have become flavour of the month: fish oils, of course, plus omega-3 rich eggs and one or two vegetable oils, notably flax and rape seed. We need only a gramme a day. The challenge is to strip out the omega-6 oils to the point where we are also consuming only a gramme a day, because high

absolute amounts of omega-6 blocks any amount of omega3—it breaks the see-saw.

About 2,000 years ago, the herders of north-west Europe developed the odd idea of consuming the secretions from the mammary glands of their lactating animals—they drank cows' milk! These herders, Slavs, Germans, Anglo-Saxons and Scandinavians, put the production of milk and its products onto a formal footing—they invented dairy farming as a major industry.

But consuming milk is not normal human adult behaviour. Foragers were not creeping around under female antelopes suckling their teats! Indeed, dairy consumers represent only about 20% of the world's population. The remaining 80%—Asians, Africans, Latin Americans—not only think milk consumption is grotesque but also it makes them sick.

The milk of the species is for the young of the species. Even human milk isn't right for humans after the age of about four years old. After weaning, we don't have the digestive enzymes or the biochemistry to handle it; our bodies don't need it any more.

Think of it this way: a new-born baby is actually an unfinished fetus; milk is its finishing-food. After weaning, fetus-food consumption creates problems: obesity, cancer, heart disease, colitis, allergies and acne.

Good food

Think of a blank food pyramid. Down at the bottom layer, instead of all the breads, starches, pastas and breakfast cereals that the authorities want us to consume, we have low-starch, raw plant food. Following it is quite easy—one big salad every day, using all the usual ingredients we think of as salad vegetables.

Next layer up we have low-starch vegetables. These are the usual vegetables with the exception of the potato. We should also go easy on sweet potato, carrots and peas.

Next layer up we have low glycaemic fruits. Fruits in our ancestral homeland were much less sugary than most of the fruits we have today, and so we have to navigate that. However, most berries (strawberries, blueberries, raspberries) are low glycaemic and conforming. They are also micronutrient powerhouses. We should go easy on sugary fruits such as pineapple, mango, melons, and so on.

Next layer up we have good proteins. All tree nuts are OK; all seafood is fine, particularly the oily fish; omega-3 rich eggs are fine—but the most conforming eggs come from hens that have been scratching around a farmyard.

Most poultry is fine: wild game such as pheasant and grouse, also duck, goose, and turkey. Do avoid battery chickens—their fatty acid profile is terrible.

Exotic meats such as venison, goat, crocodile, ostrich, and caribou are good. Most animal matter is acceptable, so long as it isn't beef, lamb or, especially, pork. These red meats, as farmed,

have high saturated fats such as palmitic acid and myristic acid. These fats were rare in our ancestral homeland and our bodies never learned to deal with them. Result: disrupted biochemistry, cardiovascular disease, cancers and more.

At the peak of the pyramid we have the good fatty acid profile. Basically balance the omega see-saw and avoid palmitic and myristic acids.

What about celebrations? Even foragers had times of plenty when there would be a gathering of the clans and over-indulgence. A healthy body can tolerate the occasional overindulgence, but do save it for a special occasion like a birthday or Christmas.

When we think of our evolutionary history, humans spent 365 days a year naked under a tropical sun. If that was the case for millions of years, we can be sure that our bodies came to depend on it. Yet now, because of a totally misplaced fear of melanoma, Westerners are suffering from chronic sunshine deficiency.

Sunshine starvation is a factor in obesity, osteoporosis, dementia, depression, MS, diabetes, and many more. It is a factor in cancer including, ironically, melanoma.

A good suntan looks *right*, even attractive. It's our brain detecting healthy sunshine nutrition. Just avoid burning.

Our ancestral women walked three to four miles a day, carrying loads, often with a toddler on their backs. The men walked and ran sometimes eight-plus miles a day.

If this was the physical activity for eons, we can be sure our bodies came to depend on it. Without it, things start to go wrong: obesity, diabetes, heart disease and many more.

So our Pleistocene ancestors were physically fit. Even to our eyes today, physical fitness looks right, even beautiful. Our brains are recognising *fitness for purpose*.

But the physical activity doesn't have to be intense. One study finds that regular golfers on average live five years longer than non-golfers. But apart from sports and recreation, think about other changes—such as working at the computer standing up.

The mismatch between our savanna-bred mentality and the way of life today triggers stresses several times a day that were designed only to be invoked a few times a year. Huge, frequent spikes in stress hormones such as norepinephrine, adrenaline and cortisol are a factor in so many diseases. In particular, cortisol lays down fat, increases appetite and sugar cravings, and depresses satiety.

Adjustments

It is within our power to adjust some of our life choices to be more in harmony with our ancestors' savanna lifestyle. Small changes can be highly effective. Foragers wake up slowly with the dawn. In keeping with that pattern, we can try a sunrise simulator to wake up instead of a stressful alarm clock.

We have to accept some changes might not be in tune with the times. Foragers worked for themselves; they were in control of their livelihoods. Having to hustle for a job, not being in control of your livelihood, being an employee, is unnatural and stressful. Alternatives to this economic development that engulfs most of our livelihoods are to be found now that you are aware what to look out for.

For optimum health and image-appeal, we have to go back to our roots and align the way we live today with the way nature intended. No one can do it for us. We have to take control.

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One big salad a day provides the foundation of a low-starch diet