

### Transcript Details

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## Sex-Based Differences in Lipid Management: Implications for Cardiovascular Risk

### Announcer:

You're listening to *Heart Matters* on ReachMD. On this episode, we'll hear from Dr. Connie Newman, who's an Adjunct Professor in the Department of Medicine and the Holman Division of Endocrinology, Diabetes, and Metabolism at NYU Grossman School of Medicine. She'll be discussing sex differences in lipid levels and cardiovascular risk. Here's Dr. Newman now.

### Dr. Newman:

The main difference in lipid parameters is the HDL cholesterol. So early in life, the plasma levels of LDL cholesterol, HDL cholesterol, and triglycerides are similar in boys and girls, except for people who have familial hypercholesterolemia. They stay similar until puberty when HDL rises dramatically in boys, and this is likely due to increased testosterone in boys, which activates an enzyme called hepatic lipase, which lowers HDL cholesterol.

So in adults, women have generally a 10 milligram per deciliter higher level of HDL cholesterol compared to men. And what we consider to be abnormal for women would be an HDL cholesterol below 50—that would increase the risk of cardiovascular disease. But for men, the level is 40 milligrams per deciliter or lower, which would substantially increase the risk of cardiovascular disease.

Women in premenopausal years have estrogen, which can be protective in terms of cardiovascular disease and also perhaps in terms of LDL cholesterol levels. So we know that in menopause, the LDL cholesterol levels in women rise. One study has shown that the increase in LDL cholesterol in menopausal women is about 11 milligrams per deciliter. We also know that replacing estrogen in postmenopausal women will not reduce heart attacks and strokes. In fact, it might increase strokes or cardiovascular disease. And if a woman has an elevated LDL cholesterol, the treatment for that person in addition to lifestyle would be a statin—not estrogen—if they're postmenopausal.

Now, turning to triglycerides, estrogen can markedly increase triglyceride levels. This is not seen that much today. But it used to be seen when oral contraceptives had a lot of estrogen in them. And in pregnancy, triglyceride levels are substantially increased. And women with such high triglyceride levels should be treated with diet to lower the triglycerides and only if the benefit outweighs the risk during pregnancy should bile acid sequestrants be added to diet.

I'm part of a cholesterol treatment trialist group that does patient level meta-analyses of the data from these trials. And what we have found is that LDL cholesterol responds to statins similarly in women and in men, and that women who take statins have the same reduction in cardiovascular risk or cardiovascular events as men if they start at the same baseline level of risk. Statins work in women, and that's not always thought to be the case. And I think it's really important that people know that a woman will respond to a statin. Of course, there is a caveat about statins in women of reproductive age because there is a possibility, although I think it's really rare, that statins could have a teratogenic effect.

### Announcer:

That was Dr. Connie Newman sharing insights about sex-specific differences in lipid management and cardiovascular risk. To access this and other episodes in our series, visit *Heart Matters* on ReachMD.com, where you can Be Part of the Knowledge. Thanks for listening!