



# NEWSLETTER

A partnership between the  
**Heart Institute & Diabetes Education**  
at Marquette General Hospital

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## JULY 2009

## AUGUST

### THE BEAT GOES ON

by Jeffrey Kinnunen, MS,

Registered Clinical Exercise Physiologist

The human heart is an amazing organ. A four chambered mass of specialized muscle that weighs less than a pound, and is capable of pumping more than 600 gallons of blood per day. Feeding this incredible pump with oxygenated blood is a small network of blood vessels called the coronary arteries. These vessels are vulnerable to the formation of fatty deposits called plaques, due to their small size. Plaques in the coronary arteries are made up of calcium deposits, fatty deposits, and abnormal inflammatory cells.



It generally takes the plaques in the coronary arteries around twenty or more years to progress to flow limiting blockages. This means that the 50 year old who has an unexpected heart attack already had early heart disease in his thirties and probably even his twenties. During the Vietnam War, researchers examining the bodies of American soldiers killed in combat determined that about half had early coronary artery disease. This seems startling considering this was a group of young healthy men with an average age of 22 years.

Regular exercise lowers the risk of developing heart disease in many aspects. It increases energy expenditure (i.e. reducing obesity), regulates or prevents type 2 diabetes, and may reduce mental stress. However, perhaps most importantly, it has a favorable impact on blood lipids. The basic lipids are cholesterol and triglycerides. The low-density lipoprotein (bad cholesterol) has a subcategory called VLDL (very low-density lipoprotein). We could call VLDL very bad cholesterol! In a general

sense, prolonged or strenuous exercise causes VLDL cholesterol and triglycerides to be used as fuel for working muscles. As VLDL and triglycerides are broken down, the precursors of high-density lipoprotein (good cholesterol) remain.

An exercise program that expends at least 2200 Calories per week may cause a partial regression of coronary artery disease; raise HDL cholesterol, lower VLDL and lower triglycerides. Total LDL cholesterol and total cholesterol are most effectively reduced when exercise is combined with a healthy diet, including plenty of fruits and vegetables, healthy fats (i.e. avocados, raw nuts, olives), and lean protein sources. Do you want to improve your cholesterol? Call us at the heart and health program at 225-4755.

### TRY SOMETHING NEW...

Mary Charlebois, RD

Heart & Health Prevention Program

“Avocados? I can eat avocados?” “YES!”

I love this kind of response from the great people who attend the Heart and Health Prevention Program, also known as “Cardiac Rehab.” This is a perfect teaching moment for me as the dietitian of the program. Recently we talked about “super foods” and many people were surprised that avocado was one of them.

The first thing we learned was that an avocado is actually a fruit. I can see why there would be some confusion. A serving of avocado counts as a fat in the exchange book. Not the “bad” fat that people try to avoid, it has mostly the “good” kind. Avocados are

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one of the best sources of monounsaturated fat, the fat thought to lower the artery-clogging LDL cholesterol and raise the heart-healthy HDL cholesterol.

Avocados are nutrient-rich, containing a nice dose of folate, potassium, Vitamin C and Vitamin E. They have zero cholesterol and are naturally low in sodium. A serving is 1/5 of a medium avocado or 2 tablespoons mashed. This does provide 5 grams of fat and adds about 55 calories to our daily total.

There are many ways to enjoy avocados in small amounts. You can mash it, mix it with pepper, and spread it on toast topped with fresh tomato and cilantro. Another idea is to slice it very thin and layer it on any sandwich in place of mayonnaise. It can be diced and added to lettuce salads, pasta salads, and bean dishes. Try it in a dip (see recipe) with baked tortilla chips.

Other sources of monounsaturated fats that I encourage people to include in their heart healthy eating plans are many kinds of nuts, nut butters, black and green olives, canola, olive and peanut oils.

Remember, we only need very small amounts of these fats, so avoid the temptation to overeat on these “super foods”. These foods are only “super” if we eat them in the right amount!

Another interesting question I challenged the participants with was, “Where do water chestnuts come from and how are they grown?” Not a single person was able to tell me. It didn’t matter if they were sixteen years old or almost 90.

We all learned something that day.

Keep learning about good nutrition. The dietitians at Marquette General Health System can help. [www.mgh.org](http://www.mgh.org)

## Avocado Dip

- 2 tbsp lime juice
- 2 tbsp olive oil
- ¼ cup packed cilantro
- 1 scant tbsp jalapeno, seeded and chopped small
- 1 clove garlic, chopped
  
- ¼ tsp salt
- ¼ tsp sugar
- 15 oz. can black beans, rinsed and drained
- ½ cup cucumber, seeded, chopped small
- 1 avocado, diced
- ¼ cup red onion, diced

Puree the lime juice, olive oil, cilantro, jalapeno and garlic in a blender or food processor to make the dressing.

Combine the remaining ingredients.  
Mix with the dressing and serve chilled.

Serving size: 1/2 cup  
Makes 3 cups (6 servings).

