

The Mediterranean Diet

....prescription for disease prevention?

A recent Nutrition Society of Australia meeting was themed, "A new twist on health foods". The theme confirmed the widespread and growing interest in the properties of particular foods. Where nutritionists once viewed foods as providing just macro- and micronutrients, now foods are viewed also as valuable sources of biochemically-active phytochemicals (plant chemicals).

It has been estimated that foods contain around 10,000 such phytochemicals if absorbed, have the potential to modify the function of our cells. This concept is the foundation on which the emerging discipline of Nutrigenomics is based. The word, *Nutrigenomics* means 'food influencing our genes'.

Another issue in the HEALTH IS WEALTH series is entitled, "Foods, herbs and medicine - a blurring of the boundaries". Ongoing research continues to confirm that the boundaries are indeed blurred. Is a soybean a food because it contains proteins, fats, carbohydrates together with a range of micronutrients or is it a medicine because it contains estrogen-like compounds which can bind to the estrogen receptors and exhibit estrogen-like properties? Is ginger a herb because it is used to add flavour to other foods or is it a medicine because it inhibits the enzyme, *thromboxane synthetase* and thereby interrupts the generation of mediators of inflammation?

DISEASES OF CIVILISATION

The Nutrition Society meeting addressed these issues whilst focusing on the "big diseases of civilisation", cardiovascular disease, cancer and diabetes. One theme which continued to emerge during discussion was the need for nutrition researchers to avoid being drawn into the reductionist model of pharmacological research; the model whereby the active component is isolated and used medicinally. Research has already shown that there is not one food or food component which is likely to be the universal panacea.



MEDITERRANEAN DIET BASICS

LESSONS FROM OTHER CULTURES

Epidemiology is the study of patterns of health and illness in different populations and cultures. Therefore, it is a very useful science to help us to draw connections between the lifestyle habits of certain cultures and the patterns of disease which exist in those cultures.

Lessons learned from Epidemiology show that the cultures which exhibit low incidence of the *diseases of civilisation* cannot attribute their good health to any one factor; rather, there are a number of factors which comprise their particular cuisine and their lifestyle.

Indeed, World Health Organisation is now encouraging the use of the term *cuisine*, rather than *diet*, to describe patterns of eating which contribute to health.

Along with the Japanese, Greeks eating their traditional diet (*cuisine*), enjoy the lowest incidence of heart disease in the world. In particular, those Greeks living on the island of Crete in the 1960's were the least likely to be affected by heart disease.

HEALTH IS WEALTH

YOUR HEALTH - IN YOUR HANDS

THE GREAT SIGNIFICANCE OF THIS IS THAT THERE IS CLEARLY NOT SOME MAGICAL GENETIC PROTECTION WHICH THE GREEKS ENJOY BUT RATHER A DIETARY OR LIFESTYLE PATTERN WHICH IN SOME WAY PROVIDES LOWERED HEART DISEASE AND ENHANCED LONGEVITY.

CUISINE – MEDITERRANEAN STYLE

In studies where the Mediterranean diet has been duplicated, human subjects have been shown to exhibit similar protection against heart disease. The great significance of this is that there is clearly not some magical genetic protection which the Greeks enjoy but rather a dietary/ lifestyle pattern which in some way provides lowered heart disease and enhanced longevity.

In Australia as well as the U.S. and U.K., we consider that several risk factors affect our likelihood of developing heart disease. These risk factors include obesity, elevated serum cholesterol, lack of exercise and cigarette smoking. When we compare these factors against those of Greek populations, we find some surprising anomalies.

The Seven Countries Study undertaken in the 1970's by American physiologist, Ancel Keys, showed that in general, the Greeks broke all the rules! Most of the Greeks he studied were overweight to a degree equivalent to American railroad workers. The Greeks had elevated cholesterol averaging 5.98 mmol/l. (We stress < 5.0mmol/L). The Greeks smoked heavily and did not undertake exercise other than that encountered in their work.

Greek market gardeners and fishermen were considered to exercise even less than did the American railroad workers. In addition to that, the Greeks consumed around 38% of their total food energy as fat – mostly from olive oil. (We stress no more than 30%). But in spite of all of that, the Greeks experience far less heart disease than we do – **provided** they consume their traditional cuisine!

Certainly food for thought!!



FRESH RIPE TOMATOES, EXTRA VIRGIN OLIVE OIL, BASIL – MEDITERRANEAN ESSENTIALS

Do we need to review the risk factors?

Many of us would think so. Australia's heart disease peaked in 1968 and has been declining at around 3% per year in the ensuing two decades.

Even so, we still exhibit levels of heart disease mortality many fold greater than that of cultures who live according to the traditional Mediterranean lifestyle.

Is this a model which could be applicable to other modern lifestyles?