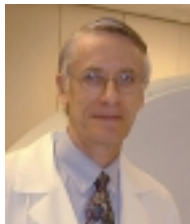


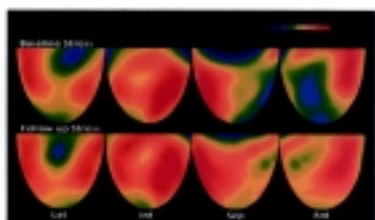
**Weatherhead P.E.T. Center for Preventing and Reversing Atherosclerosis
The University of Texas-Houston Medical School and Memorial Hermann Hospital**



Heart News

Journal of the American College of Cardiology Article

On January 15, the Journal of the American College of Cardiology, published an article by our group including first author, Stefano Sdringola, MD with our PET scans prominently displayed on its cover. The study compared outcomes in 3 groups of patients: 1) those that followed strict diet and intense risk factor management (Maximal Treatment), 2) those that followed the American Heart Association Diet (20-30% fat) and took lipid drugs (Moderate Treatment) and 3) those that were not on a diet or lipid medication or were actively smoking (Poor Treatment). Blood flow to heart muscle on PET scans improved in the Maximally treated group and worsened in the Moderate and Poor Treatment Groups. After 5 years of follow-up, coronary events occurred in 6.6% of the Maximally treated patients, compared to 20.3% of the Moderately treated patients, and 30.6% of the Poorly treated patients. The study concluded that Intense lifestyle and pharmacologic lipid treatment reduce size/severity of myocardial perfusion abnormalities and cardiac events compared with usual-care and cholesterol-lowering drugs alone. This study is one of the first to show the added benefit and importance of lifestyle changes in addition to the benefits of statin drugs alone.



Three-dimensional segmented, dyadically PET with improved perfusion following treatment. Upper row is baseline and lower row is follow-up. Red is highest flow and blue is lowest.

Coronary Artery Disease 101: A Review

Almost everyone has known someone who seemed perfectly healthy and exercised regularly but suddenly dropped dead of a heart attack. The most dramatic cases are middle aged men in their 40s and 50s, the prime of life, who had no symptoms of heart disease. Unfortunately, in men, the most common first symptom of coronary artery disease is a heart attack, or in medical terms, a myocardial infarction (MI); 50% of people don't survive that first heart attack. This summary reviews how atherosclerosis develops in the coronary arteries, how to detect it, how cholesterol plaque may rupture to cause a sudden heart attack and how lifestyle management with medications stabilizes the arteries to prevent heart attacks, progressive chest pain, or invasive procedures.

Coronary artery disease is a diffuse process of cholesterol deposition, scarring and calcification (hardening of the arteries) throughout the major coronary arteries supplying blood flow to the heart muscle. It is caused by a number of well known factors including genetics, high cholesterol levels, high blood pressure, diabetes, excess weight, high fat foods, inactive lifestyle, and smoking. In the past, it was believed that heart attacks occurred in patients who had severe narrowing in the coronary arteries (greater than 80%) causing a blood clot that totally blocked the artery with a resulting heart attack. Now it has been well documented scientifically that the majority of heart attacks occur in patients who have only mild to moderate or no coronary narrowing (50% or less) before the heart attack. In an artery without a significant narrowing, the thin fibrous cap over the cholesterol plaque may break open. This plaque rupture lets blood mix with the cholesterol in the wall of the artery that causes it to clot, blocking off the artery completely. Therefore, most heart attacks occur in people with no prior significant coronary artery narrowings or symptoms of heart disease.

This new knowledge is the basis for diagnostic cardiac imaging that detects this early build-up of cholesterol in the coronary arteries, thereby indicating vigorous treat-

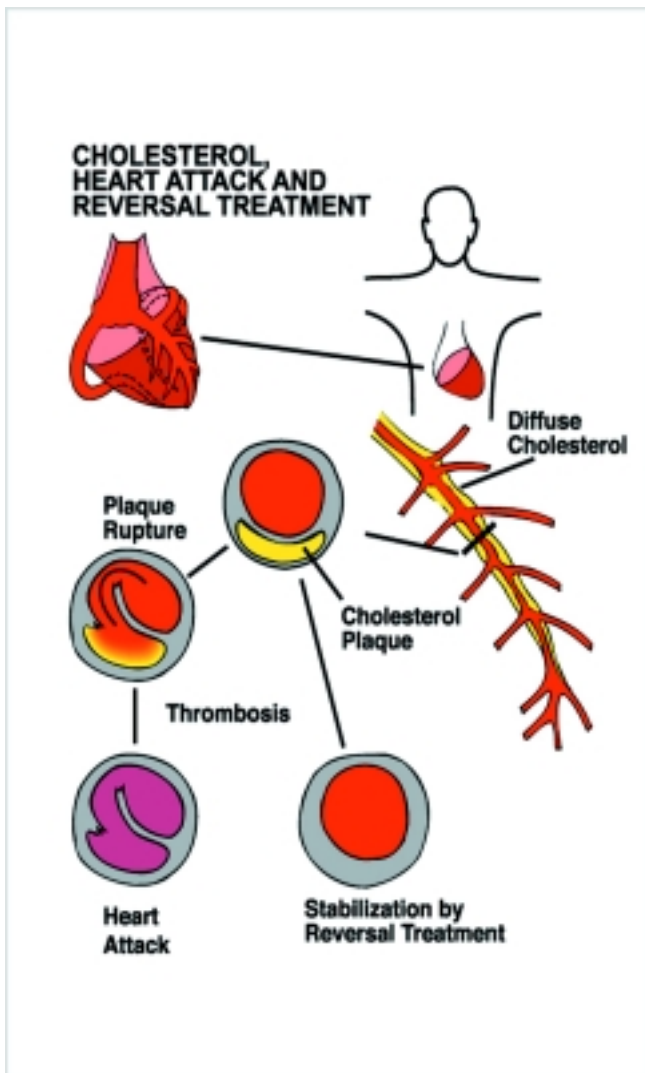
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CAD cont . . .

ment to prevent plaque rupture and associated heart attack. Positron Emission Tomography (PET) is the most accurate non-invasive test for identifying the mild cholesterol build-up or diffuse coronary vascular disease that is responsible for most heart attacks. Although an arteriogram (heart cath) is useful in identifying severe blockages, it routinely misses the mild diffuse build-up of cholesterol throughout the arteries.

A comprehensive vigorous lifestyle management program including cholesterol lowering medications, low-fat diet, and management of other risk factors actually reduces the amount of cholesterol in the walls of the artery. This removal of cholesterol from the walls of the artery occurs over an 18-24 month period associated with decreased severity of narrowings. The walls of the arteries stabilize, thereby reducing the risk of plaque rupture, heart attacks, cardiac death, unstable chest pain and need for bypass surgery or balloon dilation.



Corner Pharmacy Tips for taking Niacin



Niacin or vitamin B3, is one of the oldest lipid altering drugs. Its primary action is to increase HDL cholesterol and lower triglycerides. Niacin is well known for its side effect of flushing, or itching and redness that frequently occurs shortly after taking it. A newer form of niacin, the prescription formulation, Niaspan is now available with fewer side effects and improved effectiveness.

Low dose, regular release niacin (upto 250mg) is available over the counter without a prescription. It is effective in raising HDL cholesterol but is difficult to take in the doses required to raise HDL (up to 3000mg daily) because of its quick release into the blood stream, that causes severe flushing. It is tolerable only by taking smaller doses three to four times daily with food. Later, over the counter Slow release Niacin was marketed which did not cause as much flushing but its effects on HDL cholesterol are not as great and it more often causes elevated liver enzymes. Forms of niacin advertised to be "flush-free" do not have an effect on cholesterol levels.

Niaspan, the prescription strength form of niacin, has a special coating that controls the release of niacin and reduces the flushing while maintaining effectiveness for raising HDL cholesterol and lowering triglyceride levels. Niaspan also reduces LDL cholesterol by 17% and augments the effects of the statin class of cholesterol lowering drugs. Niaspan is started at 500mg each night for the first week and gradually increased in 500mg weekly increments up to the usual dose of 1000 to 2000mg daily, taken at bedtime. Taking aspirin at supper reduces potential flushing of Niaspan taken at bedtime.

Tips for taking Niaspan:

- Take daily aspirin at suppertime.
- Take Niaspan just before going to bed.
- Take Niaspan with a small lowfat snack.
- Do not break tablet in half since the coating is important.

Although flushing is reduced with Niaspan, it may still occur occasionally. The flushing effect is not an allergic reaction, but can be uncomfortable and bothersome. If tolerable for the first couple of weeks, it usually disappears except for rare occasions especially after alcoholic drinks during the evening. If it becomes unbearable, lower the dose of Niaspan for a few weeks but try not to stop it completely. Blood tests for liver function should be monitored monthly for the first three months of therapy and every 4-6 months thereafter.



Heart Star

Raymond Lozano was in good health when he came to Dr. Gould five years ago. But he had a cholesterol problem. He considered the risk over the rest of his life and decided to do something about it in order to stay healthy. He had watched his mother suffer with heart problems and vascular disease of her legs related to her high cholesterol level. That experience made prevention a very personal intense goal.

When Mr. Lozano's wife, Nancy, saw an article about Dr. Gould's program in the UT Health Letter, she immediately called to enroll her husband. "We wanted to take a pro-active role in keeping Raymond healthy" says Mrs. Lozano.

At that time, 49 year old Raymond was 5 ft. 10 inches tall, weighed 205 pounds and worked as a line-man for a local utility company. For years, he was aware that his HDL cholesterol (good cholesterol) was low; even the constant activity of his job was not enough to raise the HDL above 30. His initial PET scan in 1998 showed the beginnings of cholesterol build-up in the walls of the coronary arteries. Dr. Gould laid out a food and exercise plan for him and prescribed the right medications to help correct his genetic HDL cholesterol problem.

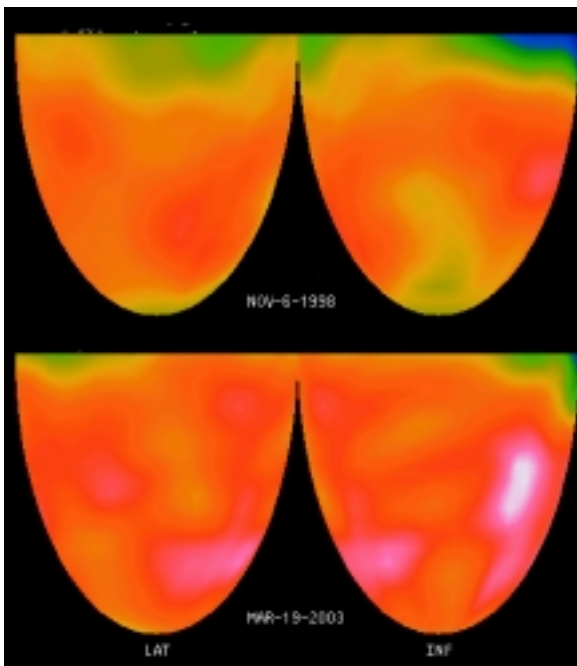
With a strong commitment to health and the help of his wife to modify his diet, Raymond slimmed down to 172 lbs within 6 months. He immediately began to feel better with more energy than in years. His



sense of well being has continued as he maintained his weight at a lean 178 lbs. A medication to help correct the HDL called Niaspan was added to his life-style regimen. His HDL cholesterol had been as low as 21 mg/dl but increased into the 50s where it remains as a result of the combined weight loss, exercise and medication.

"I feel Dr. Gould's program has been a lifesaver," says Raymond. Although his job no longer requires physical work, Raymond continues to exercise 3-4 times a week including 100 push-ups and 200-300 abdominal crunches every morning. His discipline in sticking to his diet is also commendable.

The hard work has paid off with a follow-up PET scan in March 2003 showing improved blood flow throughout the heart. Raymond enjoys his healthy lifestyle and tries to spread the word to his co-workers. His foresight, dedication and discipline in preventing heart disease make him a HEART STAR.

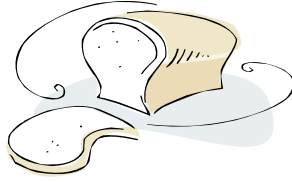


THE UNIVERSITY of TEXAS
HEALTH SCIENCE CENTER AT HOUSTON



Living Healthy

How many carbohydrates should I eat?



Counting carbs can be time-consuming and confusing because almost all foods have some carbohydrates in them, including fruits and vegetables. The most concentrated forms of carbohydrate are starches such as sweets, bread, rice, pasta, potatoes, cereal, and alcohol. When we tell you to reduce your carbohydrate intake, we are referring to these starches.

Like most nutrients, carbohydrates are not necessarily bad. It just depends on how much you eat. Carbohydrates do provide the main source of energy for the body. However, in excess they will cause weight gain and may increase triglycerides in the blood. There are two main reasons for reducing carbohydrate intake. One is for weight reduction and the other is to reducing your triglyceride level. If you have not achieved your target weight, or if your triglyceride level is consistently above 100, we generally will tell you to limit the carbohydrates in your diet by reducing starches.

Calorie Watch

TIP: 500 excess calories a day leads to one lb. of weight gain per week.

Examples of 500 calories (Think before you eat!)

- Wendy's Single Burger (470 cal)
- McDonalds Quarter Pounder with Cheese (524 cal)
- Burger King Whopper Junior with Cheese (420 cal)
- One Medium baked potato with 2 tbsp. margarine and cheese (approx. 400 cal)
- One large bagel with 2 tbsp. cream cheese (approx. 460 cal)
- A small bag of buttered microwave popcorn and 2 light beers (over 400 calories)
- 2/3 cup of cashews (over 500 calories)
- 1 small piece of pineapple upside down cake and a cup of 2% milk
- One large brownie and 2 glasses of wine



Available through

Rutgers University Press
100 Joyce Kilmer Ave.
Piscataway, NJ 08854

Or call: 800-446-9323

KLG's Pasta Substitute

Instead of a big steaming bowl of pasta for dinner, replace the pasta with a large bowl of steamed vegetables (cauliflower, broccoli, carrots, and squash). Cover it with a low fat tomato sauce with soy crumbles, fat-free Parmesan cheese and bon appetit!!!

Website Reference

The United States Department of Agriculture has an easy to use nutrient database to help you determine the nutritional breakdown of virtually any kind of food. The website address is (http://www.nal.usda.gov/fnic/cgi-bin/nut_search.pl)

Also Watch for our new Website coming soon.

Food Suggestions



Louis Rich Grilled Chicken Breast Strips – a 2 serving package, sold in the butcher shop or meat area of grocery stores. (a 3 oz. serving has 110 calories, 3.5 grams of fat and 19 grams of protein). Dip in mustard, wrap up in low fat cheese slices or put in salads, soup or chili.

The Turkey Store, Extra Lean Ground Turkey Breast (www.theturkeystore.com) 4 oz has 120 cal, 26gm protein, 1.5mg fat and 45mg cholesterol; great as patties, meat loaf or meat balls.

Land O Lakes Fat Free Half &Half- good to use in recipes calling for milk or cream or to give a creamy texture to sauces, etc.

Sapsago Cheese-small, hard, green cone to be grated; has always been made from skim milk & flavored with cloves; made in Switzerland- not in many stores, so ask your cheese buyer to order it

Morningstar Grillers Veggie Crumbles- total fat 2.5gms; 2/3 cup 80 calories and 10 grams protein. Great to use as a meat substitute in sauces and soups. Available in frozen section-HEB, Central Market, and Randalls

Beef or Turkey Jerky- available in lots of places but fat content may vary. Robertson's Quality Smoked Meat Products provides fast mail orders 1-800-654-4012; Convenient to carry and high in protein. Cut up into small pieces for easier chewing.