

My name is Richard Harding. A brief introduction so you know something about me.

I have a BSc from Sydney University - studying mathematics, chemistry and what was then, the brand new subject of Computing Studies - way before it was known as Information Technology.

I have worked mainly in banking, financial and medical industries working as a computer programmer, designer of computer software and project manager working for such companies as CBC bank, NAB bank, ANZ bank, Chase Manhattan Bank, AMP, NRMA, North Power, State Bank of NSW and Reserve Bank of Australia, Health Insurance Commission (Medicare).

After our daughter was born we moved from Sydney to the Hunter Valley - some 25 years ago now.

I worked for Hampsons Pathology as their computer system administrator. They had 10 pathology laboratories from Coffs Harbour to Sydney online 24 hours a day 6 days a week.

After doing that for 6½ years, I thought it would be easier to work for myself. I have been involved in teaching and writing computer programs as well as studying and coaching nutrition.

My most valuable nutritional course was through Cornell University in upstate New York. Professor Colin Campbell, the author of *The China Study* book, presented this course. He was professor of Nutritional Biochemistry at that University. John McDougall (author of *The Starch Solution*) and Caldwell Esselstyn (author of *Prevent and Reverse Heart Disease*) presented other modules. Other material that I use is sourced from Neal Barnard (author of *Dr. Neal Barnard's Program for Reversing Diabetes*) and Dean Ornish (Bill Clinton's doctor following his two major heart surgeries).

Joseph Goldstein and Michael Brown are well known (famous) researchers in cholesterol

research. They won a Nobel Prize in 1985. More Nobel Prizes have been won for research on cholesterol than any other subject. They wrote in a 1984 Scientific American article that, "extreme dietary change is not warranted for the entire population" because of the "extreme social and economic consequences". ¹

Do not the 44,000 deaths a year (2012) from cardiovascular disease represent severe social and economic consequences? For something that is preventable. ²

About 30% of heart attack deaths are unexpected. One morning, a family has an apparently healthy father / husband and by the next morning, they don't. That is what I think of as being extreme.

Changing your diet is far less extreme than being wheeled into an operating theatre and having heart surgery. Having heart surgery is extreme - changing your diet - not so much.

How many of you have been to the doctor and received nutritional advice? What was it?

The standard medical nutritional advice from the Australian Heart Foundation website includes:

- Eating up to six eggs each week as part of a healthy balanced diet.
- Replacing cheese with low-fat cheese or low-fat yogurt (and low-fat cheese or yogurt is not low-fat - it is only low fat compared with normal cheese or yogurt. Most low-fat yogurts contain significant amount of added sugar).
- Replacing red meat with chicken or fish (and removing the skin from the chicken)
- Trimming all visible fat from beef, lamb and mutton
- Add lemon zest or juice to grilled meat or fish instead of salt or butter to lift the flavour. Be sure to serve plenty of vegetables with meat dishes.

Doing that is like driving your car into a tree at 90 kph instead of 120 kph. The chances are you are still going to end up dead.

Dr Walter Willett is a professor of medicine at Harvard Medical School and head of Epidemiology and Nutrition at Harvard School of Public Health.

He was involved in the Nurse's Study II. Anyone heard of the Nurse's Study? The Nurses Study I followed 121,700 female registered nurses since 1976 and Nurses Study II followed 116,000 female nurses since 1989 to assess risk factors for cancer and cardiovascular disease.

The Nurses Study II showed that as fat intake decreased from 50% down to less than 30% — which is a substantial decrease — then there was no corresponding with a reduction in breast cancer.

In discussions with Professor Willett, Colin Campbell has made the point that “whole foods, plant-based diets, naturally low in fat, are not included in the Nurses' Health Study cohort, and that it is these types of diets that are the most beneficial for our health.”

Professor Willett has told Colin Campbell on a number of occasions “You may be right, Colin, but people don't want to go there.”

It is not the medical professions role to guess what your response is going to be. You can make up your own mind once you know the facts.

Dr Willett has said, “the optimal amount of red meat in the diet is zero”.

And replacing red meat, with chicken and fish is of limited benefit. It is still a high fat, high protein, high animal based diet.

To give an indication of what is possible, consider the study published in the British Medical Journal (December 2013) *A Statin A Day Keeps the Doctor Away*.³ It states that:

If everyone over the age of 50 ate an apple a day, 8,500 deaths from heart attacks and strokes could be avoided every year in the UK.

Apples give a similar decrease in the risk of heart disease as statins but do not carry any of the potential side effects.

This represents an 11% reduction in the 74,000 heart disease deaths in the UK, simply by eating an apple a day with no other changes. BUT, what about the other 89%? If the goal is to eliminate heart disease completely, not to simply defer it for a few years, then we need to make a lot more changes than eating apples and taking statin drugs.

Who watched the ABC's Catalyst programs the Heart of the Matter that was shown in about cholesterol and heart disease? What did you learn from it?⁴

Dr Ernest Curtis was the expert cardiologist in the program. He claims that we have been lied to regarding cholesterol and its role in heart disease.

"Everybody has atherosclerosis to one degree or another," states Dr. Ernest N. Curtis. "It is simply a biological fact of aging."

Not according to Professor Lew Kuller from the University of Pittsburg School of Public Health. He states, "All males who are 65 and all females who are 70 who have been exposed to the traditional Western diet have cardiovascular disease and should be treated as such."

Atherosclerosis is not a product of aging but of long-term consumption of our Standard Western Diet.

It is “Normal” to Die from Heart Disease

One difficulty in accepting the role of cholesterol in heart disease is that the “normal” ranges in Western countries are unhealthy. It is also normal to die from heart disease. 31% of all deaths in Australian (that is, 45,600 people) in 2011 were the result of cardiovascular diseases in 2011.

According to the Mayo Clinic, cholesterol should be below 200 mg/dL (5.2 mmol/L).

However,

- Dr Bill Roberts (previous long-time editor of the medical journal *American Journal of Cardiology*)
- Dr Bill Castelli (former director of the Framingham Heart Study)
- Dr Caldwell Esselstyn (former surgeon at the Cleveland Clinic)

have stated that they have never seen a heart disease fatality when cholesterol levels are below 150 mg/dL (3.9 mmol/L). Bill Roberts recommends that the goal for LDL-cholesterol should be at least less than 100 mg/L (1.6 mmol/L) and ideally less than 60 mg/L (2.6 mmol/L).⁵

Autopsies of 300 male soldiers killed in action in Korea showed 77.3% of the soldiers had gross evidence of heart problems. The average age was 22 years, fit and active and had not been diagnosed with heart problems.⁶

It is a matter of whom you choose to believe. Yes, heart disease is inevitable if you continue eating our standard diet.

Or you can choose to not only stop the progress of the heart disease but reverse it.

Dr Curtis also stated that we do not know the cause of heart disease. What he really means is no explanation that matches his view.

What is a Heart Attack?

- Endothelial cells line all blood (arteries, veins, capillaries as well as the heart) and lymphatic vessels. The endothelium is one cell thick.
- When we start eating a high fat (or even a medium fat) Standard Western Diet, it increases the viscosity of the blood. White and red blood cells, platelets, endothelial cells and low-density lipoprotein (LDL) particles containing cholesterol become adhesive - our blood becomes "sticky".
- The LDL particles that contain cholesterol enter into the space beneath the endothelium cells.
- The cholesterol becomes oxidised by free radicals. The activity of free radicals is greatly increased by eating oil, dairy and animal protein.
- Macrophages cross into the sub-endothelial space and engulf the oxidised LDL particles. Macrophages are a type of white blood cells (or leucocytes, components of the immune system which protect the body from diseases and foreign material). After the macrophage engulfs its share of LDL particles, it dies. A macrophage that has engulfed LDL particles is known as a foam cell. Nikolay Anitschkow described foam cells in the early 1900s.
- Plaques develop in the sub-endothelial space. Plaques consist of macrophages, foam cells, dead foam cells, fats, cholesterol and smooth muscle tissue. The plaques intrude into the arterial space.
- Thrombosis (blood clot inside a blood vessel) at the site of a ruptured plaque precipitates most heart attacks (myocardial infarctions)
- The vessel is completely blocked. If this is a small blood vessel within the brain, the person may not be aware of the situation. If it is a large vessel, the person will have a heart attack or a stroke.

How do you damage your endothelial cells?

The endothelial cells produce nitric oxide. It only exists for a few milliseconds. Nitric oxide dilates blood vessels and it also prevents cells in your blood from becoming adhesive.

Nitroglycerine is used to treat vascular conditions as it produces nitric oxide in the body.

A number of factors prevent endothelial cells from producing nitric oxide.

- Hypertension (high blood pressure)
- High cholesterol
- High homocysteine - an amino acid that is produced in our bodies. High levels indicate vitamin B12, B6 or folic acid (B9) deficiency. Optimal level of homocysteine is lower than the reference range given by your pathology laboratory.
- High triglycerides - no added oils, including "healthy" oils such as olive, coconut and omega 3 fatty acids (fish oils and flaxseed oil).
- Insulin resistance - which is caused by high fat content in muscle cells
- Smoking

If you have a high fat meal (or even a moderately fatty meal) then it compromises your ability to produce nitric oxide and it takes several hours to recover - just in time for your next high fat meal.

Healthy endothelial cells are essential to our health so doing everything possible to keep them from being damaged is imperative for our well-being. ⁷

Diabetes

Diabetes is another disease that is rapidly becoming more prevalent. It is detected by the amount of glucose in the urine. The kidneys are attempting to get rid of the excess glucose in the blood. The obvious solution is to reduce the amount of carbohydrate that you consume.

What really happens is that because of a high fat diet, the muscle cells contain an excess amount of fat. This prevents insulin from doing its job of allowing glucose to enter into the muscle cells.

The cells are not getting the fuel they need - you become tired. The excess glucose needs to be removed by the kidneys.

A whole-food, plant based diet can solve this problem in a very short period of time - a few

days to a few weeks.

The China Study

Colin Campbell is a nutritional biochemist at Cornell University. In the 1960s, he was involved in nutritional programs in the Philippines to help families provide for their critically undernourished children. Peanuts were one of their preferred sources of protein. It is a legume - great for improving the soil, easy to grow and is nutritious and tasty. ⁸

Children younger than 10, were dying at alarming rates from liver cancer. Normally liver cancer is an adult disease. And the children dying from the disease were from the most affluent suburbs in Manilla. These are the families that could afford the best housing and the best food.

Whilst in the Philippines, he read a paper in an obscure medical journal. Rats were fed aflatoxin - one of the deadliest carcinogens known. One group of rats was given a diet of 20% protein - and they all died of liver cancer. The second group was given a diet of 5% protein - they all lived. 100% deaths compared to 0 deaths. They were all fed aflatoxin - but only those rats that had a high protein diet died.

And, peanuts and corn in the Philippines were often contaminated by aflatoxin. And what did the wealthy eat - the wealthy ate western style diets - one rich in protein. That was Colin Campbell's first clue.

A few years later, in the early 1970s, the premier of China, Chen EnLai, was dying of cancer. At the terminal stage of his illness, he instigated a survey of death rates from cancers throughout China. Some regions showed cancer rates over 100 times greater than the counties with the lowest rates. The counties with the highest rates were still lower than the death rates of the USA.

To study these results, a team of scientists from Chinese Academy of Preventive Medicine,

Cornell and Oxford Universities conducted a study of 6,500 people in 65 different counties over a period of 20 years. They looked at over 360 different health, lifestyle and nutrition factors and found over 8,000 significant correlations.

Some comparisons with Chinese and American diets are worthwhile examining - Chinese consume much more calories but they weigh much less. They eat more fibre with much less fat and protein. Animal sources for the Chinese diet is less than one tenth of the American diet. Despite that Chinese people consume twice as much iron.

Some of the conclusions are probably surprising. In the United States and Australia, the normal range for cholesterol is usually considered to be 4.4 - 5.2 mmol / L. Normal does not necessarily equate to healthy. The CSRIO website states that "If your cholesterol is between 5.5 and 6.5 your risk of heart disease is only increased by a small amount." Maybe it increased by a small amount from what is considered the normal range. According to Dean Ornish and Caldwell Esselstyn a truly safe level is less than 4 mmol/L. Dean Ornish , Caldwell Esselstyn and Colin Campbell are the people that Bill Clinton credits in helping him return to his high school weight after 2 major heart operations.

We have all probably heard that a high cholesterol reading increases your risk of heart disease. But it may be a surprise to learn that your cholesterol levels are a really good indicator for a number of cancers, such as breast, colon and prostate cancer as well. And you have probably been told to reduce cholesterol you should reduce fat intake and cholesterol in foods. But by far the biggest contributor to cholesterol in the blood is not from those sources but from animal protein.

Lets compare our anatomy with real carnivores. Our canine teeth are canine only in name. A real carnivore (like your cat and dog) has razor sharp canine teeth designed for ripping and tearing. Our molars a large and flat designed for grinding fibrous plant material. The jaws of a carnivore move up and down - they tear the food and swallow it whole. We can move our jaws up and down and side to side to ground the food.

Our intestines are much longer in comparison to carnivores. A carnivore intestine is 3 - 6 times the body length whilst humans are 10 times. All animal proteins produce carcinogenic compounds - even more so when cooked. Therefore, the least amount of time it is in the carnivore's body the better. Animal proteins also produce opiates which probably explains are addiction to meat.

And our hands - try wrestling a pig to the ground with your bare hands and making a meal of it. Yes, it may sound appealing but if you actually try it - it is not really practical. These are dexterous hands of a food gatherer not the claws of a hunter.

Harvey Diamond writes - "Put a small child in a crib with a rabbit and an apple. If the child plays with the apple and eats the rabbit, I'll buy you a new car".⁹

We are simply not designed to eat rabbits, pigs or any other creature that can hop, walk, swim or crawl.

Professor Colin Campbell conclusion from his 20-year study in China,

The vast majority of all cancers, cardiovascular diseases, and other forms of degenerative illness such as the auto-immune diseases, kidney disease, macular degeneration can be prevented and possibly reversed, simply by adopting a whole food plant-based diet.

Here we have the director of one the largest health study ever, - the most comprehensive health study in the history of the planet, telling us how we can prevent untold grief, pain and suffering.

We do not need to raise one cent more money for cancer research. It may make you feel good but we already have the information we need to prevent most of these diseases of affluence - cancers, cardio-vascular disease, autoimmune diseases and the host of other diseases that are much more prevalent in western societies. We do not need any more research. We simply need to implement what we already know. It can be difficult to change our eating habits. The preparation of food and eating is deeply ingrained in our culture and our family life. We cannot change our diet in isolation from the rest of our family.

There is a lot to learn if you wish to implement these changes. I have lots of information that hopefully will convince you that changes can be made relatively easily and with substantial changes to your health.

Perhaps a number of you can make changes as a group - become a role model for other men's groups. Demonstrate to others how you can transform your health.

If you doubt that a whole food plant-based diet is our natural diet then consider this. When you see dead kangaroo on the side of the road, are you tempted to stop for a snack?

Footnotes

1. Brown, M. S. & Goldstein, J. L. (1984) How LDL receptors influence cholesterol and atherosclerosis. *Scientific American*. 251 (5), 58-66.
2. Nichols, M. et al. (2014) *Australian heart disease statistics 2014*. [online]. Available from: www.heartfoundation.org.au/images/uploads/main/Your_heart/RES-113_Aust_heart_disease_statistics_2014_WEB.PDF (Accessed 16 November 2016).
3. Briggs, A. D. M. et al. (2013) A statin a day keeps the doctor away: comparative proverb

- assessment modelling study. *British Medical Journal*. [Online] 347 (December), 1-6.
4. Demasi, M. & Arnott, I. (2013) *Heart of the Matter - Part 1*
 5. Roberts, W. C. (2010) It's the cholesterol, stupid! *American Journal of Cardiology*. 106 (9), 1364-1366.
 6. Campbell, T. C. & Campbell, T. M. (2006) *The China Study*. Dallas USA: Benbella Books. p112
 7. Esselstyn, C. B. (2007) *Prevent and Reverse Heart Disease*. New York: Penguin Group.
 8. Campbell, T. C. & Campbell, T. M. (2006) *The China Study*. Dallas USA: Benbella Books. p112
 9. Diamond, H. & Diamond, M. (1999) *Fit For Life*. New York: Harper Collins Publishers.