Parents and Genes

Some groups of people live longer than others. Family connections can play a role in this. Is the absence of a strong family tendency to live longer a big issue?

The rapid growth in individual life expectancies reflects how our society has applied the remarkable developments in science focused on our health, and the many factors which have changed in our surroundings and social development.

However, information about our ancestors and immediate family lives can be of real value. It's worthwhile looking for this as soon as possible – through the memories of older family members and friends, through their medical advisers who may be still practising and sometimes (although not always reliably) from medical records recording their deaths.

Useful Questions

- How long did they live?
- How much of that time was lived in relatively poor health (if any)?
- What disabilities became apparent after they passed 65 and at what age did they seem to become important?
- What was the final cause of death?
- In what circumstances were they living when they died (at home, aged care, hospital)?
- Were they reasonably financially independent when they died? (level of income is one of the factors in assessing potential longevity)
- What was their attitude to ageing? Attitude can affect both quality and length of survival.

Are Our Genes Important?

Our genes underpin how our body behaves – much of it without any direct influence from us. Genes can exercise a bad influence on our body or affect how it deals with challenges. The study of genes and their behaviour is increasingly providing amazing insights into dealing with health problems and opportunities. Family background can often help us plan sensible prevention actions with our health advisers.

A remarkable development has been the ability to map our own genes in great detail. This can aid diagnosis and treatment to sustain a more health lifespan, often by dealing with what were previously intractable diseases and conditions. Even simple family background information can help our health advisers in interpretation.

Epigenetics

How our genes function is affected by the 'landscape' in which they exist. This landscape (or epigenome) causes our embryonic stem cells to perform different functions in our bodies. If the 'landscape' doesn't change, things tend to go well. If the epigenome changes, the cell may

malfunction. This is a fundamental issue in ageing. It is well established that healthy ageing relates to maintaining the integrity of our epigenome (although it doesn't guarantee it). Epigenetics has become a major research area[1].

Next Steps

For many of us, our surroundings and our conscious selves have the major role in how our life plays out. Seeking to understand more about the survival of our near family can add substance to our own decisions.

Assemble as much information as you can about the circumstances of your immediate ancestors and near relatives as they aged. Discuss this with your health advisers to decide if lifestyle changes could benefit you and perhaps others in your family.

[1] For much more information and a good read, see 'Lifespan' by Australian scientist David Sinclair