



ANTI-AGEING STRATEGIES

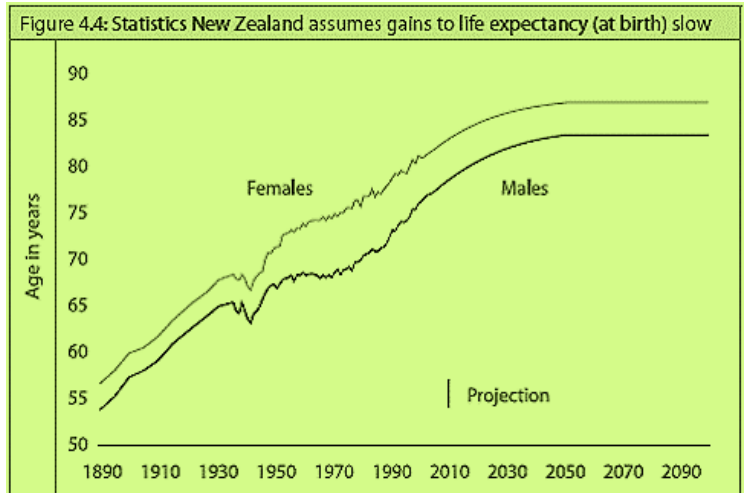
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The information below was originally published in 2013 in the Millhouse Integrative Newsletter, a monthly publication, primarily designed for clinic patients, highlighting useful strategies which may help prevent disease and improve health.

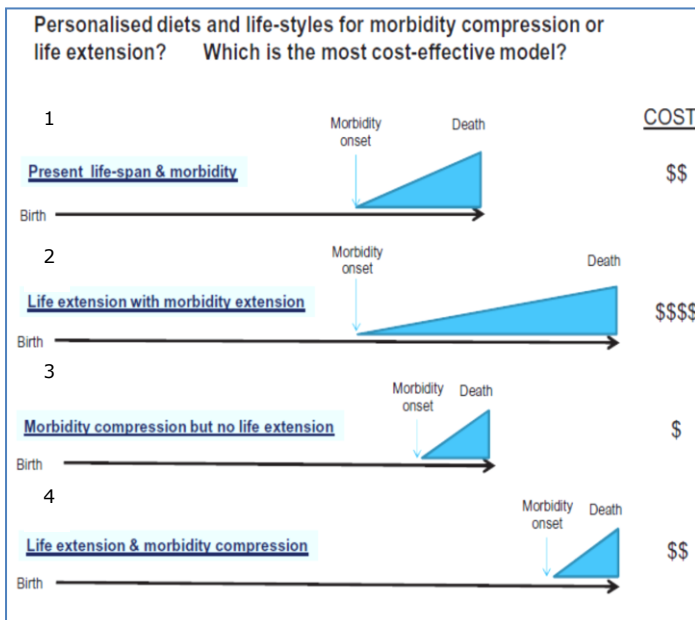
Morbidity Compression – active long life with less disease

I am amazed when I consider how a single cell - created from mother's egg and father's sperm - develops into 50 trillion cells that collaborate in a remarkably-organised community that provides the energy, mobility and security for humans to function. Throughout life we undergo 10,000 trillion cell divisions, but slowly lose the ability to photocopy each cell, and so become susceptible to disease. Our aim is to help you live long and actively and to delay chronic illness (*morbidity*) until the last decade of life; this is referred to as **Morbidity Compression**.

The New Zealand life expectancy table opposite shows that in the early 1900s we lived about 60 years but with improved health strategies (water & sewage treatment, better food, quality housing and healthcare), we now average 82.7 years for females and 78.8 years for males.



If the graph's projected life expectancy is correct, future generations may average only a few more years of living.



The '[compression of morbidity](#)' paradigmⁱ - first postulated in 1980 - has shown that if the period of chronic disease (*morbidity*) in later life can be reduced (*compressed*) there will be less disability and the elderly will live longer active lives (Table opposite-1). If lifestyle changes are not used to delay the onset of illness, the medical technologies required to prolong life are very expensive (see *line 2, compared with 3 & 4*). The preferred and least costly way to extend life is with personalized diets and proactive lifestyle changes throughout life (see 4).

In the [May 2013 newsletter](#) I mentioned that 50% of elderly will develop Alzheimers Disease, a condition that is known to begin some twenty years earlier, and that adopting specific strategies may delay and protect against the onset of this debilitating illness.

These strategies include:

- monitoring risk factors,
- adopting a phytochemical-rich (plant-based) diet,
- using protective nutrients,
- adopting a vigorous exercise program,
- using medication to control diseases such as diabetes, blood pressure, and vascular disease
- and being socially engaged.



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An aside: In 2013 it was reportedⁱⁱ that [research on brain tissue](#) specimens with cinnamon's active ingredients, cinnamaldehyde and epicatechin (*also found in green tea*), has shown the spice could inhibit the aggregation of tau protein and cause the separation of neurofibrillary tangles, the hallmark change observed in Alzheimer's disease. Cinnamon is already known to improve glucose control and may also delay and protect against the onset of dementia, to which diabetics are more susceptible.

Don't forget the influence of mother's womb on wellness & illness

It has often been assumed that the growing foetus is protected while in the mother's womb environment, while Traditional Chinese Medicine has always maintained that prenatal influences have a significant, perhaps one third influence on wellness/illness in adult life. In Western science today, deficiencies in protein, iron, folic acid B12, zinc, vitamin A, vitamin D and iodine are indeed recognised to have adverse effects on the growing unborn child.

Southampton University's Professor David Barker, who analysed birth archives and adult health records, has proposed in the [Barker hypothesis](#) (*also known as the Foetal Programming Hypothesis*) that critical events in pregnancy lead to maladaptation in the foetus, and may predispose to the development of blood pressure, obesity, diabetes and heart disease in later lifeⁱⁱⁱ.

DNA our 'book of life' possibilities

I started by discussing how one cell multiplies into a complex organism. Each cell has a control centre or nucleus with 26 chromosomes, whose DNA strands contain a 'book of life' of possible programmes. The science of epigenetics looks at how these are modified by a changing cell environment to enhance, or adversely influence, human growth and living. Epigenetic changes turn DNA (and RNA) messages on and off, and cause gene destruction, up 10,000 times each day. Most cells are repaired but this action is less effective as we age.

Genetic damage can easily be studied in blood white cells by observing the accumulating rubbish in the cell nucleus (fragments of chromosome, micronuclei) and measuring changes in the telomere cap, which protects the end of each chromosome from damage. DNA damage accumulates with age but research presented at the 2013 Science and Nutrition in Medicine Conference in Sydney indicated that this can be slowed by using a low fat, non-refined plant-based diet of rich in vegetables & fruits, along with moderate exercise and relaxation strategies. The specific nutrients of natural vitamin E, vitamin D, folic acid, B12 and omega 3 oils are protective, whereas polyunsaturated fatty acids, processed meat and raised homocysteine levels increase chromosomal damage. Environmental chemical toxins, including smoking and excess alcohol are destructive to genes.

Excessive stress and overwork are harmful; so is being obese in childhood and later life. Children who have been sexually abused also seem to suffer damage to the DNA. What is encouraging that an improved work-life balance, having renewing sleep, meditating and practicing mindfulness are all beneficial to your genes.

Lifestyle Strategies	
Know your risk	<ul style="list-style-type: none"> What diseases do your parents and relatives have?
Be proactive	<ul style="list-style-type: none"> Monitor blood pressure Check blood cholesterol, hba1c (diabetes), B12 & folate, iron, PSA (males), cervical smear & mammogram (females)
Avoid toxic influences	<ul style="list-style-type: none"> Smoking, excess alcohol, toxic chemicals
Eat healthy food & use spices	<ul style="list-style-type: none"> Adopt the Mediterranean Diet with no/low refined carbohydrates Lots of spices, garlic, cinnamon, turmeric, ginger etc
Keep ideal weight	<ul style="list-style-type: none"> Eat less, don't get overweight
Exercise	<ul style="list-style-type: none"> Some is better than none, vigorous interval training is best
Enjoy sunlight Vitamin D	<ul style="list-style-type: none"> Spend time in the sun or supplement
Live at peace	<ul style="list-style-type: none"> Sleep soundly, meditate, use prayer, mindfulness, be happy Don't live in abusive relationships
Give	<ul style="list-style-type: none"> Do something for others

How are you doing with positive lifestyle strategies?

ⁱ Fries in *Annals Internal Med* 139; 5: 456-459

ⁱⁱ *J Alzheimers Dis.* 2013 Jan 1;36(1):21-40.

ⁱⁱⁱ 'Mothers, babies and health in later life' J.P Barker (1998)