Does menopause matter when it comes to diabetes?

July 26 2011, by Shantell M. Kirkendoll

Menopause has little to no impact on whether women become more susceptible to diabetes, according to a one-of-a-kind study.

Postmenopausal women had no higher risk for diabetes whether they experienced natural menopause or had their ovaries removed, according to the national clinical trial of 1,237 women at high risk for diabetes, ages 40 to 65.

"In our study, menopause had no additional effect on risk for diabetes," says study lead author Catherine Kim, M.D., M.P.H., an associate professor of internal medicine and obstetrics and gynecology at the University of Michigan Health System. "Menopause is one of many small steps in aging and it doesn't mean women's health will be worse after going through this transition."

Kim and colleagues in the Diabetes Prevention Program Research Group will publish their results in the August issue of *Menopause*.

The findings also shed light on the impact of diet and exercise and hormone replacement therapy on the health of postmenopausal women.

Previous evidence has suggested that menopause would speed the progression to diabetes because postmenopausal women have relatively higher levels of the hormone testosterone, which is considered a risk factor for diabetes. But the recent study shows healthy outcomes for postmenopausal women.

The women in the study were enrolled in the Diabetes Prevention Program, a clinical trial of adults with glucose intolerance, meaning tests show their body's struggle to process glucose, or blood sugar, into energy.

Glucose intolerance is often a pre-stage to diabetes, a condition common later in life and is diagnosed when the body has abnormally high levels of blood sugar. Age, weight, physical activity and family history can contribute to type 2 diabetes.

But Diabetes Prevention Program researchers have shown lifestyle intervention and the blood sugar-lowering drug metformin can prevent diabetes in those with glucose intolerance. The interventions work well in women who have gone through menopause.

Menopause is the end of monthly periods and chance for pregnancy and estrogen production by the ovaries stops. In the United States, menopause happens around age 51 or 52.

The research is considered the only menopause study that specifically analyzed the impact of diabetes on women who had natural menopause and those who had their ovaries removed. Most other studies mixed them together or excluded one group.

According to the new study, for every year 100 women were observed, 11.8 premenopausal women developed diabetes, compared to 10.5 among women in natural menopause and 12.9 cases among women who had their ovaries removed.

However for women whose estrogen production ended as a result of having their ovaries removed, and engaged in lifestyle changes, cases of diabetes were extremely low. For every year 100 of these women were observed, only 1.1 women developed diabetes.

Lifestyle changes included losing 7 percent of their body weight and exercising for at least 150 minutes a week. For instance, a 180-pound postmenopausal woman would see benefits from losing 12.6 pounds.

The results among this group were surprising considering almost all of the women who had their ovaries removed were on hormone replacement therapy, a regime that women and doctors fear puts them at risk for a host of health issues. Study authors say more research is needed on the role of hormone therapy and diabetes risk.

"Physicians can be empowered to tell women that lifestyle changes can be very effective, and that menopause does not mean that they have a higher risk of diabetes," Kim says.

More information: "Menopause and risk of diabetes in the Diabetes Prevention Program," Vol. 18, No. 8, *Menopause*, August, 2011.

Provided by University of Michigan