

Life has a really simple plot: First you're here and then you're not.

(Eric Idle from the Monty Python team)

The desire for longevity has always been with us so that we are 'here' for that much longer.

Greek proto-scientists concocted recipes for ambrosia and nectar that promised immortality and alchemists toiled to discover the 'elixir of life'. They all failed.

Explorers looked for the 'Fountain of Youth' in the Americas, the Sub-Continent and along the Spice Road. None found it.

For us older folks, we see life partners, friends and family members and friends of friends becoming ill, losing their mental powers and vitality and dying in numbers that grow with each year that we age ourselves.

Lifespan and Healthspan

Science now tells us that as an organism, we might come to expect a lifespan (how long we are here) of up to 190 years and a healthspan (how long we remain healthy while still here) to match.

And this is not with intensive medical support for the last four score years and ten but underpinned far better nutrition than is commonly available today that might provide a quality of life that can only be imagined now.

However, we treat food like medicine in which a drug is meant to cure a set of symptoms and we have an obsession with that magic bullet of a food to treat some illness. Think of turmeric, apple cider vinegar, acai, Kakadu plums or whatever then next trendsetting ingredient might be.

There is a (vain) hope that some secret ingredient will make us look younger, feel and sleep better and dramatically, slow the rate at which we grow old. But it is not just one or a handful of magic bullets. It is a whole arsenal we need.

Food, lifestyle and environment

There are the non-nutritional health support factors and we know we need appropriate exercise. Too much (incorrect) exercise can be as bad as a sedentary lifestyle.

From Indigenous cultures we know that high intensity exercise for short durations and some weight lifting for joint and bone strength is the best way to 'breathe off' stored fat. Note that we don't burn fat but simply convert it to CO₂ and water then sweat and breathe it away once our metabolic rate rises over a resting level.

The environment around us needs to be conducive to healthy lungs and minimally challenged immune systems while providing pure water for drinking. Particulates are particularly damaging eg from smoking and other air pollution. Avoiding chemicals in food from farming or processing or in the form of medications and cleaning products is another requirement for a long life.

Our social surroundings need to be supportive too and it is recognized that loneliness shortens lifespan and impacts on our healthspan by increasing the risk of heart attacks and stroke.

The aim is to be socially connected, serene, cheerful, optimistic, happy, confident and satisfied.

Such is life ...

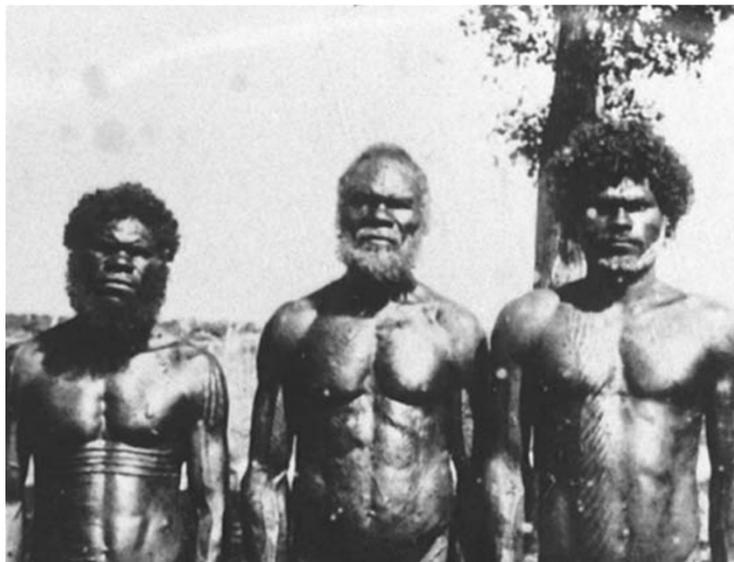
Some modern sciences are starting to reveal insights as to the complexity of ageing.

Think of these:

- the appearance of niggles and aches which turn into constant pain;
- a reduction then restriction and perhaps eventually loss of movement;
- organ and then system dysfunction;
- and eventually death.

Along the way we might lose the appearance and the mental capability of youth, gain weight, lose bone density and suffer a less resilient immune system. Some of us even succumb to genetic conditions programmed in the womb and influenced by our parent's genes and our mothers' diet and lifestyle.

Beyond scientific scrutiny, we can also look for clues for a better lifespan and healthspan in the world's oldest culture, the Indigenous Australians. In traditional times, cancers, ischemic heart disease, hypertension, gout and most of the diseases of nutrition were extremely rare. There are similar findings in Indigenous Africans and Indigenous Americans and probably all pre-agricultural people.



Ageing Revisited

To go through the pain to death progression above, we might expand on the causes of ageing:

Pain is more often due to inflammation and this is now recognized as affecting our whole metabolism. We now treat metaflammation (metabolic inflammation) as its own condition and prevented with anti-inflammatories, antioxidants and supportive minerals, particularly magnesium, zinc and selenium. All of these micronutrients are best delivered from whole food sources rather than as purified and compounded synthetic chemical concoctions in tablets and pills. We evolved with food, not bottles.

Stiffness, primarily muscular but also ocular and aural (sight and hearing) is often associated with calcification of tissues and smooth muscles, within blood vessels or in the eye lens itself (cataracts).

Interestingly, non-dairy drinkers which include our 3 Indigenous groups above and also those of Asian cultures maintain a flexibility of limb, mind and senses far superior to those of us in the Western world today. There are familiar scenes of Asian rice farmers squatting in the paddies or women harvesting wild grass seeds in the Australian Outback or acorns gathered and prepared by Californian Native Americans.

The lack of magnesium (to counteract the calcium overdose) and poor nutritional support of our cells is implicated in these early stages of ageing and before disability and dysfunction become apparent.

We now know that cellular reproduction is ideal when the tails (telomeres) on our replication hardware (RNA and DNA) remain long and flexible. Once telomeres become shorter and less flexible, our cells can become senescent and this can be paired with the degeneration of the cells' energy modules, the mitochondria. All of this is again a consequence of metaflammation, poor micronutrient intake (particularly insufficient antioxidants and good sugars) and a lack of sufficiently intense exercise. A raft of hormones (testosterone, estrogen, insulin, leptin, ghrelin) are also important and loss of their function with ageing is made worse with similar losses of enzymes, co-factors and other biochemical mediators of good cell growth and reproduction.

Then there is the extra-cellular matrix which is the structural webbing that forms our lymphatic system of extra-cellular drainage (and a similar network in our brains which aids toxin removal during sleep) and the molecular bonding between cells that is important in allowing cells to communicate with one another in a process called signaling.

The subprocesses of hydration, oxidation and glycation occur in the matrix (and within our cells) and are probably familiar terms to women exposed to the 'science' of the cosmetics industry.

Younger looking, elastic, healthy skin is the ideal proof for anti-ageing remedies which address hydration (moisture maintenance), oxidation (why we need antioxidants) and glycation (the biochemical interaction of sugars with other sugars, with proteins and fats and leading to Advanced Glycation End-products, AGEs). These are as menacing as they sound and incidentally are implicated in rapid ageing.

A focus on food

So, given that we exercise appropriately, reduce stresses be they psychological or environmental, we get sufficient quality sleep, we then come down to our diet.

The question is, how can we change the programming for future lifespan and healthspan in utero? How can we maintain the ideal functioning and renewal of our 86 trillion cells and those of the 37 trillion microbial cells in our gut?

What do we eat to slow the progress from early niggles to death?

The answer is remarkably simple. Eat wild and near wild food. Choose organic where possible. Eat game and other wild-caught meats and eat more of the parts of these animals (not just the prime cuts). We should eat when hungry and not by habit since wild foods satisfy our taste drive for micronutrients which reduces the 'hidden hunger' we have without them.

This hunger for micronutrients triggers the bugs in our gut and receptors in our brain to make us eat more food in an attempt to satisfy our cellular needs for the missing elements. If all we

have is rubbish food, deplete of micronutrients, we over-eat empty calories and the risk of suffering from the conditions of metabolic syndrome rises.

It is essential that we increase the range of foods we eat as we now consume from one third to one tenth the number of foods to which Indigenous Australians had access annually. More bad news is that the quality of modern foods is falling rapidly.

Many of the vegetables we can buy today are the products of selections (natural or otherwise) of a single species. For example, Brassica oleracea gives us 12 different cultivars including broccoli, broccolini, Brussels sprouts, cauliflower, cabbage, Kohlrabi, collard greens, kale, Chinese cabbage and a few new ones recently launched in the US. This is not helping our dietary variety.

Something else we should be learning is to avoid tomato seeds and skins due to the anti-nutritional lectins they contain. Tinned tomato paste and sauces (with no added sugar) are rich sources of the heat-stable antioxidant, lycopene whereas we would need to eat many kilograms of fresh tomato (without seeds and skins) to get anywhere close to the therapeutic dose of lycopene.

Did you know that garlic is best crushed and diced and let sit for 10 minutes at room temperature so that enzymes convert substrates into active components which are absent if this is not done?

Additionally, some vegetables such as broccoli should be consumed as raw purées so that the enzyme:substrate reaction that occurs in garlic can deliver the sulphoraphane from the broccoli. Simply dicing and cooking Brassica vegetables stops this powerful antioxidant from forming.

How many red to crimson to blue coloured fruits such berries, stone fruits and blueberries are presented with dairy products (yoghurt, cream, smoothies) and purported to be healthy? Unfortunately, the anthocyanin antioxidants responsible for the colours are irreversibly bound to the milk protein and are unable to be absorbed.

But what have we done to our food?

However, even with these and other nutritional tips, the inescapable fact is that modern foods have been falling in their nutritional quality every year since the 1980s. Fruits are now bred for distribution and export and not our ideal health. Selections are chosen to be super-sweet and packed with bad sugars (sucrose and fructose) to appeal to the addictive centre in our brain.

Fruits and vegetables are now lower in fibre and therefore lower in the antioxidants that are usually associated with that fibre and fat-soluble antioxidants are totally absent from most of our produce. Minerals are compromised due to the impoverished quality of our soils and health budgets rise every year as the media focuses on the evils of processed foods, some which are better for us than fresh produce eg frozen fruits and vegetables, tomato products (de-seeded, skinned and concentrated).

We are even fed fake news in the promotions for specific diets based on available modern foods but as solutions to our compromised longevity. The Mediterranean diet was actually based on over 100 foraged wild foods which are not promoted as essential components of the diet today. Then we have Paleo as a trendy diet but no wild foods as in real paleolithic times. Even Keto principles are based on the totally incorrect conviction that hunter-gatherers ate significant amounts of fat from animals they hunted. Game meats are typically lean with any fatty tissues given to the Elders and successful hunting expeditions were not the basis of daily

sustenance. It was the women who provided the far more reliable plant-based diet with some small game meats and insects to complete the daily fare.

Then there is the research that domestic animal meats are far more inflammatory than the same meal of game meats. Additionally, offal from game animals deliver a high water-soluble antioxidant capacity with high levels of vitamin C in organ meats such as liver and kidneys. This is absent in equivalent domestic meats.

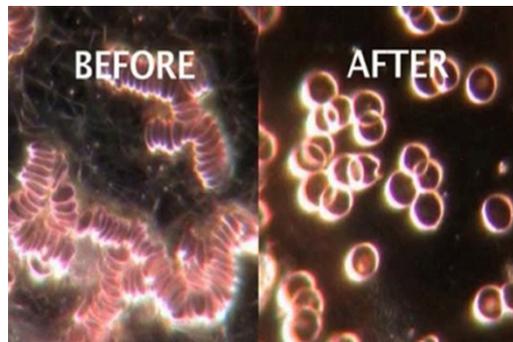
The Wild Solution

For enhanced healthspan and lifespan, it is worth repeating, eat game meats, wild caught seafood and insects (if you are 'game') and forage, grow or buy wild and near wild (heirloom) foods.

These are rich sources of essential micronutrients which include antioxidants, anti-inflammatories, anti-allergens, anti-rogue cell (anti-proliferatives, pro-apoptotics, anti-carcinogens, anti-mutagens), immune boosters, adaptogens, organic acids, organ protectants (brain, heart, liver, kidney, pancreas, blood vessels, skin, digestive tract), live enzymes and enzyme regulators, good sugars and bioavailable minerals.

This combats metaflammation by boosting our immunity, turning on our own cellular antioxidant systems to quench free radicals and reduces food sensitivities while also supporting the architecture and integrity of our organs.

And lastly, although not widely recognized by the medical industry, micronutrients have been shown to stop cells that shouldn't stick together, from doing so and the ways that they attack rogue cells are so many and varied that it is understandable why Indigenous Australians had extremely low incidence of cancers in traditional times.



Red blood cells, 20 minutes after a dose of wild food micronutrient preparation

It is ironic that we have a health industry that ignores food and a food industry that ignores health and an infant society that ignores the experience of the world's longest living culture..

We have the knowledge, means and the biology to live 190 years. Will you accept the challenge?

Vic Cherikoff is the author of Wild Foods; Looking back 60,000 years for clues to our future survival. His company, Australian Functional Ingredients, specializes in wild foods as the way to look younger, feel better and age more slowly. His freeze-dried, wild food product, LIFE (Lyophilized Indigenous Food Essentials)TM is now used by Aboriginal and non-Aboriginal Australians for health and longevity. It is sent all over the world and is recommended in Australia, by naturopaths, nutritionists, dietitians and other health care professionals.