



# the Fountain Of Youth: Found?

HAS AN AUSTRALIAN SCIENTIFIC BREAKTHROUGH REVEALED A NATURAL ANTI-AGEING MECHANISM WITHIN THE HUMAN GENE?



## Every cell in your body has 46 chromosomes.

Each one of those has a telomere at the end of the strand. It's a repetitive sequence that acts as a 'cap' to protect the critical information held in the main part of our DNA. The best analogy is to think about the plastic cap at the end of shoelaces that protects them from fraying. The telomere cap at the end of our DNA performs a similar role. Every time a cell replicates, the cap gets a little shorter. This is exacerbated by stress, diet, pollution and other environmental factors. At a certain point, this shortening of the protective cap results in the cell being unable to replicate or mutating as the DNA is damaged, just like your shoelace frays.

It has also been discovered that every cell can also produce an enzyme called telomerase, which has been shown to re-grow the telomere and continue to protect the DNA. In essence, turning back the hands of time and allowing the cell to continue replicating effectively.

Studies even show that people with longer telomeres are more likely to live longer and have more years of healthy life. Many ageing related diseases are caused simply through the degradation of our cells and their eventual inability to not replicate in a healthy manner.

In 2009, Australian Professor Elizabeth Blackburn and her team won the Nobel Prize for Medicine for their research into the ageing

process and the role of telomeres. Already, over the past decade, Blackburn's research group and others have found links between shorter telomeres and risks for cardiovascular disease, diabetes, some cancers, depression, pulmonary fibrosis, vascular dementia, osteoarthritis and osteoporosis.

"More and more we are thinking about how telomeres and their maintenance are involved in issues of human health," Professor Blackburn said at a seminar last January at the University Of California, San Francisco's Mission Bay campus.

But can we do anything to make our telomeres grow longer? Research reported by Blackburn and colleagues indicates we can.

In a three-month preliminary study of 30 men aged 49 to 80 with low-risk prostate cancer, Blackburn's team found that comprehensive lifestyle changes such as a healthy diet, stress management and exercise increased telomerase activity.

Omega-3 fatty acids found in fish oil, specifically docosahexaenoic acid (DHA) and eicosapentaenoic acid (EPA) also may influence telomere length. In elderly, coronary artery disease patients studied the researchers found that a higher level of these fatty acids in their cells at the beginning of the study was associated with a greater likelihood that the patient's telomeres would be better maintained

and even lengthen in the next five years.

Other research has identified over 300,000 separate ingredients and combinations of these that can "turn on the telomerase switch" in our cells. Interestingly, these ingredients are, more often than not, natural, botanical substances. There are now products available with ingredients that have been shown to lengthen telomeres in-vitro, that is, in a petrie dish during research.

In one case, a product locally available, is now entering further trials in two separate laboratories that are focusing on short and long telomere patient cohorts. This certainly seems an interesting area of further research. In the meantime, we believe a combination of managing environmental factors and considering taking products aimed at direct telomere support is the best option to achieve optimal cell health and longevity.

As the owners of three clinics focusing on anti-ageing, my partner Helen Koi and I have been very excited by the positive improvements in health and wellness that are being experienced by so many of our patients who are focusing on the above regime. We'd love to share this "fountain of youth" with the readers of this article as well.

**more:** To find out more about this and other anti-ageing therapies, contact Nicki at [facetoday.com.au](http://facetoday.com.au)