

Exercise During Pregnancy

by Kathy Zawadzki

A Real Concern

Although the new guidelines have been established and the many benefits to exercising during pregnancy are known, there is always concern for training pregnant women. Some of this stems from the many misconceptions about exercising during pregnancy. In the land of internet searches, blogs and misinformation overload, it becomes increasingly difficult to decipher what is good, solid information and what is fabricated. The following is an attempt to provide the facts regarding training pregnant women to maximize the potential benefits while keeping them safe. Two of the most popular misconceptions are that training during pregnancy will cause premature labor and will make the infant smaller at birth. Luckily, this has been proven untrue as one study examined how high- and medium-intensity exercise affected both the fetus and labor/delivery of the baby. The study involved forty-two healthy female athletes who followed either a high- or a medium-intensity exercise program throughout pregnancy until six weeks after delivery. At the end of the study period, there were no differences between the high- and medium intensity exercise groups in terms of onset/duration of labor, baby's birth weight or Apgar score, which measures the baby's health (Kardel and Kase, 1998).

Once again, such results underscore that healthy, well-conditioned women can exercise during pregnancy without compromising fetal growth and development. In 2002 it became the standard when the American College of Obstetricians and Gynecologists (ACOG) recommended that pregnant women exercise for thirty or more accumulated minutes on ALL or MOST days of the week.

Benefits

Most women benefit greatly from exercising throughout their pregnancy as there are numerous physical and mental benefits to be gained. At a time when many women wonder if this strange body could possibly be the one they had a few months prior, exercise can increase a sense of control while boosting energy levels. Here is a limited overview of some of the MANY pluses associated with exercise during pregnancy.

- Helps relieve backaches and improve posture by strengthening and toning muscles in the back, butt, and thighs
- May help prevent or treat gestational diabetes
- Increased energy levels and mood
- Reduction in constipation by accelerating movement in the intestine
- Increase in muscle tone, strength, and endurance
- Improvement in sleep quality
- Improve the ability to cope with the pain of labor
- Regain pre-pregnancy fitness and shape more quickly

Getting Started

For any pregnant woman, the first thing they must do is talk with their healthcare provider. The fitness professional should ensure that their client's doctor is aware that they will be exercising during pregnancy. More importantly, they need to make sure they do not have any obstetric or health conditions that would limit their activity. No matter how fit a client is, she should not be exercising if she has any of the following contraindications:

- pregnancy-induced hypertension
- preterm rupture of placenta membranes
- preterm labor during the current pregnancy or previous pregnancies
- incompetent cervix
- persistent bleeding during the second or third trimester
- intrauterine growth retardation

After the mom-to-be has been cleared for exercise, it is time to design a proper training program. As with any client, you must consider exercise history when designing an exercise program. It is typical to encounter two types of pregnant clients; those that are new to exercise and those with a strong background in athletics. For the new comers, it is critical

to start slow and gradually build up to the minimal recommendations. It may be as little as 5-10 minutes of exercise a day and then adding 5-10 min more each week until they can stay active for 30 minutes a day (ACOG, 2002). It is important to remember that the traditional principles of training overload are magnified by the demands of a growing fetus. On the other hand, female athletes who are very fit and have participated regularly in sports before becoming pregnant can continue their training with only a few modifications.

Regardless of previous fitness level or current program, ACOG recommends that any pregnant woman STOP exercising if they experience any of these symptoms:

- Vaginal bleeding
- Dizziness or feeling faint
- Increased shortness of breath
- Chest pain
- Headache
- Muscle weakness
- Calf pain or swelling
- Uterine contractions
- Decreased fetal movement
- Fluid leaking from the vagina

Monitoring Intensity

In 1985, the American College of Obstetricians and Gynecologists (ACOG) published its guidelines for prenatal exercise, cautioning women not to exceed a maximum heart rate of 140 beats per minute (bpm) (ACOG 1985). With these guidelines many pregnant women, especially athletes, found themselves in a quandary, since 140 bpm hardly qualifies as a workout for most fitness enthusiasts. The major flaw with the heart rate limitation is that blood volume increases dramatically during pregnancy. While vasodilatation increases to accommodate this blood flow, blood pressure can be inconsistent during the first two trimesters. As a result, heart rate is a poor indicator of exercise intensity during pregnancy.

Pregnant women should be encouraged to exercise at a level that feels comfortable, using rating of perceived exertion (RPE) as a guide (Anthony 2002). As mentioned earlier, ACOG advises against exercising to exhaustion, regardless of fitness level. According to the American College of Sports Medicine, pregnant women can continue to exercise at high intensity levels as long as they do not exceed their pre-pregnancy intensity levels (ACSM 2000). A general rule of thumb is that if it feels good, it probably is good; if, however, it feels bad, it's probably not good.

Researcher and physician James Clapp, MD, believes that athletes are more efficient at handling the stresses of exercise during pregnancy and can safely exercise beyond the ACOG guidelines if properly trained and monitored. His book, *Exercising Through Your Pregnancy* (2002), is an excellent resource for the fitness professional with athletic clients. Whether your client is a recreational or competitive athlete, they are typically very tuned in to their bodies. Most pregnant athletes recognize the signs indicating that exercise intensity levels are too high, and they can adjust their workouts accordingly. However, regardless of fitness level, pregnant athletes should never exercise to exhaustion. According to Clapp, this is less of a concern with recreational athletes. It is more likely to affect competitive athletes, who sometimes use poor judgment with regard to perceived exertion when competing in an event.

A challenge for the fitness professional is to be able to help women new to exercising or those returning to exercise during their pregnancy monitor their intensity levels. In the Stroller Strides program, expectant mothers are asked to monitor their exertion levels throughout the class as well as throughout the day. If a client feels okay in class but is unusually tired throughout the remainder of the day, it is likely she did too much in class. In this case, modifications should be made during the next exercise session as the goal is to help pregnant clients have MORE energy throughout the day.

Safety Considerations for Pregnant Athletes

Although pregnancy can prevent a competitive athlete from competing at their pre-pregnancy levels, it does not mean expectant athletes need to lower their activity to negligible levels. Druxman advises that athletes must still use caution when it comes to protecting their own health and that of their unborn baby. She addresses the three primary concerns of the effects of prenatal exercise on the fetus, and how they can be avoided:

1) HYPERTHERMIA

Concern: A higher-than-normal body temperature is the most common concern for the fetus during high-intensity exercise, says Druxman, as the fetus can take on the mother's increased body temperature, possibly leading to birth defects. Studies do indicate, however, that fit clients actually have better ability to dissipate heat.

Prevention: Pregnant athletes should be most cautious about exercising in hot conditions and for long durations during the first trimester, as the fetus can't regulate its own body temperature at this stage and is thus more susceptible to the mother's. Wearing light-colored, breathable fabrics to keep cool and drinking plenty of water throughout the day and during exercise bouts can help alleviate some of the heat stress. Because blood volume decreases during the early stages of pregnancy, pregnant athletes should drink 6 to 8 ounces of water for every 15 minutes they exercise (Clapp 2002). They should also avoid exercise when they are dehydrated.

2) SPORTS INJURIES

Concern: An extreme blow to (or fall onto) the abdomen during any stage of pregnancy can damage the placenta, although there is greater risk of damage to the fetus during the later stages, as it's positioned higher in the womb and unprotected by the pelvis, says Druxman. Although most medical experts agree that the typical falls and contact levels

common in sports are unlikely to cause damage, there is potential for injury, so it's best for the athlete and her physician to ultimately decide what's safe.

Prevention: Because they can be problematic to pregnant athletes, participation in contact sports, such as hockey, boxing, wrestling, football and soccer is discouraged. High risk sports, such as gymnastics, horseback riding, skating, skiing, hang gliding, racquetball and scuba diving should also be avoided as all of these activities increase the risk of falls and/or abdominal trauma.

3) OXYGEN DEFICIT

Concern: The duration, type and intensity of the exercise performed can all affect the fetus' heart rate. When a woman performs extreme levels of exercise on an inconsistent basis, uterine blood flow can decrease to a point where the fetus experiences a serious oxygen deficit. Typically, a pregnant athlete who trains regularly will have a fetus that is better conditioned to adapt to the stresses of exercise, but monitoring is still important, says Druxman.

Prevention: Pregnant athletes should follow any fitness program with a thorough cool-down period of gentle exercise and also pay special attention to fetal movements in the hours immediately following a workout. Like us, babies stop moving when they aren't getting enough oxygen.

Although experts have not established an upper level of safe activity for pregnant athletes, the benefits of continuing to be active during pregnancy appear to outweigh any potential risks. Unfortunately, no exact limits for frequency, duration and intensity are available. It is ultimately up to each woman—with the help and advice of her physician and fitness professionals like you— to decide the fitness path to take during pregnancy.

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