



Dr. Eric Johnson is a family practice doctor in Grand Forks with a special interest in diabetes -- and a special knack for writing. As a member of the Dakota Diabetes Coalition, he has generously made himself available to answer questions through our listserv.

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Cholesterol threat--much scarier than medications

Q. How should different problems with cholesterol be treated?

Diabetes is a cardiovascular risk equivalent. Most people are familiar with the idea that people with type 2 diabetes are at high risk for developing coronary disease, stroke, or peripheral arterial disease. But type 1 patients are also at high risk.

Previously, I emphasized the role of effective blood pressure management to lower cardiovascular risk. Today's focus is on the management of lipid disorders, which are common in the diabetic population.

Effective meal planning and activity programs are essential for diabetes management in general and are especially important for improving lipids. However, most patients with diabetes will not get sufficient improvements in their lipid profiles with diet and exercise alone. That means that most people will need medications to reach the target goals listed below:

- Total Cholesterol <200
- Triglycerides <150
- HDL >40 for men, >50 for women
- LDL <100

Triglycerides are another type of blood fat sometimes associated with heart attack or stroke. HDL is the so-called "good cholesterol." Just having low HDL is a risk factor for heart disease and stroke. LDL, the so-called "bad cholesterol", is a strong predictor of cardiovascular disease. In patients who have had heart disease diagnosed or experienced

a stroke, an LDL of less than 70 might be a reasonable goal. That goal should also be considered for patients who are at high risk of heart disease and stroke.

Medications are almost always needed

Almost always, patients with diabetes need medications to reach target goals in cholesterol. Classes of these medications are:

Statins

Lovastatin (Mevacor)
Pravastatin (Pravachol)
Simvastatin (Zocor)
Atorvastatin (Lipitor)
Rosuvastatin (Crestor)

Fibrates

Fenofibrate (Tricor)
Gemfibrozil

Vitamins

Niacin

Intestinal Fat Absorption Inhibitors

Ezitimibe (Zetia)

Statins are the most common medications used, and there is a large amount of data to support their use. They primarily act on total cholesterol and LDL, but have a modest effect on HDL and triglycerides. Most patients on statins can expect to lower their risk of heart disease or stroke by 20 to 50%. Side effects can occur, but are often manageable. Muscle aches and weakness are probably the most common complaints, but it is important to establish that the medication is the actual cause. Nausea can be a problem, but is usually minimized by dosing with a meal.

Liver function abnormalities are not uncommon, but outright liver disease from these agents is rare. Most liver function abnormalities in diabetes patients are not from their medications, but from fatty liver disease. Patients with known liver disease should probably avoid these medications. Liver disease is often overlooked in people with diabetes. I'll address that in more detail in a future column.

Statins may improve fatty liver disease, but are not specifically indicated for that purpose. Rhabdomyolysis, a severe muscle breakdown, can occur, but is extremely rare, perhaps 1 in 200,000 to 400,000 cases. Emphasizing the large benefit of the medication can help patients understand and weigh the potential benefits and risks. Patients should be told that they should be afraid of cholesterol, not their medication!

Niacin can be an effective adjunctive therapy, as it primarily targets triglycerides and low HDL. Flushing and diaphoresis (itchy skin!) can result from niacin therapy, but

prescribing slow-release preparations that are taken with a meal or fiber supplement may help. If the patient is on aspirin, taking niacin with the daily aspirin tablet can be useful as well.

Zetia is a newer agent that can be used by people who are usually completely intolerant of all statins. It is a very good “add-on” with a statin, and Vytorin is a combination drug with simvastatin and Zetia in a single pill. Muscle aches may occur, but gastrointestinal complaints are more common. This drug should also be avoided in persons with **known active liver disease**.

Fibrates also primarily target low HDL and elevated triglycerides, and carry some of the same cautions as statins. They can be used along with statins, but muscle problems can increase with their use, particularly in patients with **renal disease**.

Many good options exist for the diabetes patient with lipid abnormalities, and strong data exist that treatment lowers the risk of heart disease and stroke. **Patients with diabetes should have their cholesterol levels screened at diagnosis.** Pediatric patients need their own sets of guidelines **no later than adolescence.** Emphasizing the benefits of these medications, on top of a healthy lifestyle, usually minimizes resistance to treatment and improves outcomes for all patients.

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Lipids and Diabetes-- Dr. Johnson's Column #5, August 24, 2007

If you have comments about the column, or questions for Dr. Johnson's future columns, please contact gailhand@qwest.net