Restorative Health News

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Cardiovascular Health

By Dr Jeff Green

February is "American Heart Month" and we devote this entire issue of *Restorative Health News* to this important topic. As you will see there are many important aspects when it comes to keeping your heart healthy. From diet and exercise, to using natural supplements, to successfully managing stress, to informative tests important for diagnosis and prevention of heart problems, each article will provide you with valuable insight and knowledge you can apply everyday. Do you know what the risks are for heart disease? Do you know what you can do to minimize these risks? Did you know the answers are literally right at your fingertips? The answers to these questions and more are discussed here. Since heart disease is the leading cause of death and disability in America it makes **prevention** not only necessary but **key** to living a long and healthy life.

Inside This Issue

Think, Feel, Live, and Love Your Heart.

By Dr. Igor Schwartzman

How most of us think, feel, and live affects our hearts. Positive thoughts, mental/emotional states, will greatly reduce stress and improve heart health, while those that are negative will have an opposite effect. Behavioral, psychosocial, and psychological factors play an important role in health and disease. In looking at the effects of mental states and cardiovascular health, we can observe that in most people there is a direct relationship. Researchers suggest that seasonal mood changes have a direct correlation with the rates of acute myocardial infarctions (heart attacks)[1]. While, the *Harvard Mental Health Letter* (February, 2007) notes that at least half of the people hospitalized with a heart condition suffer from depression, or depressive symptoms. These same patients are 2 to 5 times more likely to take longer to recover, and/or suffer additional cardiovascular events.

Anderson, in his review of cardiovascular responses, summarizes that when study

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The Coca Pulse Test

By Dr. Sean Heerey

High blood pressure, angina, heart palpitations, shortness of breath and countless others symptoms may be the body trying to tell us something. Before you spend a lot of money on pharmaceutical drugs or invasive procedures consider this method of evaluating your pulse. The Coca Pulse Test, developed by Arthur F Coca MD, has been around for over 50 years. It is a simple technique that can tell you if you have an "allergy" to a particular food and/or substance. The term "allergy" is not used in the conventional medical sense but rather as a term to describe how a particular food or substance (e.g., tobacco, perfumes, household chemicals, personal hygiene products), speeds up the pulse. This is what the test involves:

1. Refrain from smoking during this exercise
2. Count your pulse on the thumb-side of your wrist for one minute.
3. Do this when you wake up in the morning. Do this lying down.
4. For all the other times you take your pulse, be seated
5. Take your pulse just before your meal.
6. Test foods in isolation for one or two days (e.g., corn, wheat, dairy, soy, sugar, potato, chocolate, citrus)
7. Take the pulse immediately after the eating the food you suspect and two times after each meal at half-hour intervals
8. Record each pulse and what you have eaten at each meal

Once you know your waking pulse then any food that raises the pulse more than 16 beats per minute is potentially an allergen. For example, if your resting pulse is 60 and after drinking a glass of milk it increases to 77 then milk may be an allergen for you. If your resting pulse is greater than 84 it is likely that something in your diet or environment is an allergen. For more guidance speak to your health care provider.

Your Heart Your Health – 5 Ways to Protect Your Heart

By Dr. Jeff Green

One of the best ways to transform your health is by taking care of your heart. According to the American Heart Association, cardiovascular disease is the number one cause of death nationally and one of the most preventable diseases. The major risk factors in the development of heart disease are: smoking, high blood pressure, high cholesterol, diabetes, being overweight, and physical inactivity. The NHANES II Mortality Follow-UP Study indicates that the risk for fatal coronary heart disease was 51 percent lower for men and 71 percent lower for women when three of the major risk factors, hypertension, current smoking and total cholesterol (≥240 mg/dL) were absent compared to those with one or more active risk factors. Preventing the development of these risk factors will not only protect your heart but keep your health optimal.

"Cardiovascular disease is the number one cause of death nationally and one of the most preventable diseases."

Below are 5 essential ways to protect your heart.

1. **Diet high in fiber (35-40g/day)**: Soluble fiber helps clear out LDL cholesterol from vessel walls and lowers the overall amount in the body. Extra cholesterol in the blood settles on the inner walls of the arteries, narrowing them and allowing less blood to pass through them to the heart. According to a study in the Journal of the American Dietetic Association, people who add just 3 grams of soluble fiber to their diets each day can lower their LDL levels by 5 percent in six weeks. Sources include whole grains, such as oatmeal, bran, flax, and barley, as well as fruits, vegetables, and legumes.
2. **Eat good fats and lots of fruits and vegetables**: Diets low in saturated fat and high in fruits, vegetables, and whole

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Heart Rate Variability

By Dr. Tim Hyatt

The autonomic nervous system, which controls the involuntary nervous impulses in our body, is comprised of the sympathetic nervous system (SNS) and the parasympathetic nervous system (PNS). The sympathetic nervous system is a network of nerves controlled by the brain and is sometimes referred to as the "fight or flight" mechanism. It is activated primarily in times of stress, whether it be low-grade emotional stress, or the extreme stress such as fleeing from or fighting our way out of a dangerous situation. It is very effective when we need it. The parasympathetic nervous system is activated when we need to "rest and digest". It is the balance provided by the body for the SNS and it allows us to recover and relax. Both (sympathetic and parasympathetic) nerves send impulses to the heart through regulation via the central nervous system. The SNS increases our heart rate and the PNS decreases it. It is important to remember that both systems are activated simultaneously to some degree. Each of these systems are intimately involved with the areas of our brains that control or are influenced by our emotions.

So, what does this have to do with heart rate variability? Simply put, heart rate variability (HRV) is the measure of the variations in heart rate. The length of time it takes from one beat to the next is quickly becoming recognized as an important indicator of the immediate and long-term health of an individual. A decrease in HRV (i.e. the more regular the heartbeat) is associated with a decrease in survival rate. Some studies have shown that decreased HRV can predict sudden death in patients with myocardial infarction (heart attack). Still others have suggested that negative emotions, anxiety, depression, and hostility are associated with reduced HRV. Conversely, increased resting HRV is associated with better attention and focus, effective coping strategies, and higher test scores.

Given the information above, it isn't difficult to understand that stress is associated with cardiovascular disease, higher levels of chronic disease, and overall well-being. So, what should we do about it?

There are many ways to improve the SNS/PNS response and increase HRV. Some of these strategies are directed at the reduction of stress through regulated breathing activities, biofeedback, cognitive therapy, and cyclic exercise. Our knowledge of HRV and its effects on the cardiovascular system and overall health is rapidly growing as is our ability to monitor those effects. In the future, technological advances will allow us to monitor progress of specific therapies designed to increase HRV and thus improve our quality of life.

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Tests For A Healthy Heart

By Dr. Werner Vosloo

Most of us have our cholesterol checked every few years because we want to make sure we prevent heart disease and treat it when needed.

A routine heart health screen at the doctors office is a great idea and offers the following as markers for Cardiovascular Disease (CVD): LDL-cholesterol (bad, clogs arteries), HDL-cholesterol (good, opens arteries), Triglycerides (clogs arteries, especially a problem in diabetics), C-Reactive Protein (is a general marker of inflammation and is a strong risk factor for CVD). Very few family doctors will include this as part of a routine CVD screen.

Today, in the US there are more than 37.9 million males and 42.7 million females suffering from CVD, causing the death of 869,700 Americans in both genders combined per year. This makes one wonder if we are taking adequate care in identifying risk factors that can help us predict the specific risk of a cardiovascular incident and inform us exactly how to intervene to reverse the situation should it arise. Here are a few more ideas of what you can do to make sure you are safe.

Tests that **should** be used in everyday clinical practice as a thorough and accurate means of assessing your specific risk, may be overlooked even by an assessment from a cardiologist. The following are additional tests which may be performed and what information they provide:

HDL sub-fractions – some populations are good, some bad

IDL is very strongly linked to atherosclerosis, insulin resistance and diabetes

LDL density pattern – measures your genetic predisposition to CVD. Associated with diabetes, insulin resistance and polycystic ovarian disease (PCOS), it is very effectively treated.

hs C-Reactive Protein (highly sensitive) – reflects inflammatory processes which signals increased cardiovascular risk. This can also detect bacterial causes of heart disease.

Apolipoprotein A-1 – this protects the heart against CVD. Some good news here you want to hear!

Apolipoprotein B – is a good predictor of **premature** atherosclerosis. Healthy levels provide some assurance that LDL metabolism is acceptable.

Apo B/Apo A-1 ratio – this can indicate happy tidings if it returns to normal.

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Why a good nights sleep can help prevent cardiovascular disease.

By Dr. Jesse Buttler

There are many different recommendations that physicians give to patients when educating them about what they can do in order to prevent heart disease. These include things such as exercise, nutrition, the use of specific supplements and many more. One recommendation that is not as common is that of getting a restful and complete night of sleep.

Sleep is a time when your body literally *rests and repairs* itself. This is done through the cycling of two different hormones that your body naturally produces, *growth hormone and cortisol*.

Cortisol is the hormone that is responsible for giving your body the energy that it needs to get through the day. Cortisol is highest in the early morning hours and declines slowly throughout the day. Cortisol is considered catabolic, meaning it breaks substances down in your body to be used as energy.

Growth hormone is on the opposite schedule of cortisol. It is lowest in the morning and rises throughout the day peaking in the late evening hours. Growth hormone is considered anabolic, meaning it uses substances to (re)build areas of your body. This cycling of hormones is a key aspect in helping us understand how we can not only prevent but also treat disease.

When a person is able to fall asleep (best to be in bed between 8-9pm in the winter and 9-10pm in the summer), sleep uninterrupted through the night, and wake rested in the morning, this is an indication that this cycle is in balance.

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The Vitality of the Heart

By Grant Taylor

For generations the heart and references to its vitality have been made, accepted, and mostly ignored. The significance of this organ even takes prized place in our everyday usage of language – some "half-hearted" attempts from earlier civilizations wisdom to alert us to the essential importance of sound cardiac health. It would, however, seem from the pandemic unfolding around us that this wisdom has largely eluded modern day civilians.

Each of us has come across heart-rending stories of individuals struck down suddenly through cardiac disease "before their time" or "still in their prime" or "before they were ready" – regardless of their age. How many of us place concerted effort in addressing our own hearts health….today?

With the UK and US leading the world in mortality from heart disease one wonders why our populations just don't realize the enormity of this "epidemic". Our hearts and a conscious caring about its well being right now is essential to our longevity. Not only is this behavior certain to prolong our lives, but also the bodies efficient functioning right now. Action now will also afford us a better quality of life in later years it seems[1]. In the United Kingdom in 2004, it's population of a little under 60 million people suffered one heart disease related death every 3½ minutes costing the economy and health service more than 29 billion pounds per year (over 55 billion dollars) [1]. In 2002 Cardiovascular Disease (CVD) accounted for 38% of all deaths (1 out of every 2.6 deaths). In the U.S. CVD claims more lives each year than the next 5 causes of death combined. For women in the US it accounts for more deaths than the next seven causes of death including all cancers. In 2005, the cost of heart disease and stroke in the United States was estimated to exceed $394 billion: $242 billion for health care expenditures and $152 billion for lost productivity from death and disability[2]. These costs all overlook the emotional cost and personal trauma caused by the loss of a loved one to a cardiac related death.

Recent research from the US suggests strongly in order to prevent heart failure in our 70's and 80's we need to be paying special attention to blood pressure and weight management in our 50s or younger[3]. So what is it that prevents us from applying this guidance?

"In 2005, the cost of heart disease and stroke in the United States was estimated to exceed $394 billion"

The complex multidirectional muscle fibres of this advanced organ begin rudimentary contractions akin to beating five weeks after conceptions occurs[4]. These same unique muscle fibres are responsible for maintaining our bodies blood pressure and hence every cells vital oxygen and nutrient supply throughout our lives. Our heart rate and strength of contractions spontaneous adjustments are in response to the bodies situational requirements second by second. The process of this responsiveness and the reason for it are both phenomenally complex and remain largely a mystery to us. It is as if this organ is the tireless conductor of a symphony intuitively metering out its consistent metronome like beat, all the while adapting to our highs, lows and in-betweens in body position, mood, stress level and lives. Few of us need reminding of the vital support function the heart performs though pumping blood around the body. This blood in turn supplies each cell in the body with nutrients and oxygen vital to normal functioning and

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removes the toxins and waste by-products of every cell's metabolic process. As you'd expect every cell and muscle fibre of the heart are in turn supported in the identical way. It's for this reason and the higher work rate of the heart that its cells begin to show some of the early signs of damage and degradation when we have neglected our responsibilities for our own cardiac health.

Reductions in any excess body weight we have supports the heart by reducing the distance it has to pump blood though vessels supplying this extra adipose (fat) tissue. This in turn also means the heart is not working excessively supplying cells, which are "excess" to the bodies functional needs.

Reductions in blood pressure mean the heart does not have to maintain the force of it's contractions for prolonged periods – giving it more opportunity to relax and replenish its own muscle cell requirements. In addition, reducing our blood pressure reduces the risk of damage to tiny vessels within vital organs like the brain – which in turn prevents these organs cell supply and ultimately cell death – one of the causes of Cerebrovascular Accidents (CVA's).

Reductions in cholesterol level again support the heart by preventing it from having to pump against higher pressure in the arteries. Reducing cholesterol also reduces the likelihood of a small cholesterol plaque which is encrusted on the inner vessel wall from breaking free and flowing around in the blood until it lodges in the small vessel of a vital organ like the heart or brain – preventing further vital blood supply to this part and cause these cells to die.

Eating a balanced diet low in fat (less than 25g per day) can help reduce our weight, cholesterol and blood pressure. As too can the support of your health care practitioner in advising and prescribing products adept at clearing the way for the heart to function optimally.

With modern access to the myriad of information sources available, technologies to better warn and inform us, growing skills to understand the old knowledge of our forefathers and new information and research from today, we truly cannot escape the heart of the matter – our hearts! Taking responsibility for our healthy cardiac functioning today gives us the possibility of directing our own destiny.

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participants are subjected to various mental and emotional states, (some of which are anger, sadness, fear, or happiness[2]), each of them directly affect the blood pressure. There are numerous psychosocial factors that play a role in cardiovascular health, and at the top of this list is stress. During a response to a stressful situation, or event, a surge of stress hormones is released into the blood stream, which causes all of the blood vessels to constrict. The heartbeat increases as well, which ultimately forces the cardiovascular system to be more susceptible and reactive to any additional stressors. Furthermore, stress is a major contributing factor to myriad states of cardiovascular inflammation, such as those found in cases of atherosclerosis.

In summary, it is important to note that mental, emotional, and psychosocial factors play a major role not only in cardiovascular health, but in all states of health and dis-ease. If your doctor is not asking you about your mental/emotional health I strongly encourage you to either bring it up yourself, or seek a healthcare provider who will. As a naturopathic physician, working on all levels of a patient's physical, mental, and emotional well-being is essential, and is therefore what I incorporate as part of all of my treatment plans and programs. After all, this is what makes us 'whole'.

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When this cycle is out of balance and people have difficulty sleeping, a thorough workup needs to be done to find the *cause* of why there is an imbalance.

> *"Sleep is a time when your body literally* rests and repairs *itself."*

Now we ask ourselves how does sleep affect cardiovascular disease? One of the causes of cardiovascular disease is atherosclerosis, which is the hardening of arteries from the deposition of cholesterol. Cholesterol is deposited in the arteries due to trauma occurring from hypertension. When our cortisol and growth hormone levels are out of balance, this causes an even greater stress on our arteries leading to greater cholesterol deposition and a continuation of the atherosclerotic process.

The key is to get to sleep on time, sleep through the night and wake rested in the morning. If this is something that you struggle with in your health, consult a naturopathic physician to begin addressing what the cause is.

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Lipoprotein(a)[Lp(a)] is a is key genetic factor that promotes deposition of fatty acids and growth of fibrin clots in blood vessel walls. Lp(a) is a good predictor for risk of stroke and is one of the most important things your clinician can check.

Fibrinogen promotes blood clot formation – thereby increasing the risk of strokes or heart attacks. Reducing the fibrinogen levels by, for instance, not smoking, not using oral contraceptives, managing stress levels, keeping slim and keeping the blood thin even in old age is wise.

Lp(a) *and* **Fibrinogen** elevation is a very strong predictor of heart disease and stroke risk – both very effectively controlled with focused patterns of nutrition.

Homocysteine is also one of the bad guys here. Normal can be achieved by supplementing with high quality Vit B6, B12 and folic acid and other specific nutrients.

Blood Glucose (fasting) and **Hemoglobin A1C** are measures blood sugar metabolism. This is one of the reason diabetics get into heart trouble quite often.

As a pro-active patient it is your right and duty to ask your doctor about these tests if you are concerned about your risk for heart disease. Once you have established that you are in a higher risk group for heart and or blood vessel disease by doing the above tests, there are many clinically proven natural and health promoting protocols to effectively manage risk and even deal with the cause. Answers can be found at your local Naturopathic Doctor. You may contact the editor for more information and for a referral to someone in your area that might just have the right answers for you. Your life may depend on it!

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grains are associated with a reduced risk of cardiovascular disease. Trans fatty acids, found in fast food and fried food, have been linked to high LDL cholesterol and an increased risk of cardiovascular disease. A study in the Annals of Internal Medicine confirmed that the consumption of fruits and vegetables, particularly green leafy vegetables and vitamin C-rich/high antioxidant fruits and vegetables (the red, orange, and yellow colored veggies), seems to have a protective effect against coronary heart disease. Sources include fatty cold-water fish such as salmon and mackerel, nuts (especially almonds and walnuts), avocados, and olive oil.

3. **Don't smoke**: Coronary heart disease and stroke are the primary types of cardiovascular disease caused by smoking. Smoking is hard on the heart, and the toxins in cigarette smoke cause plaques to form in the arteries, which leads to atherosclerosis. The risk of stroke decreases steadily after smoking cessation.
4. **Exercise**: Many studies show conclusive evidence that maintaining your physical fitness will significantly lower your risk of developing heart disease. Exercise can help you prevent as well as reverse heart disease. Moderate-intensity activity, which includes brisk walking, is associated with a substantial reduction for the risk of cardiovascular disease. Activity for only 30 minutes/day or more is recommended. Regular exercise and maintenance of a healthy weight will also help reduce insulin resistance and the risk of non-insulin-dependent diabetes mellitus. It's important to keep a routine going, and start off slowly. Put simply, regular exercise keeps your body in a healthy condition.
5. **Get regular check-ups with your doctor**: One of the most important aspects of heart health is prevention. Seeing your doctor for a yearly physical exam and specific blood tests can help prevent any unknown changes that might occur. As Dr. Vosloo refers to in his article, blood tests can check cholesterol levels, blood glucose levels for diabetes, and also some very specific markers for heart status (homocysteine, C-reactive protein, LDH, and apo-lipoproteins).

Heart Tonics

By Dr. Tim Murbach

The physical location of a disharmony/disease process in a particular organ system implies a weakness of that system. Tonic therapies are those that are naturally supportive of the intrinsic integrity and functions of the system in question and that have a natural affinity to exert localized effects and return balance.

The heart is a high-energy system, contracting on average, 85,000-144,000 times everyday. Anything that supports contractility and normal blood vessel function, including B vitamins, minerals, certain amino acids, short and medium chain triglycerides, etc., can be considered a heart tonic. Four cardiovascular tonics that stand out are exercise, coenzyme Q10 (CoQ10), *Crataegus oxyacantha* (hawthorn), and magnesium.

"The heart is a high-energy system, contracting on average, 85,000-144,000 times everyday."

There is no question that exercise is a crucial component of cardiovascular health and rehabilitation. The more out of shape an individual is, the greater the improvement from exercise. Specific effects of exercise include prevention of coronary artery plaques, clots, and associated oxygen deprivation (which leads to chest pain and heart attacks). Exercise also helps to prevent irregular heart beats, improves the function of cells lining blood vessels, relaxes the nervous system, and improves heart rate variability (a factor implicated in sudden cardiac death and important for normal cardiac function). Optimally, an exercise program for cardio-stable individuals should include stretching, both aerobic and strength training, and warm up and cool down periods.

The heart derives the lion's share of its energy through the oxidation (i.e. burning) of fats to ultimately supple electrons used to generate stores of cellular energy. CoQ10 buffers the flow

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of electrons (essentially a metabolic traffic signal) allowing smooth operation of the energy-generating pathway. Studies have found that supplementation of 60-600 mg per day in divided doses results in significant improvement in cardiac function[1]. CoQ10 also has powerful antioxidant properties. Here it is useful to point out that CoQ10 is a downstream metabolic end product of the enzyme HMG-CoA reductase and, therefore, any lipid lowering treatment that affects this enzyme will also affect CoQ10 production. For this reason, anyone undergoing statin, red rice yeast, or policosanol therapy should also receive CoQ10 supplementation.

Hawthorn has long been known for its cardiotonic actions and has no known contraindications or adverse effects. Specific effects on the heart muscle attributed to hawthorn include increased contraction force, decreased oxygen demand, and protection from damage; another important effect is improvement in heart rate variability. In Roman society hawthorn was viewed as a symbol of the heart – the protector of well-being. Recommended dosing is 160-900 mg per day in divided doses of a 4:1-7:1 standardized extract of the leaves and flowers for a minimum of 2 months duration, but may be used indefinitely.

Magnesium is essential to normal cardiovascular function, is concentrated in the heart, and is commonly deficient in the diet. Known physiologic benefits included dilation of blood vessels, decreased heart rate, improved oxygenation, and improved contractility. Immediate intravenous administration of magnesium to heart attack patients significantly improves mortality rates and the incidence of arrhythmias without any adverse effects. The oral dose range as a cardiotonic is 300-600 mg per day in divided doses.

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