Fitness for Two

http://www.marchofdimes.com/printableArticles/681_1150.asp

For many women, exercise is an important part of their lives, and they want to continue their exercise programs during pregnancy. In most cases, they can. Numerous studies have demonstrated that, in low-risk pregnancies, moderate or even vigorous exercise is safe for the baby. The American College of Obstetricians and Gynecologists (ACOG) now recommends that most pregnant women participate in 30 minutes or more of moderate exercise on most, if not all, days of the week.

Regular exercise leads to improved fitness for pregnant women, just as it does for all women and men. It helps keep the heart, mind and entire body healthy. Exercise helps prevent health problems like heart disease, high blood pressure, diabetes, osteoporosis (bone loss), anxiety, depression and, possibly, some forms of cancer. For the pregnant woman, it can ease many common discomforts of pregnancy, such as constipation, backache, fatigue and varicose veins. Regular exercise also may help prevent pregnancy-related forms of diabetes and high blood pressure. Fit women may be able to cope better with labor and have a faster recovery after delivery.

Pregnant women who have not exercised regularly should consider gradually increasing their activities or starting a mild exercise program to reap some of these health benefits. However, all pregnant women should check with a health care provider before starting or continuing exercise. Most women will be able to maintain their exercise program throughout pregnancy, although some may need to modify their activities.

Women who do not want to participate in a regular exercise program can obtain many of the health benefits of exercise by following an active lifestyle. Past recommendations stated that a person needed to exercise continuously for about 30 minutes at least three times a week to obtain health benefits. However, current recommendations from the Centers for Disease Control and Prevention (CDC) say that short bouts of activity (at least 10 minutes each) several times a day also are effective.

Is exercise safe for all pregnant women?

No. Women who should not exercise while pregnant include those who have heart disease that compromises blood flow or who have restrictive lung disease; those with obstetrical complications including preterm labor in the current pregnancy, an incompetent cervix, multiple gestation (twins, triplets or more) at risk of preterm labor, persistent vaginal bleeding in the second or third trimester or ruptured membranes (bag of waters); and those with preeclampsia (a pregnancy-related form of high blood pressure). Women with a history of medical problems—such as severe anemia or poorly controlled high blood pressure, diabetes, thyroid disease or seizure disorder—should exercise only with the approval of their health care provider.

Can exercise harm the baby?

There is no evidence that exercise has any harmful effects on the unborn baby, or that it increases the risk of miscarriage or birth defects in a normal pregnancy.

In the past, there were few good studies on the effects of exercise on the baby. Doctors had theoretical concerns that it could trigger premature labor because exercise increases the levels of

hormones that may stimulate uterine contractions. Recent studies have provided reassurance that exercise does not increase the risk of premature labor in low-risk pregnancies. In fact, exercise may actually decrease the risk.

Doctors also were concerned that regular exercise could slow fetal growth because during exercise, blood tends to be diverted to the exercising muscles and, possibly, away from the uterus. Most studies have found that exercise has no effect on birthweight, and a few studies suggest that moderate exercise may actually increase birthweight. Recent studies have found that moderate exercise in early pregnancy improves growth of the placenta. The placenta supplies the baby with oxygen and nutrients, possibly contributing to an increase in birthweight. Even though strenuous exercise may slightly reduce birthweight, it does not appear to increase a woman's risk of having a low-birthweight baby. A 1996 study found that women who exercised strenuously throughout pregnancy had babies who were, on average, about 8 ounces lighter than the babies of a group of fit women who stopped exercising during pregnancy. However, the weight difference was mainly in body fat, and the babies remained in the normal range for weight.

The researchers followed this group of babies and found that at age 5, the children of exercisers continued to be somewhat leaner than the children of nonexercisers, although their growth was in the normal range. And, for reasons that are not clear, the children of the exercisers scored significantly higher than the other children in tests of intelligence and language skills.

Does pregnancy change how a woman's body responds to physical activity?
During pregnancy, a woman's body changes in a number of ways that alter her response to exercise. For example, a pregnant woman's tolerance for strenuous exercise decreases as pregnancy progresses. Pregnant women require more oxygen than nonpregnant women, even at rest. As pregnancy progresses, women have to work harder to breathe because the enlarging uterus crowds the diaphragm (the large muscle separating the chest and abdomen). These changes mean that there is less oxygen available for use during exercise, making it easier to become out of breath.

The cardiovascular system also changes during pregnancy. It responds differently to certain body positions. If a woman in her second or third trimester exercises while lying flat on her back, her expanding uterus may compress the major vein (vena cava) that carries blood back to the heart from the legs. This causes her heart to beat more slowly. A slow heartbeat can cause dizziness and interfere with normal blood flow to the uterus. Similarly, motionless standing also causes the heart to beat more slowly. Therefore, pregnant women should avoid these positions.

Some studies suggest that a pregnant woman's body dissipates heat more efficiently. This adaptation may help protect the baby. The body temperature of nonpregnant women rises about 1.5° F after exercising strenuously for about 20 minutes; that of fit pregnant women decreases slightly after exercise. Pregnant women should still take steps to avoid overheating, especially during the first trimester, because during this time a sustained body temperature of 102.5° F or higher may increase the risk of certain birth defects of the brain and spine. However, studies have not shown any increase in these or other birth defects among babies of women who exercise vigorously during pregnancy.

Pregnancy alters a woman's sense of balance. The enlarging uterus and breasts shift her center of gravity. High hormone levels make her connective tissues more lax and her joints may be more susceptible to injury. All of these changes determine the types of exercises that are safest for pregnant women.

What are some guidelines for exercising safely during pregnancy?
According to ACOG, participation in a range of recreational programs appears safe for most

pregnant women. However, a pregnant woman should always check with her health care provider to make sure she can safely continue her exercise program. These precautions can help assure that an exercise program is safe for mother and baby:

- Avoid contact sports and any activities that can cause even mild trauma to the abdomen, such as ice hockey, kickboxing, soccer and basketball.
- Avoid activities with a high risk of falling, such as gymnastics, horseback riding, downhill skiing and vigorous racquet sports.
- Avoid scuba diving throughout pregnancy. This activity puts the baby at increased risk of decompression sickness and may contribute to miscarriage, birth defects, poor fetal growth and preterm labor.
- Avoid exercising on your back after the first trimester. Also avoid prolonged periods of motionless standing. Both can reduce blood flow to the uterus.
- Avoid jerky, bouncing or high-impact movements that may strain joints and cause injuries.
- Avoid exercising at high altitudes (more than 6,000 feet) because it can lead to reduced amounts of oxygen reaching the baby.
- Eat an adequate diet to gain 25 to 35 pounds (or the amount of weight recommended by her health care provider) over the nine months. Most pregnant women require approximately 300 additional calories a day. Those who exercise regularly may require more. Diets should include plenty of carbohydrates, as pregnant women who exercise use this fuel source more quickly during exercise than nonpregnant women.
- Avoid overheating, especially in the first trimester. Drink plenty of fluids before, during and after exercise. Wear layers of "breathable" clothing and do not exercise on hot, humid days. Avoid hot tubs, saunas and Jacuzzis.

What types of exercise are best during pregnancy?
Most pregnant women can continue their pre-pregnancy exercise programs, though they may need to modify some activities or decrease the intensity of workouts as pregnancy progresses. For example, a jogger who quickly becomes fatigued or breathless may switch to brisk walking.

A pregnant woman should stop exercising immediately if she experiences symptoms such as vaginal bleeding, dizziness, shortness of breath, headache, chest pain, muscle weakness, calf pain or swelling, uterine contractions or amniotic fluid leakage.

Women who perform nonweight-bearing activities, such as cycling or swimming, are more likely to be able to continue exercising at high intensity through the third trimester than women who perform weight-bearing exercises, such as jogging or aerobic dancing. Nonweight-bearing activities appear to decrease the risk of injury, though bicycle riders may want to switch to a stationary bicycle, because it may be more difficult to maintain balance as pregnancy proceeds. Women who lift weights can safely continue to train with light weights (about 5 to 10 pounds) but should probably avoid lifting heavier weights or lifting weights while lying flat on their backs.

If a pregnant woman is just starting an exercise program (with her health care provider's OK), walking, swimming and cycling on a stationary bicycle are activities that are usually safe.

When can postpartum exercises begin?
Once the baby arrives, a woman generally is eager to regain her pre-pregnancy figure. If she has exercised regularly during pregnancy, she is that much closer to her goal: the stamina and muscle

tone she acquires will allow her to build up to her previous level of exercise more quickly than mothers who do not exercise regularly. New mothers who resume exercise (and moms who breastfeed) lose more weight than those who do not exercise, and most exercising mothers are back to their pre-pregnancy weight by their baby's first birthday.

A 1999 study showed that exercise has psychological payoffs for new mothers. Women who resumed their exercise program within six weeks of delivery felt better about themselves and adjusted more quickly to being a mom than women who did not exercise. While exercise benefits body and mind, women need to remember that pregnancy-related changes in bodily systems (such as the cardiovascular system) persist for about four to six weeks after giving birth. Therefore, a woman should start slowly. If she feels pain or has other unusual symptoms during a specific exercise, she should temporarily avoid that exercise (or do fewer repetitions or a shorter routine). A woman who has had a cesarean delivery should not exercise strenuously until her health care provider gives her the go-ahead.

References

American College of Obstetricians and Gynecologists (ACOG). Exercise during Pregnancy and the Postpartum Period. ACOG Committee Opinion, number 267, January 2002.

American College of Obstetricians and Gynecologists (ACOG). Exercising During Pregnancy. Educational pamphlet AP119. ACOG, Washington, D.C., June 2003.

Artal, Raul. Exercise during Pregnancy. The Physician and Sportsmedicine, volume 27, number 8, August 1999.

Clapp, J.F., III. Recommending Exercise during Pregnancy. Contemporary Ob/Gyn, January 2001, pages 30-49.

Evenson, K.R., et al. Vigorous Leisure Activity and Pregnancy Outcome. Epidemiology, volume 13, number 6, November 2002, pages 653-659.

Sampselle, C.M., et al. Physical Activity and Postpartum Well-Being. Journal of Obstetric, Gynecologic and Neonatal Nursing, January/February 1999, pages 41-49.

09-406-00 02/04

Prenatal Vitamins: What You Need to Know

http://www.medscape.com/viewarticle/466149_print

Q What are prenatal vitamins?

A For a mother's health, and the health of her baby, she is advised to take so-called "prenatal vitamins." These are specially formulated multivitamins that make up for any nutritional deficiencies in the mother's diet during pregnancy. While the supplements contain numerous vitamins and minerals, their folic acid, iron, and calcium content are especially important.

Q Why do pregnant women need high levels of folic acid, iron and calcium?

A **Folic acid** can reduce your risk of having a baby with a serious birth defect of the brain and spinal cord, called the "neural tube." A baby with spina bifida, the most common neural tube defect, is born with a spine that is not closed. The exposed nerves are damaged, leaving the child with varying degrees of paralysis, incontinence, and sometimes mental retardation.

Neural tube defects develop in the first 28 days after conception, before many women realize they are pregnant. Because about half of all pregnancies are unplanned, the U.S. Public Health Service recommends that all women of childbearing age get 400 micrograms of folic acid each day. In fact, the FDA now requires that all flour products, such as breads, buns and bagels, be fortified with extra folic acid. Women who have had a prior child with a neural tube defect should discuss with her doctor before her next pregnancy about the appropriate dose of folic acid. Studies have shown that taking a larger dose (up to 4,000 micrograms) at least one month before and during the first trimester may be beneficial.

There are natural sources of folic acid: green leafy vegetables, nuts, beans, and citrus fruits. It's also found in many fortified breakfast cereals and some vitamin supplements.

Calcium during pregnancy can prevent a new mother from losing her own bone density as the fetus uses the mineral for bone growth.

Iron helps both the mother and baby's blood carry oxygen.

While a daily vitamin supplement is no substitute for a healthy diet, most women need supplements to make sure they get adequate levels of these minerals.

Q Are all prenatal supplements the same?

No, they're not. Look for one that contains approximately:

- 4,000 and 5,000 IU (international units) of vitamin A
- 800 and 1,000 mcg (1 mg) of folic acid
- 400 IU of vitamin D
- 200 to 300 mg of calcium
- 70 mg of vitamin C
- 1.5 mg of thiamine
- 1.6 mg of riboflavin
- 2.6 mg of pyridoxine
- 17 mg of niacinamide
- 2.2 mcg of vitamin B-12
- 10 mg of vitamin E
- 15 mg of zinc
- 30 mg of iron

Your doctor or midwife can also advise you on certain brands. In some cases, your health care provider will give you a prescription for a certain type of prenatal vitamin.

My prenatal vitamin makes me nauseous, what should I do?

Some prenatal vitamins can cause nausea in an already nauseous woman. If your prenatal vitamins make you sick, talk to your health care provider. He or she may be able to prescribe a different kind of prenatal vitamins (for example, chewable vitamins as opposed to those you swallow whole may be better tolerated by some women).

Reviewed by The Cleveland Clinic Birthing Services and the Department of Obstetrics and Gynecology.
Edited by Tracy Shuman, MD, November 2005, WebMD.