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Heart to Heart Talk

With Philip S. Chua, M.D.

New Stunning Reports on Cholesterol

A recent study released last month revealed that getting cholesterol to super-low levels can stop the progression of arteriosclerotic heart disease, the culprit responsible for blockages in our coronary arteries which supply blood to our heart muscles. This was reported by Steven E. Nissen, the cardiologist who headed the investigation at the Cleveland Clinic, where the cholesterol-lowering drugs, Lipitor and Pravachol, were used in more than 500 patients. The study shows that taking 40 mg of Pravachol did not offer the same slowing effect on heart disease even though some patients were able to achieve the same super-low LDL levels. Heart disease in the Pravachol-treated patients was about 3% worse after 18 months of treatment. Lipitor seems to be superior in this regard.

Nissen also observed that Lipitor stopped progression of plaque in a variety of patient groups including younger and older patients as well as people with diabetes and high blood pressure. But for Pravachol it was a different story: "We were unable to stop progression in any of the subgroups in the Pravachol group," he says. Nissen based his findings based on ultrasound images inside the arteries in beating hearts. This technique is still in its infancy and needs to be correlated and confirmed with clinical results. However, evidence-based medicine has shown that these statin drugs, like Lipitor and Pravachol, among others, reduce deaths and complications from coronary heart disease.

Nissen added that "in addition to bigger drops in LDL cholesterol with Lipitor, patients taking Lipitor also had much greater reductions in C-reactive protein: 36% vs. 5%". C-reactive protein, CRP, is an inflammatory marker found in the blood. High levels of CRP have recently been identified as a heart disease risk factor. "The potent anti-inflammatory effect seen with Lipitor might be a factor in the observed differences between the two treatments," according to Nissen .

Christopher Cannon, assistant professor, Harvard Medical School, Boston, says he is also studying Lipitor and Pravachol at the same dose but with several thousand patients. The results of his study will be presented next spring at the American College of Cardiology meeting.

What is cholesterol?

Cholesterol is a sterol, a complex alcohol constituent of animal fats and oils. This is the substance that forms the plaques which adheres to the inner wall of

arteries causing hardening of the arteries and stenoses (blockages), many leading to heart attacks, strokes, or poor leg circulation.

Is there such a thing as “good” cholesterol?

Yes, it is called High Density Lipoprotein (HDL), and the bad cholesterol is called the Low Density Lipoprotein (LDL). For better health, a person should have Total Cholesterol no higher than 150, a high level of the HDL (above 60), low level of LDL (below 100), and Triglyceride level below 150. To be accurate and significant, the cholesterol study should include these four, in a blood test called Lipid Profile.

Where does our body get cholesterol from?

While our liver produces (endogenous) cholesterol, the main source of (exogenous) cholesterol in our body and the blood is from the food we eat. Food that are high in cholesterol include: egg yolk, pork, beef (and other red meats), butter, lard, and other dairy products.

Does milk contain cholesterol?

Yes, but the 2% milk, skim milk, or reduced cholesterol milk have been reconstituted to attain the reduction in cholesterol in them, and marketed as such. For young children, skim milk is not recommended, unless they are hyperlipidemic (with high triglyceride level, especially the LDL). Two percent milk is acceptable, but not lower.

How much fat is in our usual diet?

The average U.S. diet contains about 37% total calories as fat. In the Philippines, this may even be as much as 45%, which is a very unhealthy diet. Even 37% is too high, and the American Heart Association recommends that this needs to be reduced to 10% to have a major effect in heart attack, stroke and cancer prevention.

What are the types of dietary fats?

There are three kinds: saturated, monosaturated, and polyunsaturated. Sources of saturated fats are meat, non-skim dairy products, artificially hydrogenated vegetable oils. Monosaturated fats are found in olive oil and cannola oil. Polyunsaturated fats are from Omega-3 (sea plankton, deep-sea cold water fatty fish, like salmon, tune, mackerel), and from Omega-6 oils in cultivated vegetable oils (like corn oil).

Is pork white meat?

No, pork is red meat, just like beef is red meat. Both are high in cholesterol and fats. Obviously aimed at confusing the public to promote pork, a television ad in the United States, featuring actor Robert Mitchum as its spokesman, says “Pork, the other white meat.” This is a misrepresentation and a great public disservice.

How about chicken meat?

Chicken breast is white meat, lower in cholesterol compared to pork or beef, but chicken skin is very high in cholesterol. The dark chicken meat (neck, wings, back, legs) is slightly higher in cholesterol compared the breast portion.

Why does the fatty portion of any meat taste good?

The portions of the meat that is “loaded” with fats, such as skin, intestines, omentum (chicharon bulaklak), taste better because the taste of the food we eat is in the cholesterol content of the food. If cholesterol is totally removed scientifically from beef or pork, for instance, these meats will taste like rope fibers...flat and tasteless. The higher the cholesterol content of the food, the better it tastes, but the worse it is for our health.

Does fish meat have fats?

It does, but the fats in fish meat is the good kind, one that is good for the heart and blood vessels. They are called Omega-3 oils. Regularly eating only fish (not together with pork, beef, eggs, butter, etc.) has been scientifically shown to lower the incidence or risk of sudden cardiac death. These oils (eicosapentaenoic acid and docosahexaenoic acid) have also been shown to lower serum triglycerides and “bad cholesterol,” and makes blood thinner and less prone to clot, and, therefore, slows down hardening of the artery.

What is the normal level of serum cholesterol?

The National Cholesterol Education Program (NCEP) defines the normal Total Cholesterol level as levels less than 200 mg/dL or 5.18 mmol/L. However, new medical studies have shown that this current “normal level” is still too high to be effective in lowering the risk of heart attacks and strokes. The predominant new concept today for desirable level is about 150-160 mg/dL. The level of triglycerides is also very important, if not more, in the maintenance of cardiovascular health. It is wise to have a screening and baseline Lipid Profile, and then every couple of years.

Is there a skin test for cholesterol?

Skin test for cholesterol is still being developed. In the mean time, cholesterol level or Lipid Profile are still performed thru blood (serum) test. Screening should start at age 20 because 33% of young adults have been found to have a cholesterol level above 200. Among young children whose parents have a cholesterol level of 240 and higher should likewise have cholesterol screening.

What are the markers of heart disease?

The markers of coronary heart disease among those with blockages in their heart arteries are: high white blood count, high fibrinogen (blood clotting factor), high c-reactive protein (suggesting inflammation), and Lipoprotein-associated phospholipase A2. These findings suggest the presence of coronary heart disease, which could be (and, if the patient is symptomatic, needs to be) confirmed by coronary arteriogram.

How does one lower his/her cholesterol level?

The initial step, which is quite successful in majority of people, is by not eating red meats or meat products made of pork or beef, non-skim dairy products, eggs (the yolk of which is in itself very high in cholesterol). The diet should consist of fish, vegetables, white chicken meat (no skin) and fruits. Indulging a bit in red meats during the holidays is acceptable, except among those whose cholesterol and LDL are very high and the HDL is very low. If this recommended diet regimen is followed religiously, chances are the cholesterol and triglyceride levels will come down to the desired levels. Medications to lower the cholesterol and triglyceride levels are reserved for those where months of strict fish, vegetable, and fruit diet has failed to bring the cholesterol and triglyceride level down to normal. Some of these are people have a genetic predisposition (two out of 100 people) to having high cholesterol level, and therefore would need the help of cholesterol/lipid lowering drugs. However, many of us have been on unhealthy diet for years and will definitely benefit from these medications. Your physician will be your best partner in planning an effective strategy for you.
