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## Welcome to Natural Health Review Issue 28.

Each issue of Natural Health Research Review highlights a selection of recently published studies that I hope will be of interest to natural health practitioners. In addition to providing 3 key facts of the study, I add a comment about why the study might be of interest and how it can potentially affect current practice in the field of natural health.

This time we have a fascinating study that combined omega-3 with a cholesterol-lowering drug to produce exceptional results. I predict we will see many more studies like this in the future, focusing not on "pharmaceutical" or "natural" treatments, but on what works. Also this time, we have a cautionary tale. I normally like to focus on positive findings here but every now and then, it is useful to issue a warning about safety. Acupuncture is usually safe but we have a study showing that it can on rare occasions cause death, either from misplacement of needles or failure to sterilise equipment. Please ensure your acupuncturist is well trained!

Meanwhile, the staff at Research Review and I wish you a wonderful seasonal holiday.

Kind Regards,

**Prof Shaun Holt**  
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## Omega-3 fatty acids reduce gum disease



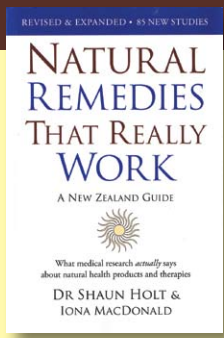
### The facts:

- 9182 adults participating in the National Health and Nutrition Examination Survey between 1999 and 2004 in the US were evaluated for the presence or absence of gum disease, in addition to having their omega-3 fatty acid intake assessed.
- People who consumed the most dietary DHA (docosahexaenoic acid) were found to have about 20% lower prevalence of gum disease than patients who ate the least DHA; the impact of EPA (eicosapentaenoic acid) consumption was less apparent.
- The effects of omega-3 fatty acids in reducing gum disease appear to be due to their anti-inflammatory properties.

### Prof Shaun Holt:

Yet another part of the body that omega-3 can help with! Periodontitis is a common, usually long-lasting inflammatory disease that can cause gum tissue to separate from teeth, which can lead to bone and tooth loss. This study found a significant association between omega-3 intake and lower incidences of the disease, but before omega-3 can be recommended for this purpose, specific trials need to be done whereby groups of patients with the disease take omega-3 and control groups take placebo ... this is how the effect can be proven.

<http://dx.doi.org/10.1016/j.jada.2010.08.009>



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## Nutritional supplements improve running performance

**The facts:**

- A pre-exercise supplement containing caffeine, creatine and amino acids (Game Time<sup>®</sup>) was given to 10 young adults before exercise to see if it might improve their aerobic or anaerobic exercise capacity.
- The drink caused an 11% increase in anaerobic running capacity but there was no significant difference between the effect of the supplement drink and a placebo on aerobic capacity.
- Drinking a pre-exercise supplement containing caffeine, creatine and amino acids improved anaerobic performance, but had no effect on aerobic power.

**Prof Shaun Holt:**

We know that caffeine can improve athletic performance, and so it is no surprise that a combination of caffeine with creatine and amino acids also had the same effect. It would be interesting to see how this combination compared to caffeine alone. However, for serious athletes, the observed improvements of up to 11% are highly desirable.

<http://dx.doi.org/10.1016/j.nutres.2010.09.004>

## Omega-3 supplement helps control blood lipids

**The facts:**

- 62 South Korean patients with mixed dyslipidaemia (high blood levels of triglycerides and total cholesterol) were given the cholesterol-lowering drug simvastatin alone or with 4g of omega-3 fatty acids (Omacor<sup>®</sup>) each day for 6 weeks.
- Over the 6-week treatment period, triglyceride levels fell by 41% in patients taking simvastatin plus Omacor<sup>®</sup> compared with 14% in patients taking simvastatin alone.
- The combination of omega-3 fatty acids plus simvastatin therefore appears to be more effective than simvastatin alone in patients with mixed dyslipidaemia.

**Prof Shaun Holt:**

This is a fascinating study as it combines pharmaceutical and natural treatments and they work together to produce exceptional results. Six weeks of treatment with the combined pharmaceutical/natural treatment was found to reduce blood levels of triglycerides by 41%, compared to 14% in the group receiving the pharmaceutical drug. I predict that we will see many more studies like this in the future, focusing not on “pharmaceutical” or “natural” treatments, but on what works.

<http://dx.doi.org/10.1038/ejcn.2010.195>



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## Some herbal supplements reduce anxiety



**The facts:**

- This review of published studies investigated the potential use of dietary and herbal supplements in patients with anxiety or depression.
- A total of 24 studies investigated 5 different complementary medicine monotherapies and 8 different combination treatments (including passionflower, lysine, magnesium, kava and St John’s wort), mostly in patients diagnosed with either an anxiety disorder or depression.
- Most of the studies showed evidence supporting the efficacy of the dietary and herbal supplements and any reported side effects were mild to moderate.

**Prof Shaun Holt:**

This review of published research looked at the evidence for the effectiveness of natural products for the treatment of anxiety disorders. Whilst there was a wide range in the quality of the research that has been undertaken, as you would expect, there was reasonably firm evidence that 5 products may be helpful: passionflower, lysine, magnesium, kava and St John’s wort. We need much more research, as anxiety is a common problem that is hard to treat conventionally, with many treatments causing side effects.

<http://dx.doi.org/10.1186/1475-2891-9-42>



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## Capsaicinoid supplement has weight loss effects

### The facts:

- Capsaicin extracted from chili peppers has previously been investigated for potential health benefits, including weight loss, anti-inflammatory or antioxidant activity, and cancer cell inhibition.
- This study investigated the fat-burning effects of Capsimax® (providing a 2mg dose of capsaicinoids) when given to 20 men and women two hours before exercise.
- The supplement increased levels of fat burning before and after exercise compared with placebo without affecting heart rate or blood pressure, although it did cause some gastric upset.

### Prof Shaun Holt:

This small trial found that an extract of chili peppers can lead to higher blood levels of certain body fats, which could mean that more fat is burned off during exercise. The product, capsaicin is found in the white pulp of chili peppers and is the compound that gives them their 'heat', causing a burning sensation in any tissues that it comes into contact with. Not only will it burn your mouth, but it may well also help you burn off calories!

<http://dx.doi.org/10.1186/1476-511X-9-72>



Independent commentary by

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## Vitamin C lifts mood in hospitalised patients

### The facts:

- Hypovitaminosis C and D (i.e. low levels) are common in acutely hospitalised patients for various reasons and may be linked to psychological abnormalities.
- Hospitalised patients were given vitamin C (500mg twice daily) or vitamin D (1000 IU twice daily) to see if either vitamin had any effects on mood.
- Vitamin C improved mood disturbance scores in patients by 34% but vitamin D had no effect.



### Prof Shaun Holt:

Vitamin C levels are low in around 20% of sick people in hospital, and many have low mood ... could these be related and, if so, can giving vitamin C help? This study suggests so, finding an improvement in mood scores of around 1/3. The mechanism by which the vitamin C acts is not known, but this is an intriguing finding and should be studied further. The study did not find any improvements from vitamin D.

<http://dx.doi.org/10.1016/j.nut.2010.05.016>

## Probiotics may protect against respiratory illness in infants

### The facts:

- 109 newborn infants were given a tablet containing *Bifidobacterium animalis* subsp. *lactis* BB-12 twice daily (equivalent to 10 billion colony-forming units per day) via a novel slow-release pacifier or a spoon until they were 8 months of age.
- Infants who received BB-12 tablets had 31% fewer respiratory infections over the course of the study than infants who received a placebo tablet but no between-group differences were seen for stomach symptoms, ear infections or antibiotic use.
- Administration of the probiotic BB-12 via a dummy or spoon may therefore reduce respiratory infections in early childhood.



### Prof Shaun Holt:

There are two very interesting findings from this study. Firstly, the novel way in which the supplement was given - this was the first study to give probiotics using a pacifier. And secondly the main finding that almost all infants had a respiratory infection without probiotics, but this reduced to around 2/3 in those who were given the supplement, an impressive reduction.

<http://dx.doi.org/10.1017/S0007114510003685>

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## Vitamin D might reduce asthma symptoms

### The facts:

- A review of nearly 60 years of literature of vitamin D levels and asthma found that vitamin D deficiency is linked to increased airway reactivity, poorer lung function, and worse asthma control.
- Risk factors for vitamin D deficiency were found to include obesity, being African-American, and living in Westernised countries; these populations are also known to be at higher risk for developing asthma.
- The findings suggest that vitamin D supplementation may improve asthma control in susceptible individuals but further studies are needed.

### Prof Shaun Holt:

Vitamin D has been described as the new "it" vitamin as numerous studies have linked its deficiency to a host of medical conditions, including heart disease, diabetes and certain cancers. Could it play a role in asthma as well? Vitamin D deficiency is strongly linked to increased airway reactivity, lower lung function, and worse asthma control, but it has not yet been demonstrated that giving vitamin D supplements to people with asthma who are deficient (which is most people) will reduce symptoms.

<http://dx.doi.org/10.1016/j.anaei.2010.01.013>



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## Deaths after acupuncture

### The facts:

- A review of acupuncture reports from the past 45 years identified 86 people who died soon after receiving acupuncture; most died after being treated by acupuncturists in China or Japan, but some deaths were recorded in the US, Germany and Australia.
- The most common cause of death was punctured heart or lungs, but damaged arteries and livers, nerve problems, shock, infection and haemorrhage were also seen, largely because of incorrect needle placement or failure to sterilise the equipment.
- Acupuncture-related deaths are avoidable and proper training is essential for all acupuncturists.

### Prof Shaun Holt:

Normally, I like to focus on positive findings in the Natural Health Research Review, but every now and then, it's useful to issue a warning about safety. Acupuncture is safe on the whole, but it does of course involve inserting a number of needles into the skin and surrounding tissues. There are many reports of serious injuries, and it's likely that the real number is vastly under-reported. Making sure that your acupuncturist is well trained is your best way to stay safe.

<http://dx.doi.org/10.3233/JRS-2010-0503>

## Mediterranean diet good for diabetics

### The facts:

- An Italian study has found that a Mediterranean diet rich in vegetables and whole grains, and with 30% of calories from fat (mostly olive oil), helps control blood sugar levels better than a typical low-fat diet in people with diabetes.
- After 4 years on the diet, fewer than half the people on the Mediterranean diet needed to take diabetes drugs compared with nearly three-quarters of those who followed the low-fat diet.
- People eating a Mediterranean diet also had improvements in heart disease risk factors compared with those on a low-fat diet, but weight loss was similar between the 2 groups.



### Prof Shaun Holt:

The Mediterranean diet is rich in vegetables and whole grains but low in red meat, with protein being obtained from fish or poultry. This intriguing study found that people newly diagnosed with diabetes were more likely to be able to manage their disease without taking medications if they followed this diet compared to a low-fat diet. The study authors conceded that this and other research shows "... that adopting a Mediterranean diet may help prevent type 2 diabetes, and also improve glycaemic control and cardiovascular risk in persons with established diabetes".

<http://www.annals.org/content/151/5/306>

