



HEALTH SUPPLEMENTS AND YOUR HEART: Are They Effective And Safe?

Your heart is a strong, hardworking pump that distributes oxygen and nutrient rich blood to all parts of your body. Several factors may cause the heart and its cardiovascular system to go wrong, resulting in different diseases such as high blood pressure, high cholesterol, atherosclerosis and heart failure etc.

Dietary control and conventional medicines are the mainstay of treatment. However, there are many health and dietary supplements (that claim to promote heart health) which can be purchased easily off the shelves. Are they EFFECTIVE? And more importantly, are they SAFE?

SUPPLEMENTS WITH THEORETICAL HEART BENEFITS

L-Arginine Dilates your blood vessels, improves blood vessel function and increases blood flow to the heart. There is also some evidence that L-arginine has benefits in interrupting the snowball effect of heart failure. Despite these promising effects, the clinical benefits of L-arginine are limited. It is **not necessary for you to take supplemental L-arginine for preventing heart disease.** But if you decide to try it, L-arginine is usually safe for most patients. However L-arginine may cause a decrease in blood pressure. This could lead to hypotension, especially if you are taking other medications for hypertension.

Carnitine An amino acid-like cofactor in muscles and the heart cells. It is involved in generating energy. Patients with heart failure seem to have decreased levels of carnitine in heart tissue. The evidence supporting carnitine is growing, but it is still fairly preliminary. **There is not enough evidence to recommend the use of carnitine** for heart disease prevention.

Hawthorn (*Crataegus Monogyna*) A herb with a long history of use in Europe. Hawthorn contains constituents that increase heart contraction and blood flow, and cause vasodilation. Hawthorn is chemically similar to digoxin (a medication that increases heart contraction). Some people claim that hawthorn is safer than digoxin. But there is no evidence that this is true. It is **not appropriate for self-treatment** as there may be potential drug-herb interactions and adverse effects.

Coenzyme Q-10 (*Ubiquinone*) Vitamin-like cofactor found in cells and plays an important role in energy production. Researchers think that replacing coenzyme Q-10 may improve cellular energy production and prevent cell death in people with heart failure. Coenzyme Q-10 also has antioxidant effects and can prevent oxidative damage. There is a lot of controversy about the effectiveness of coenzyme Q-10 and **more evidence is required to recommend its use.**



Vitamins Vitamin C (ascorbic acid) and Vitamin E (alfa-tocopherol) have antioxidant effects. They may prevent LDL-cholesterol build up and oxidation in the arteries. However, recent studies **did not show benefits for prevention of heart disease**. Vitamins C & E can be used safely for other purposes but avoid mega doses. Vitamin E may affect blood thinning medications.

Garlic (*Allium Sativum*) Garlic contains a variety of constituents that seems to inhibit cholesterol synthesis. Garlic is also said to have antioxidant and blood thinning properties. However, many studies were conducted and most show **no benefits**. It is unknown how effective garlic supplements really are. If they do help, benefits are probably very modest. Garlic may cause abdominal discomfort. There are also **potential interactions with conventional medications**. Garlic may increase the risk of bleeding if combined with blood thinning drugs.

Red Yeast Rice (*Monascus*) These products are extracts of rice that has been fermented with the *Monascus purpureus* strain of red yeast. This process naturally yields numerous different HMG-CoA reductase inhibitors or statins (a group of medicine used for lowering cholesterol). It is not surprising that red yeast rice products are effective. As red yeast rice products contains numerous statins, they can also cause the same side effects (such as muscle and liver damage) and have similar drug interactions associated with this group of medicine.

Fish Oils. Contains two important polyunsaturated omega-3 fatty acids **eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA)**. Omega-3 fatty acids in doses of up to 5 grams per day may reduce triglycerides by as much as 20% to 50%. Omega-3 fatty acids may also have anti-atherosclerotic and blood pressure lowering effects. They can be **recommended (by doctor's advice) for coronary heart disease and lowering triglycerides**. High doses of these fatty acids can increase the risk of bleeding when used concomitantly with anticoagulant and antiplatelet drugs such as warfarin or aspirin.

- Remember**
- i) There are many products in the market. **ALWAYS** take health supplements and alternative medicines with care.
 - ii) **ALWAYS** consult your health professionals before using any health or herbal supplements especially if you have existing medical conditions or are taking conventional medications.
 - iii) **Natural does not mean safe**. An overdose of health supplements may be harmful.

The information in this leaflet is meant for educational purposes and should not be used as a substitute for medical diagnosis or treatment. Please seek your doctor's advice before starting any treatment or if you have any questions related to your health, physical fitness or medical condition.

Contents in this brochure are not to be quoted or reproduced without the permission of National University Hospital. Information is correct at time of printing (June 2006) and is subject to revision without notice.

National University Hospital

5 Lower Kent Ridge Road, Singapore 119074

Tel : 6779 5555 Fax : 6779 5678 Website : www.nuh.com.sg

This information leaflet is produced by



NUH Pharmacy Committee for Health Supplement & Alternative Medicine