

Foreword

Dementia is expected to become the number one health concern this century. It is projected to affect 115 million people worldwide by 2050. Families, friends and car-ers are overwhelmed by the affect of dementia on their loved ones. So it is ex-tremely important to provide treatments that can prevent , stall or even reverse the disease. In addition to that it is also very costly to administer care to the patients.

In 2010 the estimated cost in United States Dollars was \$604 Billion, and that is expected to increase dramatically by 2050. “Reversing Alzheimer’s” was priced at \$19-95 and was on Apple’s iTunes Store for \$9-99 but in order to reach as many people as possible I have decided to make it available FREE of charge. Please share it with anyone affected by Alzheimer’s. You may copy it, print it, email it, share it, like it and forward it to anyone as long as it is complete. It may not however, be sold in any format.

To your good health and your loved ones,
kind regards

Dr. Gerald Veurink.

<http://www.naturels.com.au/reversing-alzheimers.html>

Need For Innovative Thinking

Innovation is needed to develop combinations of medicines that address all the factors involved in the disease process, and so providing a cure rather than symptomatic relief using a single ingredient medicine. For example combinations that alkalize, provide antioxidants, improve oxidation reduction potential, increase neurotransmitters, decreasing insulin resistance, provide nutrients for increased growth of new neurons (brain nerve cells) and removing plaques. Research has shown that there are many natural ingredients which provide these actions (Refer to Pubmed for example and see below).

Combined Antioxidants Therapy for Alzheimer's Disease.

A large number of research articles have demonstrated that antioxidants are helpful for Alzheimer's Disease. Antioxidants are substances which prevent oxidation such as vitamin C and vitamin E which remove or mop-up potentially damaging oxidising agents

(free radicals or reactive oxygen species) in living organisms.

Different antioxidants have different mechanisms of action, and are effective against different free radicals. For example, vitamin C is effective for protecting cellular components in an aqueous environment, whilst vitamin E and carotenoids protect cellular components in lipid environments.

Since both lipophilic (fat soluble) and hydrophilic (water soluble) phases occur in biological systems, it is wise to use antioxidants which are effective in each phase or in combinations which can act synergistically. No single antioxidant is likely to be capable of scavenging the variety of free radicals formed in Alzheimer's disease, therefore, the utilisation of multiple antioxidants as a preventative measure or as a treatment for neurodegenerative disease has been postulated to be more beneficial than the use of single antioxidants.

A combination of antioxidants is likely to have a synergistic effect, as well as regenerate other antioxidants. For example, various studies have shown that ascorbic acid (Vitamin C) recycles alpha-tocopherol (Vitamin E). It has also been shown that consumption of whole fruits and vegetables or their juices is superior to an ascorbic acid supplement for

antioxidant effectiveness.

It is likely that the combination of antioxidant ingredients in fruits and vegetables also have a synergistic effect.

The fact that various antioxidants protect neurons *in vitro* and *in vivo* from beta amyloid-induced oxidative stress lends further support for the use of a combination of antioxidants as an adjunct to other therapies in the treatment of Alzheimer's disease.

Clinical studies have already found that vitamin E taken at 1000 IU twice daily delays the advent of death, institutionalisation or significant functional decline in patients with moderate Alzheimer's disease. However, vitamin E in combination with vitamin C may prove to be even more beneficial to Alzheimer's disease patients as vitamin C recycles vitamin E as mentioned, to its active form and, more recently, a study of vitamin intake has in fact found a reduced incidence of Alzheimer's disease following the combined intake of vitamins C and E, but not vitamin C or E alone.

Recent reviews of such clinical studies of vitamin C and E intake in elderly patients have also concluded that it is likely that the combined intake of these vitamins may reduce the risk of Alzheimer's disease. Not all studies agree, however; for example, one study

of the intake of carotenes (vitamin A) and vitamins C and E from both dietary and supplemental sources did not find a reduced incidence of Alzheimer's disease in a 4 year follow-up of the elderly patients in the study. Nevertheless, this study may have had problems estimating dietary intake of vitamins as these were only calculated from food frequency questionnaires and the vitamin content of the foods would have been rough estimates only.

Since epidemiological studies have revealed a variety of dietary interventions which may slow down or prevent the onset of Alzheimer's disease, more fresh fruit and vegetables in a calorie- restricted healthy diet low in trans-fats and carbohydrates (sugars), possibly supplemented with a combination of antioxidants, may prove to be a beneficial preventative measure.

Other Aspects of Nutrition and Alzheimer's Disease.

Researchers have found that African-Americans and Japanese living in the United States have a much higher incidence of Alzheimer's disease (6.24% and 4.1% respectively) than their counterparts (<2%) living in their homelands. This suggests that environmental factors are also important players that interact with genetic susceptibility factors, or may play independent roles in the pathogenesis of

Alzheimer's disease. This study also found that levels of fat intake had the highest correlation with both Alzheimer's disease and the prevalence of senile dementia, and that a high correlation existed between total caloric supply and the prevalence of Alzheimer's disease.

Similar findings on the deleterious effect of high saturated fat and trans-fat consumption on cognitive function in aged men have been independently reported.

Cancer, coronary heart disease and Alzheimer's disease become increasingly prevalent with age. Decreased fat intake has been linked to a reduced risk of coronary heart disease. Furthermore, individuals with coronary heart disease also have an increased density of senile plaques in their brains.

Many studies have found a large overlap in risk factors for these two diseases. Such studies also give credence to the notion that environmental factors are important agents in Alzheimer's disease.

These studies also provide strong evidence that inappropriate diets may contribute to the pathogenesis of Alzheimer's disease as well as heart disease via an increased occurrence of oxidative stress or impaired cholesterol metabolism.

The concept that diet can affect mental ability and susceptibility to neurological disorders is not new.

Several thousand soldiers held as prisoners of war in Japanese camps were made prematurely senile by almost four years of malnutrition. Supplementation with megadoses of nicotinic acid (Vitamin B3 at 3 grams per day) restored mental capacity. This led to the conclusion that “senility is due to chronic malnutrition and that it is a vitamin-dependent condition which comes from many years of mild or moderate chronic vitamin deficiencies”.

A variety of other nutritional factors have also been integrally linked with Alzheimer's disease. For example, it has been shown that dis-regulation of energy balance, vitamin B12, folate and homocysteine levels play a role in the pathogenesis of Alzheimer's disease.

It has therefore been suggested that an integrated medicine approach combining evidence-based treatments from the literature on dietary intervention, a reduction in stress, an increase in exercise, and dietary supplementation with pharmaceuticals and/or vitamins and antioxidants into an all-embracing complementary treatment strategy would benefit the elderly in many health aspects, and possibly reduce the risk of age-related conditions including Alzheimer's disease.

CHAPTER 2

Mineral and Antioxidant Deficiencies in Foods

Agricultural methods

Unfortunately the nutrients contained in food crops has decreased over the last 200 years or so.

The nutritional value of crop plants is determined by a number of factors including genetic makeup, the type of soil in which the plants are grown, seasonal effects, stage of maturity at harvest, and the quantity and type of fertilisers used in the production of the plants.

Hundreds of years of agriculture using the same soil in many countries have slowly drained soils of minerals. In addition, pesticides and herbicides have been sprayed on most soils, inadvertently destroying the microorganisms which are needed to release many of these minerals and to maintain soil fertility.

In Western Australia it is common practice to test soils for nitrogen, phosphorous and potassium (NPK) levels since that is all plants need to look good and grow;

other macro and trace elements are rarely tested, and thus depletion of many essential minerals has not been documented carefully, or even measured, in many areas.

The continuous yearly application of NPK fertiliser has resulted in a high phosphate status of soils, and two thirds of high phosphate status soils have been found to be deficient in sulphur and a quarter deficient in potassium.

Problems are compounded by the fact that high phosphate soils greatly diminish the uptake of copper, zinc and manganese by plants, probably owing to the formation of complex phosphate salts. Essential minerals and trace elements are not replenished with the addition of NPK fertiliser and the resulting food crops are severely deficient in them.

Low zinc levels in soils have been found in many regions throughout the world, this may directly impact on antioxidant status since zinc has a direct antioxidant action by occupying iron or copper binding sites in lipids, proteins and DNA.

Interestingly, it has also recently been reported that zinc binding to beta amyloid inhibits neurotoxicity by suppressing the generation of hydrogen peroxide.

These studies and many others suggest there is a need for mineral replenishment of soils, since depleted soils

cause deficiencies in plants which will have a detrimental impact on the entire food chain.

For example, studies comparing the antioxidant status of fruits such as plums, pears and peaches have found that levels of vitamins C and E and polyphenols are significantly higher in these fruits when grown using organic practices instead of conventional methods.

It has also been demonstrated that increased soil organic matter content increases the uptake of copper, zinc and manganese in oat crops.

The agricultural problems are further aggravated by the common harvesting procedure of picking fruits and vegetables before they reach maturity, despite the fact that most fruits and vegetables reach their maximum vitamin content at maturity. This practice also impacts upon the phytonutrient and antioxidant content.

Food processing and storage methods

Extensive research needs to be undertaken on the effects of storage on vitamin and phytonutrient levels in fruits and vegetables, since some studies have demonstrated their reduction during storage.

Processing and preservation of foods increases the problem further; for example, nutrient losses following the refining of flour and sugar have been demonstrated.

Similarly, a marked decrease of all trace elements with

the exception of copper occurs when rice is polished. Large losses of nutrients also occur due to the canning of fruits and vegetables. Although the snap-freezing of vegetables is thought to preserve many of the vitamin content of such foods, it has been found for example that the freezing of vegetables results in a loss of 37-56% of vitamin B6 levels.

Levels of vitamin B6 and pantothenic acid are also decreased as a result of freezing and canning of fruits or fruit juices, with losses ranging from 7% to 50%. Wholegrain foods on the other hand are valuable sources of nutrients which are low in the diet, including dietary fibre, the B-group vitamins, vitamin E, selenium, zinc, copper, magnesium and phytonutrients, including the phenolic antioxidants. Whole-grains are also a source of alpha-sitosterol, a cholesterol-lowering plant sterol.

Recently, some strategies have been developed to combat zinc and iron deficiencies by the fortification of these compounds in bread flour however, it is still lacking in sufficient nutrients.

Another problem is that the gluten content of wheat has been raised from 5% to 50% through the development of various hybrids and genetic modification of the wheat. It also means that the other nutrients in wheat have been lowered.

Recent research has established that the high levels of gluten has made the flour toxic to humans as it causes leaky gut syndrome. This means that holes are formed in the intestines, and then some of the contents of the intestines get into the blood stream. As a result the immune system attacks it so setting up a continuous process of inflammation. Therefore, it is not surprising that we see an increase in autoimmune diseases and an increase in various degenerative diseases. At least 205 diseases have been associated with wheat and/or wheat gluten. See website below for more information.

<http://www.greenmedinfo.com/toxic-ingredient/wheat#>

I therefore strongly advice everyone to stay off bread and wheat products.

Around 40 micronutrients including vitamins, essential minerals and trace elements are required in the human diet. Recommended dietary allowance of micronutrients is mostly based on information on acute effects of dietary deficiencies.

However, for long-term health, the optimum intake of dietary micronutrient quantities is largely unknown, and a substantial percentage of the population is deficient in many of the micronutrients.

Many individual essential minerals have been found

to be lacking in Western diets despite the availability of a huge range of foods, and supplementation of such minerals may prove to restore antioxidant balance in the body, or improve resistance to Alzheimer's disease via other mechanisms.

For example, magnesium has been studied extensively by researchers and has been demonstrated to lower serum total cholesterol, decrease serum LDL and insulin-stimulated glucose uptake in type 1 diabetic subjects.

Low Carbohydrate Diets

In developing countries diets are increasingly becoming higher in trans-fats, carbohydrates and refined foods; however, levels of fibre have decreased. These dietary factors are contributing to a rapidly increasing prevalence of obesity and type 2 diabetes and a decline in health, particularly in the aged.

Alterations in dietary lipids have been posited as playing a role in cognitive defects in Alzheimer's disease. It may be likely that high- carbohydrate and high-fat (transfats & saturated), high-cholesterol diets, together with declining levels of vitamin B12 and folate and with declines in trace minerals, may play a role in the pathogenesis of Alzheimer's disease.

The common recommendation of low-fat and high-carbohydrate diets, however, is contradicted by various studies. In fact, studies of glucose metabolism suggest this sort of diet is actually detrimental to human health. For example, in a dietary intervention

study in which patients were subjected to either a high-fat or high-carbohydrate diet, it was demonstrated that triglyceride, glucose and insulin levels were higher on the high-carbohydrate diet.

In another dietary intervention study, it was shown that a high- carbohydrate diet lead to increased insulin, and triglycerides but to significantly lower levels of HDL. Similar results were seen in non-insulin-dependent diabetes mellitus subjects when fed high- and low-carbohydrate diets; the conclusion suggested that high- carbohydrate diets did not improve glycaemic control nor insulin sensitivity but contributed to raised plasma triglycerides and VLDL concentrations yet reduced HDL levels.

Moreover, it has been demonstrated that a high-monounsaturated-fat, low-carbohydrate diet improves insulin sensitivity peripherally in non- insulin-dependent diabetes mellitus subjects.

The effect of high dietary fat on endurance performance in athletes has also been assessed, and a significantly improved performance was demonstrated when compared to a diet with high carbohydrate intake.

Studies of aerobic exercise and diet on obese women have also demonstrated that a greater loss of weight

occurs when subjects are on a low-carbohydrate diet than when consuming a low-fat diet.

The use of a low-fat, high-carbohydrate diet has also been found to increase hyperglycaemia and hyperinsulinaemia, therefore leading to upper-body obesity, glucose intolerance, hypertension and hypertriglyceridaemia. For example, a cross-sectional study of subjects in India revealed that central obesity was associated with higher postprandial plasma levels of insulin, glucose, serum iron and oxidative stress. This study also found that vitamin C, vitamin E, serum zinc/insulin ratio and serum magnesium/insulin ratio had an inverse association with high body fat.

In addition, when a diet consisting of 17 snacks per day was compared to the common three meals per day, a reduction of fasting serum cholesterol, LDL, apolipoprotein B and mean serum insulin levels were demonstrated. These results suggest that the frequency of meals is an important determinant of fasting serum lipid levels, probably due to the changes in insulin secretion.

Insulin resistance syndrome and associated conditions such as type 2 diabetes mellitus and hypertension are associated with age-related memory impairment and Alzheimer's disease. As the evidence of links between

insulin resistance, impaired glucose metabolism and Alzheimer's disease increases, it would appear that diets appropriate for the prevention of diabetes and obesity may also be appropriate for the prevention of Alzheimer's disease.

A meta-analysis of a number of studies has also revealed that high- mono-unsaturated-fat diets can improve lipoprotein profiles and glycaemic control in patients with type 2 diabetes. Therefore, a diet rich in mono-unsaturated fatty acids and medium chain saturated fatty acids (as in organic coconut oil) and low in carbohydrates, trans-fats and long chain saturated fats, may be useful for the elderly and also for Alzheimer's disease patients.

Benefits of Olive Oil.

HDL, which carry cholesterol from the body's tissues to the liver, are considered to be the 'good' form of cholesterol. LDL, often classed as the 'bad' form of cholesterol, contain greater amounts of cholesterol than HDL, carry cholesterol and fatty acids from the digestive tract to tissues, and have been linked to the formation of atheromas, atherosclerosis and heart disease.

Various studies have demonstrated positive health effects, including raising HDL/LDL ratios, following

Thank You for previewing this eBook

You can read the full version of this eBook in different formats:

- HTML (Free /Available to everyone)
- PDF / TXT (Available to V.I.P. members. Free Standard members can access up to 5 PDF/TXT eBooks per month each month)
- Epub & Mobipocket (Exclusive to V.I.P. members)

To download this full book, simply select the format you desire below

