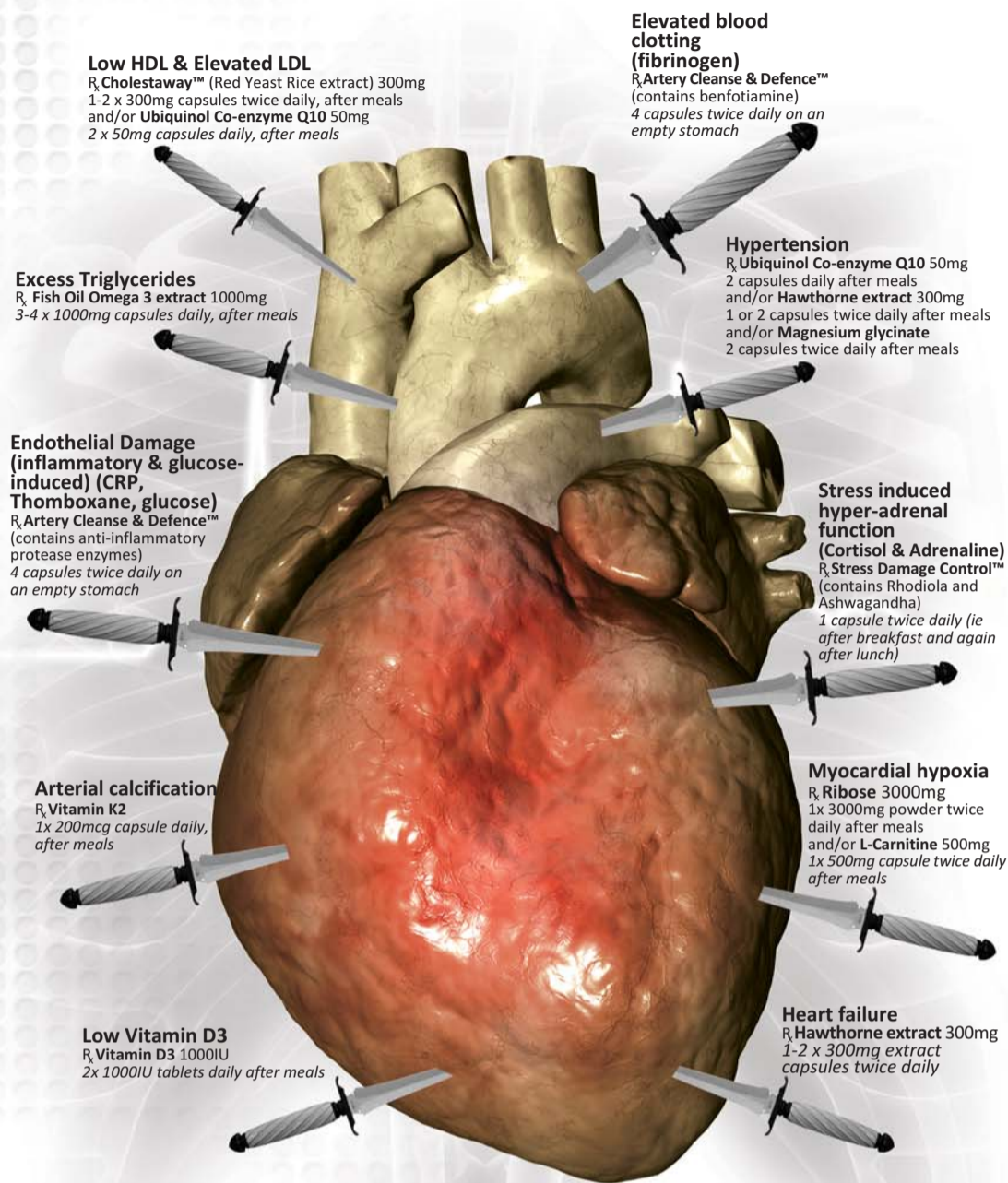


Heart and blood vessel disease is so much more than just triglycerides, cholesterol, LDL/HDL and hypertension



This image depicts daggers aimed at a healthy heart. Any one of these daggers would kill if thrust deep into the heart. In the real world, however, aging humans suffer small pricks from the point of many of these daggers over a lifetime. Although none of the pricks by itself is enough to cause myocardial infarction, the cumulative effect of these dagger pricks (risk factors) is arterial occlusion and, far too often, angina or acute myocardial infarction.

The 10 Daggers:

1. Low HDL & Elevated LDL
2. Excess Triglycerides
3. Endothelial Damage (inflammatory & glucose-induced) (CRP, Thromboxane, glucose)
4. Arterial calcification
5. Low Vitamin D3
6. Elevated blood clotting (fibrinogen)
7. Hypertension
8. Stress induced hyper-adrenal function (Cortisol & Adrenaline)
9. Myocardial hypoxia
10. Heart failure

For a free copy of the DVD recording of the **Preventive Heart Health Seminar** contact Solal Technologies. ►



Speakers at the Seminar include:

Dr Craigie Golding – MBChB (Cum Laude)(Pretoria); FCP(SA), Specialist Physician ABAARM: Board Certified Anti-Aging Physician – American Board of Anti-Aging and Regenerative Medicine.
Dr Mitch D Kaplan – MBCh FFRAD(D) S.A. Specialist Radiologist
Brent Murphy – B.Pharm (Rhodes), MPS, Pharmacist

Topics covered at the Seminar include:

1. **Coronary Heart Disease & Preventive Heart Health:** a discussion on the risk factors for heart and blood vessel diseases, including cholesterol, homocysteine, inflammatory markers (silent inflammation), CRP, Lp(a), Fibrinogen, TXA2, mitochondrial cardiac fatigue, metabolic syndrome, and how to reverse these. We will also focus on important heart-active nutraceuticals, such as Magnesium, Ubiquinol, EPA/DHA, Carnitine, Arginine, Taurine, Ribose, Vitamin D, and others. We will show how these can be incorporated into conventional therapy, to improve efficacy and reduce the adverse reactions of conventional medicines.
2. **Hypertension:** a presentation on preventive medicine alternatives to chronic medicines. Anti-hypertensive medicines have a narrow mechanism of action, therefore addressing the symptom of hypertension alone, rather than addressing the underlying blood vessel disease and other pathologies that cause it. This talk will focus on safer and wider-acting preventive strategies for managing hypertension, including lifestyle measures, nutrition and nutraceuticals, to address the underlying causes of hypertension.
3. **Preventive Imaging:** early detection of coronary artery disease.
4. **Case studies:** using natural medicines to reverse the risks for heart disease. The follow up blood results, angiograms and clinical outcomes will be discussed for these cases.

10 Important Preventive Medicines for Cardiovascular Health:

1 Artery Cleanse & Defence™ "You are only as old as your blood vessels" -Sir William Osler, Father of Modern Medicine



Composition per daily dose:

- Bromelain 1400 GDU
- Nattokinase 6400 FU
- Serrapeptase 30000 IU
- GliSODin® (enteric coated SOD [super-oxide-dismutase]) 500 IU
- Arginine 2800mg
- Sulforaphane 3mg
- Benfotiamine 100mg
- Cats Claw (Uncaria tomentosa) extract (3% POA [pentacyclic oxindole alkaloids]; No TOA [tentacyclic oxindole alkaloids]) 400mg
- Grape seed extract (standardised to 95% oligomeric proanthocyanidins) 180mg
- Pomella® Pomegranate extract (standardised to 30% punicalagins) 180mg

► SUMMARY OF BENEFITS:

Bromelain:

Bromelain is used to support cardiovascular health by reducing risk factors for heart attack and/or stroke. Studies show that bromelain inhibits platelet aggregation and decreases the pain and inflammation associated with blood clots; improving some symptoms of angina and thrombophlebitis. Thrombolytic enzymes (enzymes that break down blood clots) are normally generated in the endothelial cells of the blood vessels. As the body ages, production of these enzymes begins to decline, making blood more prone to coagulation. This mechanism can lead to cardiac or cerebral infarction, as well as other conditions. Since endothelial cells exist throughout the body, such as in the arteries, veins and lymphatic system, poor production of thrombolytic enzymes can lead to the development of blood clots and the conditions caused by them, virtually anywhere in the body.

Nattokinase:

Nattokinase is a particularly potent protective enzyme because it enhances the body's natural ability to fight blood clots in several different ways and has many benefits including convenience of oral administration, confirmed

efficacy, prolonged effects and can be used preventatively. Nattokinase produces a prolonged action in two ways: it prevents the formation of thrombi and it dissolves existing thrombus. In addition, the researchers confirmed the presence of inhibitors of angiotensin converting enzyme (ACE) thereby lowering effect on blood pressure. The same natto extract was then tested on human volunteers with high blood pressure. On average there was a 10.9 percent drop in SBP and a 9.7 percent drop in DBP.

Serrapeptase

Reverses the endothelial inflammation that leads to blockage and is directly fibrinolytic, thereby removing existing clots (unlike aspirin). It has powerful anti-CRP effects. Serrapeptase does have blood thinning effects so be careful in patients taking warfarin (monitor INR/PT).

Pomegranate

In a group of aging humans with risk factors for cardiovascular events, pomegranate or placebo was ingested on a daily basis. After twelve months, blood flow through the carotid arteries improved 44% in the pomegranate group, whereas carotid blood flow worsened by 9% in the placebo group. In another similar group, pomegranate or placebo was ingested daily. After only three months, coronary artery blood flow improved by 18% in the pomegranate group, but worsened by 17% in the placebo group.

Enteric coated SOD [super-oxide-dismutase] (GliSODin®)

Aging results in a reduction of our body's production of the critical antioxidant called superoxide dismutase (SOD). One consequence of SOD depletion is excess degradation of endothelial nitric oxide. An orally active superoxide dismutase (SOD) called GliSODin® has been clinically proven to support healthy arterial function and structure, while boosting levels of the body's most powerful antioxidant enzymes (SOD and catalase) and protecting against oxidative stress-induced cell death. Studies show that damaging carotid artery thickness increases by 0.04 mm every ten years. However, the recent study with GliSODin® suggests that 2.8 years of supplementation may turn back the clock on ten years of age-related damage due to carotid artery wall thickening.

Arginine

Arginine also improves cardiac blood flow, reduces atherosclerosis and protects the endothelium from inflammatory damage, mainly via a mechanism of increasing nitric oxide.

Sulforaphane

Activates transketolase, is a key enzyme that changes endothelial damaging glucose by-products into harmless compounds for safe elimination.

Benfotiamine

Prevents oxidative damage and sugar and advanced glycation end product induced inflammatory damage to blood vessels.

NOTE: Benfotiamine is also available as a stand alone product from SOLAL Technologies. Benfotiamine is a unique fat soluble form of vitamin B1, which unlike conventional vitamin B1, penetrates into the blood-vessel cells, where it prevents inflammatory damage to the blood vessels, caused by alcohol, refined carbohydrates and AGE's (Advanced Glycation End products).



Cats Claw

Reduces NF-kappa B, thereby reducing endothelial damage and lesions and has anti thromboxane effects.

Grape seed extract

Attenuates development of atherosclerosis. Has plasma antioxidant capacity. Improves lipid profile in hypercholesterolaemic subjects. Reduces post-prandial oxidative stress. Significantly reduces oxidised LDL and inhibits endothelial CD36 expression.

2 Vitamin K2

Keeps calcium in bones, not in the arteries

Composition per daily dose:

- Menaquinone-4 (MK-4) K2 155mcg
- Menaquinone-7 (MK-7) K2 45mcg



Arterial calcification, a process of hardening of the arteries, is inhibited and even reversed with supplementation with vitamin K2. Benefits are only seen with the K2 form of vitamin K, not the K1 form. Caution: use with care in warfarin patients. Vitamin K can oppose the effects of warfarin.

3 Vitamin D3

Composition per daily dose:

- Vitamin D3 2000iu

A growing body of research indicates that vitamin D deficiency contributes to a broad spectrum of conditions such as high blood pressure, poor insulin sensitivity, inflammation, cancer and other fundamental processes that underlie heart disease. Alarming, vitamin D deficiency is extremely common throughout the South African population—affecting more than half of adults and the majority of the elderly.



4 Hawthorne

Composition per daily dose:

- Hawthorne (*Crataegus monogyna*) 6:1 extract (standardised to 1.9 to 2.3 % hyperoside and 9-15 % procyanidin) 600mg

Hawthorn preparations act on the myocardium by increasing force of contraction and lengthening the refractory period, increasing coronary blood flow and cardiac output, and reducing oxygen consumption. Hawthorn's cardiotropic properties are attributed to increased membrane permeability for calcium, and phosphodiesterase inhibition, which increases intracellular cAMP. Increased cAMP leads to increased coronary blood flow, vasodilation, and positive inotropic effects. Research shows that hawthorn also has antiarrhythmic activity. Hawthorn also seems to have hypotensive activity, according to some research. It causes peripheral vasodilation and induces endothelium-dependent arterial relaxation. The proantocyanidin constituents seem to cause this effect. Preliminary research suggests hawthorn can lower serum cholesterol, low-density lipoprotein (LDL) cholesterol, and triglycerides. It seems to lower accumulation of lipids in the liver and aorta. Hawthorn fruit extract may lower cholesterol by increasing bile acid excretion, reducing cholesterol synthesis by the liver, and enhancing LDL-receptor activity. Hawthorn has antioxidant activity.



5 Ubiquinol Co-enzyme Q10

- 6x more bio-available than conventional ubiquinone co-enzyme Q10
- Essential for all patients on statin medications

Composition per daily dose:

- Ubiquinol 100mg

Ischemic reperfusion injury. Taking co-enzyme Q10 orally for a week before cardiac bypass or vascular surgery lessens hypoxic damage during surgery.

Hypertension. Taking co-enzyme Q10 orally with other antihypertensives provides an additional blood pressure lowering effect and might allow dosage reduction or discontinuation of some antihypertensive medications.

Congestive heart failure (CHF). Adding oral co-enzyme Q10 to conventional treatments improves quality of life, improves New York Heart Association classification, decreases hospitalization rates, and decreases symptoms of heart failure such as dyspnea, peripheral edema, enlarged liver, and insomnia in patients with mild to severe (New York Heart Association Class II-IV) CHF.

Myocardial infarction (MI). Taking co-enzyme Q10 orally decreases the risk of cardiac events in patients with recent MI who are at risk of atherothrombosis. When started in patients within 72 hours of MI and administered for 1 year, co-enzyme Q10 appears to significantly lower the risk of cardiac events including non-fatal MI and cardiac death.

Hypertrophic cardiomyopathy. Preliminary evidence suggests that co-enzyme Q10 might improve symptoms of hypertrophic cardiomyopathy. Taking co-enzyme Q10 orally in doses titrated to achieve a co-enzyme level above 2 mcg/mL seems to decrease cardiac wall thickness, and decrease symptoms of dyspnea and fatigue.

Statin-induced myopathy. Clinical research shows that co-enzyme Q10 decreases muscular adverse effects caused by HMG-CoA reductase inhibitors ("statins"); patients with statin-induced myopathy who took co-enzyme Q10 100 mg daily had significantly reduced pain intensity compared to baseline and compared to a vitamin E control after 30 days of treatment. In people taking high-dose lovastatin investigational as a treatment for cancer, taking co-enzyme Q10 decreases the dose-limiting statin toxicity of myopathy.

Warfarin-induced hair loss. There is some preliminary evidence that co-enzyme Q10 might be helpful for preventing warfarin-induced hair loss.



6 L-Carnitine

Composition per daily dose:

- L-Carnitine 1000 mg

Angina. Taking L-carnitine improves exercise tolerance in people with chronic stable angina.

Congestive heart failure (CHF). L-carnitine improves symptoms in people with congestive heart failure.

Myocardial infarction (MI). L-carnitine after MI reduces complications and mortality.

Myocarditis. L-carnitine reduces the morbidity and mortality of myocarditis.

Peripheral vascular disease. Preliminary evidence suggests that L-carnitine may improve walking distances in people with peripheral vascular disease.



7 D-Ribose

Composition per daily dose:

- D-Ribose powder 6g

Coronary artery disease. Taking ribose is effective for improving the heart's tolerance to ischemia in patients with coronary artery disease. A small randomized, placebo-controlled study showed increased time to onset of moderate angina and time to ST depression during treadmill walking exercise testing in patients with coronary artery disease.

Congestive heart failure. Preliminary clinical research shows that patients with congestive heart failure who take a ribose supplement 5 grams three times daily for 3 weeks have improved measures of cardiac function and improved quality of life.

Coronary artery bypass surgery. Preliminary clinical research shows that people who take a ribose supplement immediately prior to surgery have improved postoperative cardiac indices following surgery.



8 Fish Oil Omega 3 Extract

Composition per daily dose:

- 2000mg fish-oil extract (30% omega 3 fatty acids), containing:
 - EPA 328mg
 - DHA 220mg
 - DPA and others 52mg

Hypertriglyceridemia. Fish oil from supplements or from dietary sources can reduce triglyceride levels by 20% to 50%. Preliminary clinical research suggests that taking the omega-3 fatty acids found in fish oil also reduces fatty liver disease and serum transaminase levels associated with hypertriglyceridemia.

Cardiovascular disease. Fish oil reduces the risk of developing cardiovascular disease (primary prevention). In people with existing heart disease (secondary prevention), consuming fish oil reduces the risk of cardiovascular and all-cause mortality. Consuming 1 gram/day of fish oils decreases the risk of myocardial infarction, stroke, and progression of atherosclerosis.

Stroke. Fish oil reduces the risk of ischemic stroke by 27%.

Fish Oil vs Statins According to one analysis, consuming dietary fish oil or taking fish oil supplements is associated with a 23% reduction in overall mortality and a 32% reduction in death from cardiovascular causes in people with or without cardiovascular disease (Yzebe D, Lievre M. *Fish oils in the care of coronary heart disease patients: a meta-analysis of randomized controlled trials. Fundam Clin Pharmacol 2004;18:581-92*). By comparison, statins lower overall mortality by 13% and cardiovascular mortality by 22% (Studer M, Briel M, Leimenstoll B, et al. *Effect of different antilipidemic agents and diets on mortality: a systematic review. Arch Intern Med 2005;165:725-30*).



9 Stress Damage Control™

Composition per daily dose:

- Rhodiola rosea (3% rosavins+ 3% salidroside) 315mg
- Ashwaganda extract 15:1 210mg

Ashwagandha helps protect against myocardial infarction.

Rhodiola rosea helps prevent some types of arrhythmias and ventricular fibrillation (by stimulating the endogenous production of opioids). Rhodiola reduces stress-induced damage to the heart caused by cortisol and adrenaline.



10 Cholest-Away™

Composition per daily dose:

- Red yeast rice 600mg

Hypercholesterolemia. Taking red yeast orally can significantly lower total and low-density lipoprotein (LDL) cholesterol levels, and triglycerides when used for 8-12 weeks. Some research shows that red yeast might be as effective as simvastatin for improving lipid profiles.



References available on request from pharmacist@solaltech.com

WHY SOLAL TECHNOLOGIES?

Read the "Why SOLAL" section on each label to find out what makes each SOLAL product better than competitors.

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- ▶ View/download Solal chart titled "Correcting Pharmaceutical Induced Nutritional Deficiencies". If you are taking the contraceptive pill, pharmaceutical hormone replacement therapy or any other medication, these may be depleting your body of important nutrients.
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