Advise Pregnant Patients Exercise Is Healthy, Safe

BY KATE JOHNSON
Montreal Bureau

Pregnant women perform fewer intense physical activities, with less duration and frequency than nonpregnant women, and only 16% of pregnant women and 27% of nonpregnant women meet physical activity recommendations, said Ann M. Petersen, Ph.D., and her colleagues at Saint Louis University.

"This study has vital public health implications that can assist physicians to identify patients who are at high risk for inactivity during pregnancy," the investigators said (Med. Sci. Sports Exerc. 2005;37:1748-53).

"Obstetricians and gynecologists should focus on encouraging continued physical activity during pregnancy among those already active, and should specifically target physical activity promotion among those women performing irregular or no activity," Dr. Petersen said.

"The message is not getting out that women should continue to exercise during pregnancy, at least at moderate intensity," study coauthor Terry Leet, Ph.D., noted in a separate written statement. "Only one of every six pregnant women is meeting the current physical activity recommendations of 30 or more minutes of moderate physical activity on most, if not all, days of the week," Dr. Leet said.

The population-based, cross-sectional study used data from the 1994, 1996, 1998, and 2000 Behavioural Risk Factor Surveillance System (BRFSS) on more than 150,000 women.

STANFORD W. CARPENTER

Researchers say evidence-based guidelines should reassure medical providers of the safety of exercise in pregnancy.

A total of 6,528 pregnant and 143,731 nonpregnant women between the ages of 18 and 44 were categorized into groups based on vigorous or moderate levels of exercise, according to guidelines established by the Centers for Disease Control and the American College of Sports Medicine (ACSM). These consisted of 20 minutes or more of exercise, three or more times per week at an intensity of 6 or more metabolic equivalents or METs, and 30 minutes or more, five or more times per week, at an intensity of 3-5.9 METs, respectively; vigorous or moderate activity not meeting the guidelines (150 minutes or more per week, regardless of frequency, at an intensity of 3 METs or more); irregular physical activity; or no physical activity.

The study found that overall, nonpregnant women were more likely to meet the vigorous and moderate exercise recommendations, compared with pregnant women, and more pregnant women were inactive or performing irregular activity.

Walking was the most common activity reported equally by pregnant (52%) and nonpregnant (45%) women. However, there were notable differences between pregnant and nonpregnant women reporting aerobics (8% vs. 14%), and running and/or jogging (2% vs. 7%). Similar percentages reported gardening (3% and 5%) and swimming (4% and 3%).

The findings confirm the need for a multidisciplinary intervention from school educators, medical school instructors, and faculty aimed at promoting exercise in pregnancy, according to Raul Artal, M.D., professor and chair of the department of obstetrics, gynecology, and women's health at the university.

"It has to start at all levels—early school years, medical schools, physician education. A total effort is needed, and it needs to start in childhood," Dr. Artal said in an interview. "We don't look at physical education as a health benefit but, instead, always seem to emphasize the competitive aspect. If the competitive aspect could be deemphasized, and we could agree that physical education is part of health maintenance and prevention of disease, then the whole attitude toward exercise would change."

Dr. Artal was lead author of the American College of Obstetricians and Gynecologists 2002 guidelines on exercise during pregnancy.

According to the authors of the study, evidence-based guidelines should be reassuring to health care providers regarding the safety of exercise in pregnancy. The guidelines, published jointly by the Society of Obstetricians and Gynaecologists of Canada, and the Canadian Society for Exercise Physiology in 2003 (and endorsed in 2004 by the ACSM), show that exercise is not associated with any increase in early pregnancy loss, late pregnancy complications, abnormal fetal growth, or adverse neonatal outcomes. The Physical Activity Readiness Medical Examination for Pregnancy in the guidelines describes the medical clearance for prenatal exercise participation.

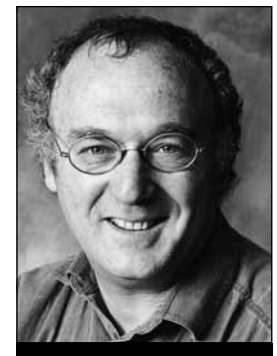
"These safety procedures will further educate health care providers about the appropriate promotion of exercise during pregnancy," the authors said. ■

Drugs, Pregnancy, And Lactation

Inhaled Corticosteroids and Fetal Growth

The widespread prescribing of corticosteroids in medicine includes many clinical situations during pregnancy, which naturally raises concerns about the safety of these drugs in pregnant women. Over the past few years, information on this topic has begun to accumulate, providing stronger evidence about the safety of inhaled corticosteroids in this population.

Most recently, in October, the largest study to date, conducted by the Organization of Teratology Information Services (OTIS), on the use of asthma medications—corticosteroids and β_2-agonists—during pregnancy and their effects on fetal growth was published. The main finding was that treatment of pregnant women with β_2-agonists and inhaled steroids did not have adverse effects on fetal growth and that systemic corticosteroids had a minimal effect on birth weight and length.



BY GIDEON KOREN, M.D.

The prospective study compared birth size and the incidence of babies born small for gestational age (SGA) in 654 infants whose mothers had taken inhaled or systemic corticosteroids and β_2-agonists for asthma during pregnancy with birth size and incidence of SGA in 303 infants whose mothers did not have asthma. Women from North America were enrolled between 1998 and 2003. There were no significant differences in the incidence of SGA for weight between the groups. There was a small reduction in birth weight among those exposed to systemic steroids: In this group, the mean birth weight, adjusted for other risk factors, was 3,373 g, compared with a mean of 3,540 g among controls, 3,552 g among those exposed to β_2-agonists only, and 3,524 g among those exposed to inhaled steroids.

Mean birth weight and mean birth length, adjusted for risk factors, among infants whose mothers had been treated with inhaled steroids were not significantly different from those of controls or of infants whose mothers had used β_2-agonists only. The adjusted mean birth lengths were 51.3 cm in the inhaled steroid group and 51.5 cm in the β_2-agonist group.

The authors, from the University of California, San Diego and the OTIS Research Group, concluded that these results were "reassuring and support the recommendations of adequate control of severe asthma during pregnancy," and that "the modest effect of systemic steroids on fetal growth should be weighed against the necessity to achieve adequate control of severe persistent asthma and to prevent hypoxia during pregnancy" (J. Allergy Clin. Immunol. 2005;116:503-9).

This study is a major breakthrough because it combines information from teratology information centers in North America to provide much larger numbers than were available previously.

Women and physicians should be informed that there are some risks: In 2000, my colleagues and I published a metaanalysis of all available studies of women who were given high-dose steroids during pregnancy for various reasons. The results indicated that the use of systemic steroids during the first trimester was associated with a two- to threefold greater risk of oral clefts. This finding was consistent with extensive animal data that have shown the same association.

However, inhaled corticosteroids, commonly used as first-line therapy for asthma, result in an extremely low systemic dose, and none of the available reviews on their use during pregnancy have found any association with a greater risk of oral clefts. The β_2-agonist albuterol is not teratogenic.

There is emerging evidence that repeated weekly corticosteroid injections for fetal lung maturation in cases of premature rupture of the membranes may result in brain damage in some babies. But this is not relevant to the use of inhaled corticosteroids in pregnant women with asthma.

Therefore, based on this recent study and previous data, pregnant women should be encouraged not to neglect their asthma therapy because of concerns about potential effects on the fetus. The very real risks of untreated asthma during pregnancy are often put aside because of these concerns. The risks include higher rates of perinatal complications, mostly prematurity, when asthma is poorly controlled. We are aware of fatal cases of women who stopped needed asthma treatment during pregnancy. We owe it to pregnant women to provide them with this information so that they are treated appropriately.

The authors of an editorial accompanying the OTIS study state that inhaled steroids "do not seem to significantly impair fetal growth," but add that adequately powered studies are needed (J. Allergy Clin. Immunol. 2005;116:501-2). While I agree that this area of research remains a work in progress, the risk-benefit ratios should dictate optimal treatment of maternal asthma.

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