

# Pregnancy and Postpartum Exercise

There is no reason for a “pregnant pause” in your healthy pre/postnatal client’s exercise program.

Your pregnant clients may not be up to training for their first triathlon, but they don’t have to skip their workouts altogether. In fact, consistent exercise will help clients as they prepare for childbirth and, later, as they return to prepregnancy activity levels. Benefits of regular exercise during and after pregnancy include the following (Garshasbi & Faghih Zadeh 2005; Mayo Clinic 2004):

- reduced incidence of back pain
- boosted energy
- fewer problems with constipation
- increased muscle strength and a superior cardiovascular condition, which can facilitate labor and delivery
- improved endurance, to prepare for the possibility of a longer labor
- improved mood states
- reduced postpartum recovery time

## DESIGNING AN APPROPRIATE PROGRAM

Dealing with many of a pre/postnatal client’s hormonal, metabolic, respiratory, cardiovascular and musculoskeletal changes is beyond the scope of practice for fitness professionals. Getting your client’s exercise plan approved by her physician before getting started—and then maintaining an open dialogue with the physician throughout the pregnancy and postpartum period—is essential.

Any fitness professional who works with pre/postnatal women should be familiar with the guidelines developed by the American College of Obstetricians and Gynecologists (ACOG 1994b). Of course, there are always exceptions to guidelines; your client’s doctor will let you know if any of the exceptions apply to your client.

Research suggests that during pregnancy, women can continue to derive

health benefits from regular exercise (at least three times per week). No data indicate that limiting intensity or lowering target heart rates is necessary to avoid potential adverse effects. With a doctor’s approval, some exercises may be continued at intensities similar to those maintained prior to pregnancy.

According to the ACOG guidelines (ACOG 1994b), a woman who does not have any specific risk factors for adverse maternal or perinatal outcomes can exercise throughout her pregnancy if she takes these precautions:

- Avoids exercise in the supine position after the first trimester (ACOG 1994b), since this position can lead to a reduction of maternal heart rate and decrease the flow of oxygenated blood to the baby.
- Avoids prolonged periods of motionless standing.
- Listens to her body. As the pregnancy progresses, there is less room for lung expansion, and the pregnant exerciser may “run out of breath” more quickly. Realizing that decreased oxygen is available, she should modify her exercise intensity and stop when fatigued.
- Chooses activities that minimize the loss of balance. The pregnant woman’s changing body affects her center of gravity, so it is best to avoid single-leg movements and exercise on uneven surfaces. Non-weight-bearing exercises, such as cycling or swimming, minimize the risk of injury.
- Avoids any type of exercise that carries the potential for even mild abdominal trauma (e.g., downhill skiing, contact sports).
- Consumes an adequate diet. During pregnancy 300 additional kilocalories per day are required to maintain metabolic homeostasis.
- Ensures adequate hydration, appropriate clothing and optimal environmental surroundings during exercise to augment heat dissipation, especially during the first trimester.

Since many of the physiological and morphological changes of pregnancy persist 4–6 weeks postpartum, prepregnancy exercise routines should be resumed gradually, based on a woman’s physical capability.

## CONTRAINDICATIONS TO EXERCISE

The following conditions should be considered contraindications to exercise during pregnancy (ACOG 1994b):

- pregnancy-induced hypertension
- preterm rupture of membranes or preterm labor during the prior or current pregnancy

## red flags

These symptoms are messages from your client’s body, telling her to slow down:

- fatigue
- dizziness
- heart palpitations
- shortness of breath

Ela Lewis, MSPT, NCS, recommends that your client “seek immediate medical advice if no fetal movement occurs for 30 minutes after exercise or if there is fetal heart rate deceleration.” In addition, if any of the following signs occur, **immediately** terminate exercise and have your client check in with her doctor:

- pain in the back or pelvis
- vaginal bleeding or fluid leakage
- preterm labor
- headache and/or visual disturbance
- muscle weakness or unusual pain
- persistent dizziness or lightheadedness
- unusual shortness of breath (e.g., prior to exercise)
- racing heartbeat or chest pain
- uterine contractions

Sources: ACOG 1994a; ACOG 1994b.

- incompetent cervix
- persistent second- or third-trimester bleeding
- intrauterine growth retardation
- multiple gestation

In addition, women with certain other conditions—including chronic hypertension or active thyroid, cardiac, vascular or pulmonary disease—should be carefully evaluated to determine whether an exercise program is appropriate.

## MODES AND INTENSITY OF EXERCISE

The appropriate mode of exercise for your pregnant client depends to a great extent on how fit she was before her pregnancy. A previously sedentary client must begin slowly and progress gradually. Swimming and other types of aquatic exercise are preferred for the pre/postnatal client because they provide the benefit of buoyancy, taking weight off the joints and allowing the client to feel more comfortable. Other possibilities include yoga and Pilates (geared to pregnant clients), walking, or exercise on cardiovascular machines. Performing a mix of cardiovascular, strength and flexibility exercises is an option.

The “talk test” is useful for determining intensity with a pregnant client. If she cannot hold a conversation with you while exercising, the intensity is too high.

## RESISTANCE EXERCISE

Colleen M. Fitzgerald, MD, the medical director of the Rehabilitation Institute of Chicago Women’s Health Rehabilitation and an assistant professor at Northwestern University Feinberg School of Medicine, advises that the “key muscles to strengthen are the transversus abdominis muscles because they work hand in hand with pelvic floor [muscles].” In addition, Fitzgerald believes that women with strong transversus abdominis muscles will have much less postpartum muscle dysfunction and weakness.

### General Resistance Training Guidelines

Clients who had been strength training regularly prior to the pregnancy can continue, but they should reduce intensity and change positions when necessary; for example, by using the seated leg curl machine instead of performing a prone hamstring curl. In addition to the

general exercise guidelines outlined above, clients should

- always breathe through exercises (avoiding the Valsalva maneuver);
- be cautious of rapid positional changes, including bending over quickly with the head below chest level, since these movements may cause dizziness; and
- aim for maintenance, not hypertrophy.

### Exercises

**Kegel Exercises.** Kegel exercises strengthen the pelvic floor, preparing it for labor and delivery, and help with sphincter control.

- Sit comfortably with legs apart and back supported by a chair. Keep the abs relaxed and legs still, and contract the pelvic-floor muscles as if stopping the flow of urine.
- Hold for a count of 10, then relax. Perform multiple sets of 15–25 repetitions a day.
- Do not perform this exercise while urinating, as this can increase the risk of a urinary-tract infection.

**Transversus Abdominis.** Your favorite transversus abdominis exercises—for example, dead bugs or bicycles—can be used, as long as you keep in mind the precautions about exercising in the supine position after the first trimester.

**Postural Exercises.** Keeping the postural muscles strong is important to support your client’s ever-changing body.

- Seated row (1–2 sets of 10–15 reps): Use cables or tubing and modify position.
- Quadruped cat-cow (anterior and posterior pelvic tilting), or quadruped arm/leg lift (1–2 sets of 10–15 reps): Work the core and postural muscles while on all fours (to avoid the supine position), relaxing while inhaling and then tightening the muscles while exhaling.

**Squats and Lunges.** These functional exercises prepare the client’s body for lifting a baby, picking up toys, pushing strollers and other “new mom” activities. Perform 1–2 sets of 10–15 reps.

## FLEXIBILITY TRAINING

Feel free to use your favorite stretches for the following muscle groups (3 reps, holding for 30 seconds each), but pay attention to the client’s position, avoiding supine after the first trimester.

- hip flexors
- iliotibial band

- hip internal rotators
- piriformis
- adductors
- low back
- anterior shoulders
- pectorals

## POSTPARTUM EXERCISE

Women can usually begin gentle and casual walking within the first 2 weeks postpartum. Light upper-back exercises, heel slides and ankle pumps/circles can also be resumed.

“I think patients can definitely start exercising abdominals by the 6-week postpartum/post-op mark if no medical contraindications (for example, incision precautions) exist,” reports Fitzgerald. “I think some high-level patients could do it even sooner, say at 3 weeks.”

After a client has passed the 6-week postpartum period and been cleared by her physician to go back to her prepregnancy exercise routine, the return should be gradual. Pay close attention to her subjective and objective responses to exercise. Although most of the physiological and morphological changes are most notable for the first 4–6 weeks postpartum, many experts agree that the muscles, tendons and joints do not return to their prepregnancy state for at least 9–12 months (ACOG 1994a). Fitzgerald suggests, “Recovery can be maximized if the exercise program is designed properly for those important first 6 months.”

## EXERCISE AFTER A CESAREAN SECTION

After a C-section, isometric and gentle stretching and strengthening exercises, as well as casual walking, can be started right away unless there is heavy bleeding; pain; or breast infection or abscess.

Ela Lewis, MSPT, NCS, a physical therapist specializing in women’s health and a certified specialist in neurology, suggests diaphragmatic breathing, pelvic tilts, hip lifts, pelvic-floor exercises and walking. She advises, “There should be no pain, and the [client’s] physician should be aware of any form of exercise program that is being started.”

ACOG recommends that clients who have had a C-section should return to prepregnancy exercise no sooner than 6 weeks after giving birth. Again, this should be cleared by the client’s physician.

It may take 2–6 months before a woman feels she is completely recovered and back to prepregnancy form.

## YOUR ROLE IN THE BLESSED EVENT

Working with a pregnant or postpartum client is both demanding and rewarding. If you pay close attention to the guidelines outlined here, consider the dynamic needs of the individual client and maintain regular contact with her physician, you will have the wonderful opportunity to guide your client safely through one of the most exciting transitions of her life.

*Catherine Logan, MSPT, is a licensed physical therapist, a Pilates instructor and a personal trainer in Boston. She is the co-founder of Fit to Flawless LLC, a fitness product development company, and practices physical therapy at Sports and PT Associates. Logan is also a Pilates conditioning coach for Boston University Women's Tennis. She can be contacted at [catherine@fittoflawless.com](mailto:catherine@fittoflawless.com).*

© 2006 by IDEA Health & Fitness Inc. All rights reserved. Reproduction without permission is strictly prohibited.

## References and Suggested Reading

- American College of Obstetricians and Gynecologists (ACOG). 1994a. ACOG issues recommendations on exercise during pregnancy and the postpartum period. *American Family Physician*, 49 (5), 1258–59.
- American College of Obstetricians and Gynecologists (ACOG). 1994b. Exercise During Pregnancy and the Postpartum Period. Technical Bulletin No. 189. Washington, DC.
- Clapp, J. 2002. *Exercising Through Your Pregnancy*. Omaha, NB: Addicus Books.
- Garshasbi, A., & Faghieh Zadeh, S. 2005. The effect of exercise on the intensity of low back pain in pregnant women. *International Journal of Gynaecology & Obstetrics*, 88 (3), 271–75.
- Mayo Clinic. 2004. Exercise: Pace it for pregnancy. [www.mayoclinic.com/health/pregnancy-and-exercise/PR00096](http://www.mayoclinic.com/health/pregnancy-and-exercise/PR00096); retrieved Nov. 15, 2005.
- Noble, Elizabeth. 2003. *Essential Exercises for the Childbearing Year* (4th ed.). Harwich, MA: New Life Images.

## Resources

In 2003 the Society of Obstetricians and Gynaecologists of Canada (SOGC) and the Canadian Society of Exercise Physiology (CSEP) published recommendations for exercise during pregnancy and the postpartum period (Davies, G.A.L., et al. 2003. Joint SOGC/CSEP clinical practice guideline: Exercise in pregnancy and the postpartum period. *Canadian Journal of Applied Physiology*, 28 [3], 329–41). Because the ACOG guidelines are still considered the standard in U.S. medical circles, to avoid any potential liability, American fitness professionals should abide by the ACOG guidelines when any discrepancies exist between the two sets of recommendations. Nevertheless, readers may be interested in checking out the newer Canadian guidelines, which were based on sound research.