Moderate Exercise Helps Insulin Sensitivity in PCOS

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SAN DIEGO — Moderate exercise equivalent to a brisk 1-hour walk 4 days a week improved insulin sensitivity in a group of women with polycystic ovary syndrome, even in the absence of weight loss, results from a small trial demonstrated.

The finding is important because obese women with polycystic ovary syndrome (PCOS) "have often been told to lose weight," Ann J. Brown, M.D., told this newspaper during a poster session at the annual meeting of the Androgen Excess Society. "They know that they need to lose weight, but it's very difficult [for them]. This is a hopeful message that even just picking up the pace of activity will improve your metabolic profile."

For the 5-month study, she and her associates randomized 19 sedentary women aged 22-41 years with PCOS to one of two groups. One group of 11 women continued their sedentary lifestyle, while another group of 8 women participated in a monitored exercise program that equaled about 230 min/wk at 60% maximal oxygen uptake (VO_2 max), "the equivalent of a brisk walk," said Dr. Brown of the division of endocrinology, metabolism, and nutrition in the department of medicine at Duke University Medical Center, Durham, N.C.

Study participants completed a 75-g oral glucose tolerance test and a frequently sampled intravenous glucose tolerance test before and after the intervention. The investigators calculated insulin sensitivity and area under the curve (AUC) for glucose and insulin.

At baseline, the women in both groups were similar in age, aerobic fitness level, body mass index, blood pressure, fasting insulin, AUC insulin, and insulin sensitivity.

At the end of 5 months, aerobic fitness among women in the sedentary group worsened by 2.3%, compared with a 4.3% improvement in the exercise group, a statistically significant difference. BMI and waist circumference did not change in either group.

Fasting insulin decreased significantly in the exercise group, compared with the sedentary group (–4.6% vs. +8.9%), as did AUC insulin (–26.0% vs. +1.4%).

"What surprised me is how hard it was for people to do the protocol, which was to come to [a gym] 4 days a week and exercise," said Dr. Brown, who also directs the Duke Academic Program in Women's Health. "A lot of people were enthusiastic about doing it, but early on they dropped out because they did not have a lot of flexibility in their schedule." ■

Women's Weight Gain Higher on Thiazolidinedione

WASHINGTON — Women gain more weight on thiazolidinedione therapy than do men, Amy Toscano-Zukor, D.O., and Xiangbing Wang, M.D., reported in a poster at the annual meeting of the American Association of Clinical Endocrinologists.

Weight gain is often noted in patients with type 2 diabetes after initiation of thiazolidinedione therapy. Proposed mechanisms include fluid retention and/or an increase in subcutaneous fat accompanied by a decrease in visceral fat, according to Dr. Toscano-Zukor and Dr. Wang of Saint Peter's University Hospital, New Brunswick, N.J., and Robert Wood Johnson Medical School, New Brunswick.

In the first study to compare weight gain by gender among patients on thiazolidinediones, the investigators randomly reviewed the charts of 31 men and 30 women in an outpatient endocrinology practice.

All patients were receiving either pioglitazone or rosiglitazone, as monotherapy or as part of a multidrug regimen for diabetes. The men and women did not differ significantly in mean age, initial body weight, body mass index, diabetes duration, hemoglobin A_{1c}, or number/type of diabetes medications.

The proportion of patients with significant weight gain, defined as a greater than 3% increase in weight from baseline, was 60% of female patients and 26% of males.

Among those who gained weight, women gained a higher percentage of body weight than did men (9.3% vs. 5.1%).

—Miriam E. Tucker