

Folic Acid, Vitamin E, aspirin, etc.

Written by PHILIP S. CHUA, M.D., FACS, FPCS
Friday, 29 July 2011 13:19



THE progress in medical science is ever-evolving as man's battle against diseases and his quest for better health and longevity continue to inspire him.

Advances in medicine almost invariably result in changes in previously held concepts, dogmas and therapies in the arena of clinical practice.

The standard of medical care today may be archaic tomorrow.

Rather than defaulting to a stagnant status quo, the constant transformation in medicine is a welcome upgrade that positively translates to unceasing improvement in the quality of medical care for mankind as a whole.

Our consultant for this column today is Luisito C. Gonzales, M.D., FACC, a board certified Interventional Cardiologist, Director of the RiverPointe Cardiac Catheterization Laboratory, and Director of Cardiopulmonary Rehabilitation Program at Elkhart General Hospital in Elkhart, Indiana.

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We have chosen the following five interesting and most frequently asked questions from our readers for Dr. Gonzales to discuss in this issue:

Why are Folic Acid and Vitamin E no longer recommended?

It was previously thought that Folic Acid, by lowering homocysteine levels, was able to reduce the risk for heart attacks, strokes, cancer, and lower the need for revascularizations.

Vitamin E, acting as antioxidant and mild blood thinner, was considered beneficial in lowering the risk for cardiovascular diseases, like stroke and heart disease.

However, a review of all the major clinical trials (CHAOS-2, VISP, WAFACS, HOST, HOPE-2, WENBIT, NORVIT, and SEARCH studies) involving 37,485 individuals did not show any benefits from taking either supplements and, if taken beyond the recommended dose, Folic Acid and Vitamin E may even be harmful.

The take home message from all these trials is that nothing can replace a balance nutritious diet, regular physical activity, and abstinence from smoking and alcohol abuse to preserve health.

How much aspirin is safe?

The U.S. Preventive Services Task Force has recommended that low-dose aspirin (81 mg) is all that is needed, and is as effective as higher doses, both in men and women to prevent coronary heart disease.

Following consultation with their physician, men are usually advised to start taking low-dose aspirin at age 45 years to prevent a heart attack and women to start at age 55 to prevent a stroke.

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Women who are still menstruating release estrogen which protects them somewhat from developing heart disease.

In general, higher doses of aspirin (greater than 81 mg) may increase the chances of bleeding from the stomach.

For those aged 80 and beyond there is paucity of available data to tell us how safe aspirin is.

In this age group, we advise extra caution and vigilance while taking low-dose aspirin under their physician's supervision.

What has my thyroid problem to do with heart attack?

The association between hypothyroidism or under functioning thyroid and heart attacks and deaths was seen in several studies.

The possible explanation could be due to the effects of the thyroid hormone itself leading to a stiff blood vessel (increased systemic vascular resistance, arterial stiffness, altered endothelial function, increased atherosclerosis), and a thicker blood that seems to clot faster.

These are the usual associated factors among those with thyroid problem that cause heart disease.

When the thyroid hormone is also not working properly, it can lead to very high cholesterol levels that could deposit in the walls of the blood vessel and eventually cause blockages and heart attack.

Hypothyroidism can also cause a weakening of the heart muscle called cardiomyopathy that will

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improve with treatment of the thyroid gland.

What tests do I need for my chest discomfort?

When evaluating chest discomfort precipitated by lifting heavy objects, the time of the onset of the chest pain might help differentiate the cause.

Chest discomfort or pain due to musculoskeletal cause may have a vague onset, whereas heart related chest discomfort starts gradually and increases in intensity over time.

Also important to know is if it radiates or extends to the left arm, neck, throat, lower jaw or shoulder, which typically suggests heart involvement.

How long does the discomfort last?

Chest discomfort that last only for seconds or constant over weeks is usually not heart related.

Chest discomfort that increases with change in body position or movement, as well as deep breathing, suggests a musculoskeletal pain.

What makes the discomfort go away may also give a clue as to the source.

Typically, a complete history and physical examination should be done.

In the history, age greater than 70, presence of diabetes, hypertension, smoking and hypercholesterolemia are predictive of a higher likelihood that the chest discomfort could be due

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to coronary heart disease.

Other studies might include an ECG and chest x-ray.

Further investigations such as an exercise ECG, myocardial perfusion scan, stress echo or chest CT may be required to establish specific source(s) of the pain.

Can stem cell help people with cardiomyopathy?

Genetic modulation of the heart function may offer hope for treatment of heart failure.

Cellular cardiomyoplasty involves directly injecting cells such as stem cells that may become new heart muscle cells into the diseased heart after a heart attack.

This has been used during the acute heart attack setting.

There was some short term benefit with improvement in exercise treadmill time.

However, it was found that in some angioplastied patients with heart stents, there was an increase rate of the stent being plugged up (in-stent re-stenosis).

Stem cell therapy has also been studied in Ischemic Cardiomyopathy (heart muscle damage related to previous extensive heart attacks).

The result showed significant increase in the heart function.

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This technique, which is still investigational, may have potentials in reducing the size of heart muscle damage and leading to improvement of heart muscle function in patients with cardiomyopathy.

Presently, experience with this approach is still limited to a few small trials and the potential risks of dangerous heart rhythm problems (ventricular tachycardia) and possible increase in in-stent re-stenosis should be taken into account.

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