

## **DIETARY SUPPLEMENTS: helpful, harmful or indifferent?**

I feel that most readers of this article will be aware of the UK dietary guidelines which advise us to:

- Cut down our fat intake
- Substitute unsaturated rather than saturated fats
- Cut down sugar intake
- Increase the fibre in our diet
- Cut down our salt intake
- Increase our fruit and vegetable intake (which provide essential vitamins and minerals)

These guidelines are for the general population, aiming to prevent or control conditions prevalent today eg heart disease, diabetes, obesity and some of the cancers. These guidelines are thought to be just as relevant for those of us who have MS as our condition does not make us immune from these other major 'killers'. There is also some evidence that the recommendations in relation to fat may also be helpful in slowing disease progression in MS; and are the basis of the Swank diet.

### *Do we get enough vitamins and minerals?*

Nutritionists suggest that a well balanced diet will provide enough vitamins and minerals for our needs. However many people with MS may find problems in achieving a balanced diet. Fatigue is present in approximately 90% of those with MS, which may adversely affect our ability to shop, prepare and cook meals; as well as possibly having to manage on a reduced budget.

So it is not surprising that many of us pop a daily vitamin tablet. As long as we purchase a well known proprietary brand and adhere to the recommended dosage, we are not likely to come to any harm, and we may even benefit!

Super-doses are to be avoided particularly in the fat-soluble vitamins (A, D, E and K) as it is hard for the body to eliminate excess and they can be toxic.

### *Other nutritional supplements*

Within the world of complementary therapies (therapies used together with, rather than instead of conventional medicines) there seems to be a *mantra* which exhorts us to embrace *positive health* as well as *preventing disease*. This seems an admirable policy and one which the *World Health Organisation* endorses.

### *However how is positive health achieved?*

Within the world of complementary therapies, one of the ways, of which you may be aware, is to take dietary supplements which are suggested to stimulate the immune system. There is the *common sense* belief that a stimulated immune system will be better able to fight disease. Scientifically speaking this makes sense in fighting infectious diseases.

*As people with MS---do we want to stimulate our immune systems?*

**NO!!!** but why not?

There is much controversy in relation to the causes of MS. However MS is considered a multi-factorial disease with environmental factors acting on people who have particular vulnerable genetic make-ups. Such factors act together to cause the body's immune system to wrongly recognise its own myelin sheath (which surrounds the brain and spinal cord) as '*foreign*' and attacks it. Such an attack is the relapsing phase of MS. It is particular cells within the immune system, which are targeted, namely macrophages, T and B lymphocytes.

Most nutrient supplements have not been investigated in people with MS and therefore it is not known whether they are helpful or harmful. However it would seem to make sense to avoid immune-stimulating supplements. Over the last eleven years, that I have had MS, I have suggested (to anyone who would listen!) that we do not want to stimulate our immune system, rather we want to suppress it.

Now at first hand, I have discovered an international expert, who also suggests that immune stimulating supplements should be avoided. At the beginning of November I was pleased to attend the MS Trust conference in Leeds as their guest and to meet Allen Bowling. One of the most important sessions was presented by Allen, who is the Medical Director of the Rocky Mountain MS Centre in Colorado, Director of the Complementary and Alternative Medicine Program at the Centre and Associate Professor of Clinical Neurology at the University of Colorado. He is known for his non-judgemental and evidence-based approach.

In his talk Allen suggested that a diet high in polyunsaturates may be beneficial for those with MS; and also he mentioned the growing evidence of the possible role of vitamin D both as a prophylactic (prevention) and once MS has been diagnosed.

However he suggested that as there have not been investigations of other nutritional supplements in people with MS, that instead we consider the effects of these substances on macrophages and T and B lymphocytes in the laboratory. He has produced a list of supplements, which may be harmful and why. Some of these supplements may interact with other medications, preventing the latter from working or producing a harmful reaction.

I am reproducing this list below with his permission.

**“Potentially Harmful Supplements**

*Alfalfa:* immune-stimulating

*Aloe:* may interact with steroids

*Asian Ginseng*: immune-stimulating, possible fatigue-producing, may interact with steroids

*Astragalus*: immune-stimulating

*Bayberry*: may interact with steroids

*Beta carotene*: immune-stimulating, greater than 10,000 IU/day may produce toxic effects, avoid in smokers

*Borage seed oil*: possible liver toxicity

*Cat's claw*: immune-stimulating

*Chamomile*: possibly fatigue-producing

*Chapparal*: possible liver toxicity

*Coenzyme Q10*: immune-stimulating, may interact with warfarin

*Comfrey*: possible liver toxicity

*DHEA*: possible immune-stimulating

*Echinacea*: immune-stimulating

*Garlic*: immune-stimulating

*Goldenseal*: possibly immune-stimulating, possibly fatigue-producing

*Grapeseed extract*: possibly immune-stimulating

*Kava – kava*: possible liver toxicity, possibly fatigue-producing

*Licorice*: may interact with steroids

*Lobelia*: multiple possible toxic effects

*Melatonin*: possible immune-stimulating

*Niacin*: greater than 35mg / day may produce toxic effects

*Nettle*: possibly fatigue-producing

*Oligomeric proanthocyanidins*: possibly immune-stimulating

*Passion flower*: possibly fatigue-producing

*Pycnogenol*: possibly immune-stimulating

*Sage*: possibly fatigue-producing

*St John's wort*: possibly fatigue-producing

*Selenium*: possibly immune-stimulating, greater than 200 micrograms / day may produce multiple toxic effects

*Siberian ginseng*: immune-stimulating, perhaps fatigue-producing

*Valerian*: possibly fatigue-producing

*Vitamin A*: immune-stimulating, greater than 10,000 IU / day may produce toxic effects, avoid in smokers

*Vitamin B6*: greater than 50 milligrams / day may produce toxic effects

*Vitamin C*: immune-stimulating, greater than 1,000 milligrams / day may produce toxic effects, may interact with warfarin

*Vitamin D*: greater than 2,000 IU / day may be harmful

*Vitamin E*: immune-stimulating, may interact with warfarin

*Vitamin K*: : may interact with warfarin

*Zinc*: possibly immune-stimulating, may cause copper deficiency

(Bowling, 2005) “

This list of supplements is included in an article written by Allen with the title '*Diet and Dietary Supplements in MS*'. This article was in a newsletter '*Informs*' published in the winter 2005 edition. The whole article can be found on the Complementary and Alternatives Program of the Rocky Mountain MS Centre web-site.

*How to find and read or down load the article*

The web address is [www.ms-cam.org](http://www.ms-cam.org)

At the bottom of the home page you are required to login. Before you can do this you will need to register. Instructions are given. A membership fee is suggested, but this can be waived.

After login you follow the guidance below:

- Learn about MS
- Resource library
- INFORMS newsletter
- Winter 2005 p3-12
- Diet and dietary supplements

*Interview with Allen Bowling*

Allen was interviewed by the MS Trust, during the November conference, where he answered questions about the benefits and potential harm associated with a wide range of complimentary therapies. This interview is available as a webcast accessible at [www.mstrust.org.uk/bowling](http://www.mstrust.org.uk/bowling) A transcript of the session can also be downloaded or ordered from [www.mstrust.org.uk/publications](http://www.mstrust.org.uk/publications)

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