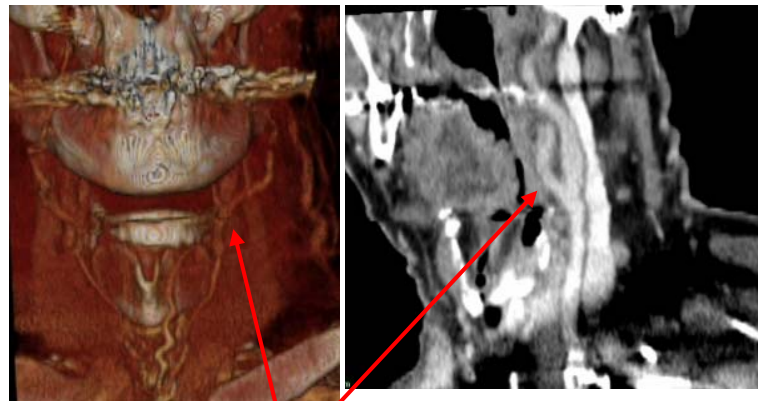


NOVEMBER 2005

All About Our Non-Invasive Angiograms

An angiogram is a special kind of imaging study that looks at arteries. One specific example is a *coronary angiogram*. This is performed in a special room called a cardiac cath lab. The cardiologist inserts a flexible plastic tube called a catheter into the femoral artery. Typically, the entry point for the catheter is the right groin area. The catheter is advanced up the femoral artery to the aorta, then up the aorta until it reaches the coronary arteries, which encircle the heart. Contrast goes through the catheter into the coronary artery and pictures are taken.

This kind of a study is done when your doctor *strongly* suspects a narrowing in one of the arteries. The risk of the procedure is small compared to the benefit of diagnosing and treating a dangerously narrowed artery. But sometimes, doctors are less sure about whether an artery is narrowed. There may be vague symptoms or a mildly abnormal stress test. In this situation, *a non-invasive angiogram provides a nice solution*- we simply place an IV in a vein in the arm and inject the contrast. No tubes are inserted into the body. We scan the heart and then reconstruct 3D images that show the coronary arteries and reveal any narrowings. *The procedure can be done in 15-30 minutes and is very safe.* The red arrow in the top picture points to a narrowed artery on the front of the heart. We can also perform non-invasive angiograms on the carotid arteries of the neck. Plaque in the carotids increases risk for stroke. If a carotid artery is more than 70% narrowed, a procedure to open the artery may be indicated.



The two lower pictures are 3D and 2D pictures of angiograms of the carotid arteries (red arrows).

The LifeScore Clinic non-invasive angiogram is an excellent option when your physician needs further data to decide whether an invasive angiogram is necessary. It can be done quickly, safely and comfortably and may help avoid more invasive procedures. Please call the clinic if you would like more information on this potentially life-saving procedure.

Fish Oil Shown to Lower Heart Rate and Prevent Adverse Cardiac Events

We already know that fish oil can decrease the risk for dangerous cardiac arrhythmias, but the mechanism for this effect is unclear. The authors of the heart rate study (September 19, 2005 issue of *Circulation*) analyzed 30 clinical trials of fish oil. After 12.5 weeks, the average fall in heart rate was 2.5 beats per minute. This translates into a 10% reduction in risk for sudden death. The average dose of fish oil was 3.5 grams/day. This is significantly higher than the dose of 1 gram found in the GISSI study to reduce risk of further adverse cardiac events after heart attacks by 20%.

There are many ways in which fish oil can potentially benefit the heart. The omega-3 fatty acids DHA and EPA are the major components of fish oil. These fatty acids lower inflammation, thin the blood and lower triglycerides.

The fish oil effect on heart rate is a new finding that points to other mechanisms that may be involved in its beneficial effects, such as perhaps a decrease in sympathetic nervous system activation (the system that speeds up heart rate in response to stress or increased activity).

Another major study on fish oil was presented at the 2005 American Heart Association meeting in Dallas.

The study, conducted in Japan (the Japan EPA Lipid Intervention Study, or JELIS) tracked 18,000 people for 4.5 years. The treatment group received 1.8 grams of EPA fish oil. This group experienced a 20% reduction in major coronary events when compared to the control group. The study results were very consistent with GISSI, but expanded GISSI's results to include people with no prior history of heart disease.

An interesting observation was made in the adverse events data from JELIS- those taking the fish oil had a statistically significant lower rate of joint pain and low back pain compared to the control group. This certainly makes sense considering the well-known anti-inflammatory effects of fish oil.

ARE YOUR KIDS OVERWEIGHT?

Consider giving them fish oil! A study at the AHA meetings showed that 3 grams of fish oil lowered triglycerides by 70mg/dL AND raised HDL, the protective form of cholesterol

At the LifeScore Clinic, we recommend 1-3 grams of fish oil per day as part of our total program for prevention.

Other News From AHA...

Your dog is good for you!

Some hospitals have 'pet therapy' programs where a volunteer brings a dog to visit patients. A study found that a dog visit with a volunteer decreased patient anxiety by 24%, compared to only a 10% decrease if the volunteer came without the dog!

OMNIHeart Study- Increase Plant Protein

We know from the DASH study that a diet high in fruits and vegetables and low in saturated fat can lower blood pressure and reduce risk for heart disease by 16%. The OMNIHeart study showed that by increasing plant protein and olive or canola oil (total carbs go down, total protein and fat goes up), risk can be reduced by another 4%, to 20% total risk reduction. The higher plant protein diet lowered LDL cholesterol better than DASH (-14% vs. -11%) and lowered triglycerides by 16.4% (DASH has a neutral effect on triglycerides). The best-performing diet was 48% carbs (compared to 58% in DASH), 25% protein (half from plant sources) and 27% fat.

