

Julie Tupler, RN

**W**omen who exercise during pregnancy may have shorter labor, with fewer complications and obstetrical interventions, according to the results of recent research study findings. One study, published in the October, 1998 issue of the *American Journal of Public Health* suggests that exercise and the fitness resulting from it may facilitate an efficient and timely labor. Other research by Dr. James Clapp, director of research of the department of Obstetrics and Gynecology at Metro Health Medical Center in Cleveland, Ohio, has shown that women who exercised while pregnant gained less weight and had shorter labors, with fewer complications and obstetric interventions such as forceps deliveries and cesarean sections. Statistics kept by Maternal Fitness, an exercise program taught by RNs for pregnant women and new moms, bear out the benefits of exercise during pregnancy, birth, and recovery. Since 1990, we have found that the 2,500 women who have taken our program, felt better during their pregnancies, had fewer cesarean sections, pushed more effectively, and experienced faster recovery. Exercise in preparation for labor may help women to condition both their minds and bodies for the rigors of childbirth, similar to any other athletic event.

Before exercising a woman must arm herself with knowledge and good sense. She must understand the changes her body will go through and how to exercise safely throughout these changes. Her training program should be flexible, based on her age, physical condition, fitness level, and motivation for exercise. She must also be aware of the medical concerns - overdoing it may cause premature births and birth defects, and get her healthcare provider's medical clearance before starting. Pregnant women are frequently told: "Don't start an exercise program if you haven't been exercising." The misconception here is in the definition of exercise. Exercise, for many people, has become synonymous with the image of aerobic activities. Aerobic exercise is important but it's only one of the components of fitness. Muscle strength, flexibility, relaxation, and proper nutrition are the other elements of fitness.

Aerobic exercise requires the most caution. Theoretically, two physiological adaptations are thought to occur during aerobic exercise that concern scientists when they study pregnant women: an abnormally high increase in core body temperature (hyperthermia), and a diversion of blood away from the uterus toward the working muscles. Based on results from animal studies, some scientists



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believe that if the uterine temperature increases from prolonged or intensive exercise by the mother, birth defects and premature labor may result. They believe a reduction of blood flow to the uterus could rob the baby of needed oxygen, glucose, and nutrients with similar projected results.

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### How Much Exercise Is Too Much?

Clapp's ongoing research indicates that the marvelous pregnant body has built-in safety mechanisms. The body's ability to dissipate heat is improved both by training and by pregnancy. The increased blood volume of a pregnant woman acts as an internal cooling system and helps to maintain blood flow to the fetus. However, Clapp believes that a woman should not elevate her temperature more than one- and one-half degrees during any exercise. The American College of Obstetrics and Gynecology (ACOG) recommends a temperature no higher than 101 degrees F. A pregnant woman must therefore monitor the intensity at which she is exercising. She can do this by the "talk test." If she can't carry on a conversation while doing aerobic exercise she is overdoing it. To evaluate whether she is overheating, she should take her temperature before and after she exercises and drink water before, during, and after she exercises. Water helps cool the body down and prevents dehydration, which can cause premature labor. To be safe, she should drink at least eight, eight-ounce glasses of water a day. The type of aerobic exercise should also be monitored. A pregnant woman is at risk for falls due to the shift in her center of gravity and the loosening of her joints by the hormone relaxin. Trauma to the abdominal area due to falls may cause the placenta to detach. The first sign of this would be bright red blood. She should refrain from doing exercises or sports that put her at risk of falling. If she does fall, she should protect her abdomen and fall on her side or buttocks.

### Practice, Practice, Practice

An important, but neglected, part of preparing for the marathon of labor is learning how to push. As in training for a marathon, a woman must strengthen and stretch the muscles she will be using (abdominals and pelvic floor muscles) and then practice the activity (pushing) she will be doing. A good time to practice pushing is while having a bowel movement. If she practices pushing throughout her pregnancy, when she gets to labor it will be second nature. I use the image of squeezing toothpaste out of a tube to help my clients understand pushing. Imagine that the tube is the uterus and

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## **Marathon continued from 12**

the hands are the abdominal muscles. The abdominals (hands) push against the uterus (tube) and the baby, (like toothpaste) comes out of the bottom (pelvic floor is open and relaxed)! So pushing is back, not down. Most women are told to hold their breaths and bear down. They are told this because it is an easy and natural thing to do even though it is hard on the body. A woman can't learn a new way to push while she is in pain! Holding the breath and bearing down causes the Valsalva Maneuver, which increases the blood pressure of mother and baby, pulls blood away from the muscles that need it and into the head, where it may cause broken facial blood vessels. Using the abdominal muscles improperly causes them to push out instead of back against the uterus. This puts stress on the supporting ligaments of the bladder and uterus. Strong abdominals are important not only for pushing, but preventing back problems during and after pregnancy. The "Tupler Technique" abdominal exercises focus on the transverse abdominal muscles, the muscles used when pushing. These are the innermost abdominal muscles that circle the waist like a corset and move forward and backward when you breathe.

A woman can strengthen these muscles by sitting cross-legged on the floor against a wall or on a chair. Her hand is on her belly and on her back. Bring the belly button halfway back to the spine. This is the starting position of the exercise. She then imagines the belly button touching the spine. She must squeeze and hold this backward movement before she brings it back to the starting position - halfway back. That is one repetition. She needs to do this 100 times. Each time she brings the belly button back to the spine she must count as it forces her to breathe. She should work up to doing three sets of 100 in the morning, three sets of 100 at midday and three sets of 100 in the evening. For more information on maternal fitness, contact Julie Tupler, at (212) 553-1047. ■

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