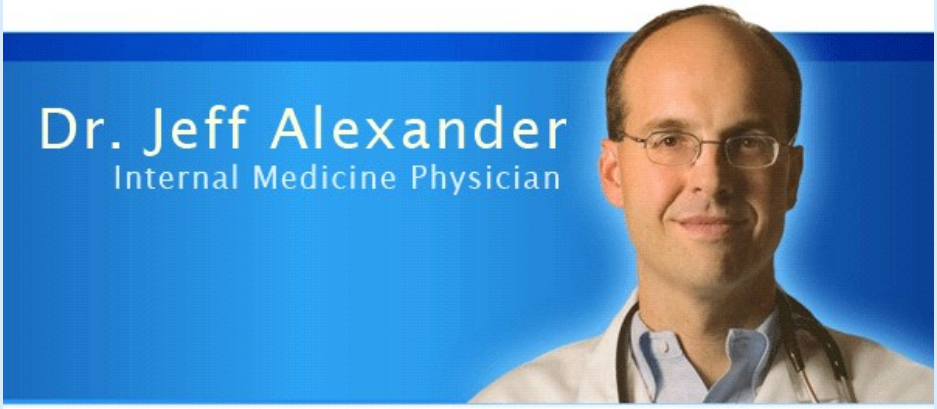

OCTBOBER 2O11 NEWSLETTER

In the last newsletter we discussed primary prevention of heart disease and stroke in regards to cholesterol. This month we will discuss secondary prevention, that is what to do after you have had an event.

Who is in need of secondary prevention? It sounds easy but is not necessarily. Obviously, people who have had an event (heart attack or stroke) are ones we need to worry about. That is not all however. Numerous well done studies tell us that people, who are diabetics, have peripheral arterial disease, or chronic kidney disease are all at an increased risk of an event. In most cases the risk is identical to someone who has already had a heart attack. For this reason we treat these groups more aggressively. We also now have of means of testing such as coronary calcium scores and carotid imaging that can tell us if plaque is in the arteries. If the plaque is seen in one set of arteries, you can bet it is probably in the heart arteries. One of the reasons I exam your eyes during a physical is because it is one place a doctor can look directly at arteries. This can give us an idea of what is going on elsewhere.

Where do you start? I am sure you know the answer is diet and exercise. Diets low in saturated fat and cholesterol are key. The Mediterranean diet and Ornish diets are among the best. Dr Dean Ornish's diet although aggressive has been shown to reduce plaque. Exercise is also vital. The big issue here is that we do not want to create more problems for the heart , so you need to consult with a cardiologist or myself before starting. There are many monitored post cardiac rehab plans that work well. Just do not go out and do something on your own.

Cholesterol medication is critical. In secondary prevention we target an LDL of 70 or less. We may not always get there, but we try. Studies such as PROVE IT have given great evidence that aggressive cholesterol reduction with a statin (drugs like Crestor, Lipitor, Zocor, or Pravachol) is essential. If you remember stains not only lower cholesterol reducing plaque, but also stabilize the internal membranes of arteries, making that plaque less likely to rupture and cause an event. Do people get side effects with these drugs? Yes sometimes, but the benefits of these medications especially in secondary prevention are so important that we really try to get every patient on one. At times we will dose the drugs as rarely as once a week to get some of the drug into the patient. If I place you on a statin, please give it a chance. They can and will save your life.

Other medications are available to lower cholesterol, but do not have the amount of data the stains have. Niacin has been shown to lower triglycerides and LDL while raising HDL. It does have some studies showing benefit, but can cause flushing at night. There are ways around this, but it takes time and patience. Cholesterol binding agents such as Welchol and Questran bind cholesterol in the gut before you absorb it. These generally are safe and well tolerated, but lack significant studies in secondary prevention. Zetia, another drug that impairs cholesterol absorption has great LDL reducing abilities when taken with a statin. Studies regarding its effectiveness at event reduction are currently in progress and should be available soon. Despite a lack of numerous studies, I still use all of the above medications because I feel that lowering cholesterol in any fashion is a key to secondary prevention.

Raising HDL(good) cholesterol and lowering triglycerides are great targets. The drugs available here are not the greatest, but are effective. Exercise, diet and moderation of alcohol intake are the best place to start. Statins may raise HDL slightly as Niacin will also. Currently drugs are in development to selectively raise HDL. Some are available as IV infusions, but none are easily available for mass consumption. When we are able to raise HDL safely, that will be one of the greatest advances in secondary prevention. A high HDL is the single best safeguard against an event.

Non- HDL cholesterol is an emerging risk factor that deserves mention. As stated it is the total of the LDL and triglycerides. This is a secondary goal for people with heart disease. Many experts recommend getting this level below 130 even if the other lipid measures are where we want them. This just points out the need for aggressive lipid management in people with heart disease.

Lowering triglycerides can be achieved by a class of drugs called the fibrates (drugs such as tricor, gemfibrizol or trilipix). A goal of less than 150 is ideal, but there is not great evidence that pushing patients there is critical. For people with very high (>500) triglycerides, it is a necessity, but it is less clear for the ones in between.

Cholesterol Recommendations

LDL (Bad) Cholesterol Target

< 100	Optimal
100-129	Near optimal/above optimal
130-159	Borderline high
160-189	High
>190	Very high

Total Cholesterol Target

<200	Desirable
200-239	Borderline high
>240	High

HDL (Good) Cholesterol Target

<40	Low
>60	High

National Institutes of Health-Reprinted April 2010

Other secondary prevention strategies are critical, but will not be the main focus of this newsletter. Aspirin or other antiplatelet drugs are essential in therapy. Cardiovascular events are usually clotting events so it makes sense that these drugs work. Aspirin also has anti-inflammatory properties that seem to stabilize arteries. Aspirin or drugs like it are critical.

Control of blood pressure and diabetes are also critical to prevention of events and will be the topic of future newsletters. You also know that smoking is an absolute no-no. We have many drugs available to help with all of these problems, but lifestyle changes are still a key. You truly need to make your mind up to change.

If you think about it, reversing the risk factors that increase your risk of an event is the best way to reduce the likelihood of another event. The worst thing you can do after a heart attack or stroke is to not change because you will definitely be back in for more.