

# Make Discussing Exercise in Pregnancy a Priority

*Ample evidence shows that regular, moderate exercise in healthy pregnancies has no adverse effects.*

BY KATE JOHNSON  
Montreal Bureau

Although exercise is promoted to the general population for its well-recognized benefits, it is still not adequately accepted or recommended during pregnancy, according to Raul Artal, M.D., professor and chair of obstetrics, gynecology, and women's health at St. Louis University.

The hesitance of physicians to recommend exercise to pregnant women is rooted in old-fashioned notions of pregnancy as a time of confinement, he said.

With evidence to show that regular, moderate exercise in women with healthy pregnancies results in no adverse maternal or fetal effects, it could be argued that, in the spirit of "primum non nocere," physicians should make exercise recommendations a priority, said Dr. Artal, a noted expert in exercise physiology in pregnancy.

Because it is recognized that habits adopted during pregnancy can result in persistent lifestyle improvements, the promotion of exercise during pregnancy is an

important public health issue that could significantly reduce the lifetime risks of obesity, chronic hypertension, and diabetes—not only for pregnant women, but also but for their families, he said.

Dr. Artal's pregnancy exercise recommendations include:

## Healthy Pregnancy? Few Restrictions

Women with healthy pregnancies and no contraindications can exercise just as their nonpregnant counterparts do. (See box.)

A clinical evaluation of each patient is recommended before prescribing exercise, including an assessment of the type and intensity of exercise, as well as the duration and frequency of exercise sessions.

Contact sports and exercises with a high risk of falling or abdominal trauma should be avoided. Scuba diving should be avoided because this activity puts the fetus at increased risk for decompression sickness secondary to the inability of the fetal pulmonary circulation to filter bubbles.

## Exercise Intensity

Moderate exercise is defined as a level of intensity that still allows normal conversation—equivalent, for example, to brisk walking at 3-4 miles per hour. For women who have been sedentary and are taking up exercise for the first time, a gradual progression is recommended.

Those who are fit should be advised that pregnancy is not a time for greatly improving physical fitness.

Pregnant women should use caution in increasing the intensity of their workouts, especially when they are extending exercise sessions beyond 45 minutes, because body core temperatures can rise above safe limits after that time. Strenuous exercise has not been proved to increase overall benefit and could actually be harmful.

## Fetal Effects

Maternal cardiovascular, respiratory, and thermoregulatory adaptation occurs as a result of pregnancy and is further challenged by the addition of exercise.

Some physicians are hesitant to prescribe exercise for pregnant women because of the hypothetical fetal risks of impaired transplacental blood flow of oxygen, carbon dioxide, and nutrients during exercise, as well as the potentially teratogenic effects of raising fetal temperature.

Most studies show a minimal to moderate increase in fetal heart rate during exercise, and there is also evidence of heart rate decelerations and bradycardia; however, no lasting fetal effects have been reported.

Loss of fluid through sweat may compromise heat dissipation, so maintenance of hydration—and thus blood volume—is essential to controlling core temperature.

## Extra Nutritional Requirements

Although published data on a link between low birth weight and maternal exercise are conflicting, it appears that adequate energy intake can offset any exercise-induced decrease in birth weight.

By the second trimester of pregnancy, an extra 300 calories are needed daily to meet general metabolic needs in pregnancy; exercise increases this requirement.

Pregnant women use carbohydrates at a greater rate than do nonpregnant women and there is preferential use of this form of energy during non-weight-bearing exercise, making adequate carbohydrate intake of particular importance.

## Elite Athletes

Most elite athletes choose to continue training during pregnancy, but they must be told that they probably will not achieve the same level of performance as they did before pregnancy, and the physiologic changes they experience will also make them more prone to injury.

Although routine prenatal care is sufficient for most women who exercise, elite athletes require closer observation.

Women engaging in endurance sports can be prone to anemia that results from increased blood volume during pregnancy. High-intensity, prolonged, and frequent exercise can put women at greater risk of thermoregulatory complications as well, and will usually result in less maternal and fetal weight gain.

## Gestational Diabetes

The American Diabetes Association has endorsed exercise as a helpful adjunctive therapy for gestational diabetes mellitus (GDM) when glycemic control cannot be achieved through diet alone.

Approximately 39% of patients with GDM require insulin therapy, but in my experience, exercise is a safe and effective alternative for most of these women.

The key to achieving euglycemia through exercise is ensuring the adequate duration and intensity of the activity. At least half an hour of brisk walking per day is sufficient to upregulate insulin sensitivity, obviating the need for insulin therapy.

## Weight Control

Although exercise should never be used for weight control during pregnancy, excessive weight gain should be avoided.

The current Institute of Medicine (IOM)



LYNDA BANZI

**Staying hydrated is key, as sweating may compromise heat dissipation.**

guidelines on weight gain—which recommend a gain of 25-35 pounds for normal-weight women with a singleton pregnancy—are too high and are based on historical concerns about the effects of famine on fetal growth retardation.

The effect of gestational weight gain on pregnancy outcomes in obese women is not well studied. "It is my opinion that the IOM guidelines are outdated, and that weight gain recommendations should be individualized," he noted.

## Postpartum Exercise

Because failure to lose weight gained in pregnancy is a significant contributor to the obesity epidemic, the promotion of good exercise habits during pregnancy can also sow the seeds for postpartum exercise and weight loss.

In a study by Dr. Artal and colleagues, a weekly structured exercise program plus diet in postpartum overweight women were found to be much more effective in achieving weight loss after 12 weeks, compared with a single 1-hour education session about diet and exercise (J. Women's Health [Larchmt] 2003;12:991-8). ■

## Contraindications To Exercising During Pregnancy

### Absolute Contraindications

- Hemodynamically significant heart disease
- Restrictive lung disease
- Incompetent cervix/cerclage
- Multiple gestation at risk for premature labor
- Persistent second- or third-trimester bleeding
- Placenta previa after 26 weeks' gestation
- Premature labor during the current pregnancy
- Ruptured membranes
- Preeclampsia/pregnancy-induced hypertension

### Relative Contraindications

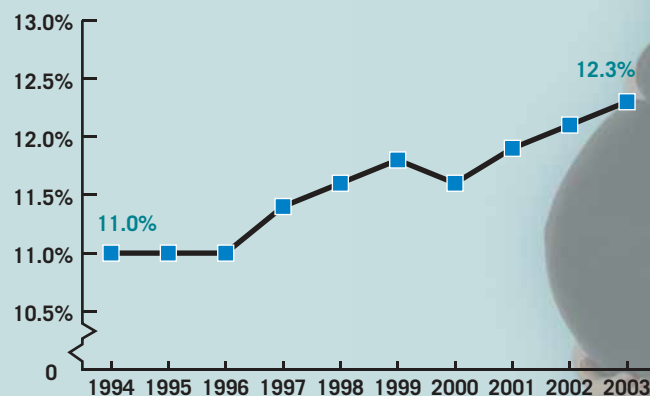
- Severe anemia
- Unevaluated maternal cardiac arrhythmia
- Chronic bronchitis
- Poorly controlled type 1 diabetes
- Extreme morbid obesity
- Extreme underweight (body mass index [kg/m<sup>2</sup>] < 12)
- History of extremely sedentary lifestyle
- Intrauterine growth restriction in current pregnancy
- Poorly controlled hypertension
- Orthopedic limitations
- Poorly controlled seizure disorder
- Poorly controlled hyperthyroidism
- Heavy smoker

Source: Obstet. Gynecol. 2002;99:171-3

## DATA WATCH

### Preterm Births on the Rise

Percentage of all live births that are preterm



Notes: Based on 100% of the birth certificates registered in all states and the District of Columbia. Preterm defined as less than 37 weeks' gestation. Source: Centers for Disease Control and Prevention