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From the World of Health and Nutrition

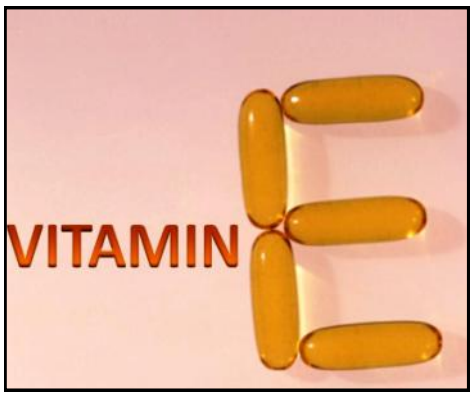
Stress and Candidiasis

The Australian Open Tennis Championship has seen the world's finest players struggling with their **breathing**. While this is understandable with extreme physical exertion, stress can also deplete the immune system, making the body more vulnerable to candida overgrowth. Candida or yeast overgrowth can lead to blocked sinuses and breathing problems.

Studies available on this site illustrate this. Treating candida overgrowth might be the way to diminishing breathing difficulties, as well as treat **sinus** blockage. **Gluten** intolerance, which are reactions to wheat, rye oats and barley, might be caused by candidiasis.

Vitamin E
Could Taking This Supplement Be Dangerous?

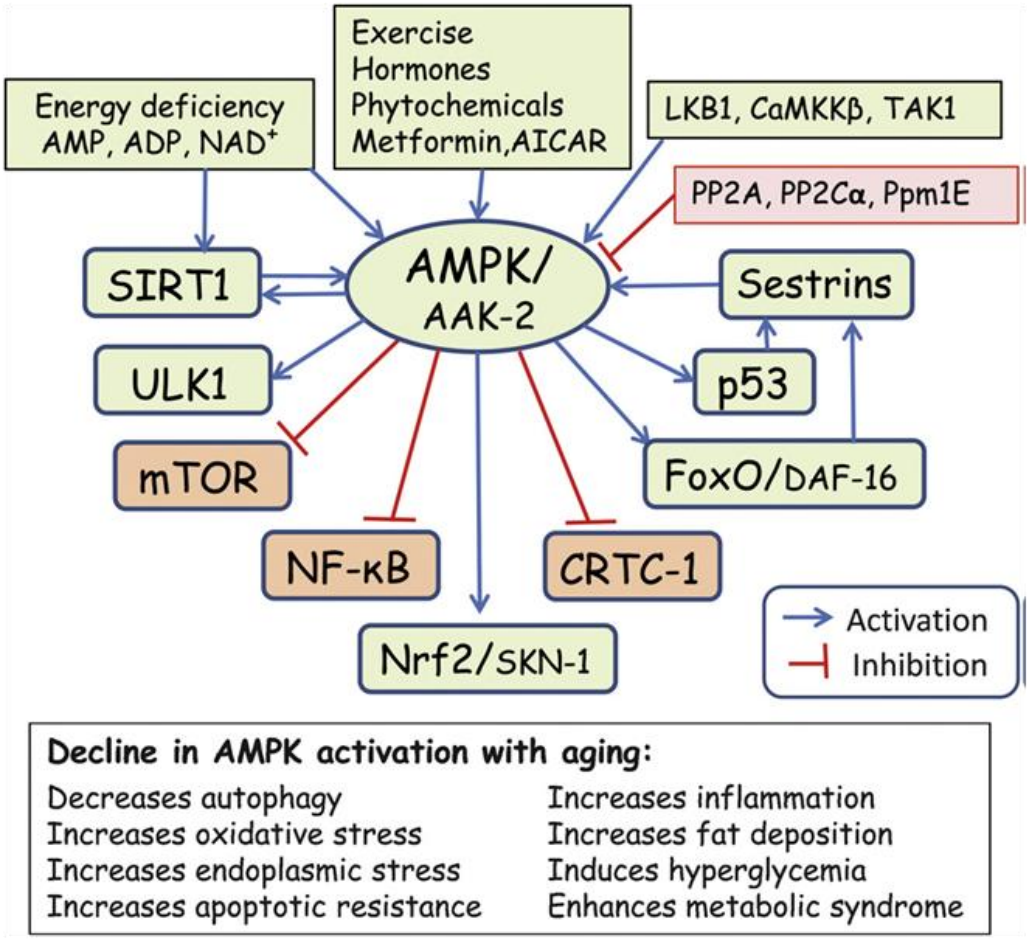
Vitamin E is found predominantly in vegetable oils and therefore with the notion that many of us might not be getting enough of this vitamin, at the close of the last millennium, most studies suggested that supplementing might be a good idea. Then recently research surfaced connecting vitamin E with an increased prostate cancer risk, heart disease and even a greater threat of death. Not surprisingly these revelations decidedly cooled enthusiasm for taking extra vitamin E. This is illuminated by the **study** accessible on this site, which agrees that supplementary vitamin E would be unwise.



Vitamin E is a complex substance consisting of both tocopherols and **tocotrienols**. If these were a sporting team, tocotrienols would be the minor players. However a recent **review** provides some evidence that tocotrienols might have the capacity to prevent dementia and protect against heart disease. The bottom line though is that research is still in its infancy and before supplementation can be endorsed we need more trials on humans. Unfortunately this hasn't dulled the fervor of commercial interests.

My e-Book **You Have The Power** has an excellent segment dealing with the pros and cons of multivitamin and antioxidant supplementation.

AMPK
The Possible Key to Longevity



AMPK, located at the epicentre of the diagram above, might just be the magic protein that promotes longevity. AMPK can protect against cancer and heart disease, prevent weight gain while stimulating fat loss, and as the diagram above suggests initiate a host of events that can protect us, as we age. Unfortunately AMPK becomes less active with ageing, which in turn activates all those biochemical processes located in the box, that are bad for us. What we need to do is restore AMPK's vital function.

What switches on AMPK? Regular exercise, eating less and here you only need 10-20% less with every meal, a drug called Metformin, also used to control blood sugar, soy and a host of other natural substances. These include resveratrol, green tea, black tea, quercetin, a vitamin-like substance found in apples and onions, curcumin in curry, the herb ginseng and the antioxidant alpha-lipoic acid in **Memozeal**.

The female hormone oestrogen and thyroid hormone also switches on AMPK, whereas a study on mice shows that growth hormone can actually turn it off. Those mice who were genetically engineered to lose their growth hormone were found to have increased AMPK activity and lived longer, which questions the wisdom of growth hormone supplementation, especially in the case of those who don't have deficiencies of this hormone.

Antioxidants and Exercise
Should we be taking them?

There are a number of websites claiming unequivocally that we need to take antioxidant and vitamin supplements. Research and the science of antioxidant supplementation is much less clear about this. An illustration is the diagram below. Free radicals (ROS) are not always malicious and in this instance, when they are promulgated by exercise, they ignite a bunch of genes, which make our cells more responsive to insulin helping them to use glucose or sugar for energy. What also comes into play are our own cellular defences, which protect us. Antioxidants get in the way. In this research the antioxidants utilised were vitamin C at a dose of 1000mg and 400mg of vitamin E.

This study did not absolutely negate the use of antioxidants, as it suggested that continuous production of ROS might be counterproductive, but those produced during exercise could be useful and it might not be a good idea to totally neutralize them. An excellent **review** examining all the studies which have investigated the effects of antioxidant supplementation, and can be accessed by you, reinforces the point 'that modest augmentation in ROS levels causes muscle force to increase, while antioxidants deplete oxidant levels and depress force. At higher ROS concentrations this is reversed and force production decreases in a dose-dependent manner.' What I am doing is to reduce my antioxidant regimen especially around exercise. As the review states near its conclusion, what we really need is measurements of our free radical and antioxidant status but this is very complex and not yet commercially available.