

Active Pregnancy



Pregnancy does not have to stop you from being active. Current research suggests that healthy pregnant women can continue to participate in physical activity. If you have been regularly active (3 times per week for 30 minutes) before pregnancy, you can safely participate in physical activity during pregnancy. If you have not been regularly active before pregnancy, the best time to start would be after your 16th week of pregnancy or during your second trimester when the risks and discomforts of pregnancy are at their lowest.

Before engaging in physical activity begin your program by following the guidelines listed below. Each physical activity session should include stretching and aerobic activity. Remember to include two sessions of seven muscle conditioning exercises per week.

Safety Guidelines for Physical Activity During Pregnancy

- 1... Consult with your doctor or midwife before beginning or changing your physical activity program.
- 2... Begin slowly. Start with aerobic activity 3 times per week for 15 minutes.
- 3... Avoid activities which require sudden starts or stops, jumping, or rapid changes in direction.
- 4... Always warm up your muscles before activity and stretch after your activity.
Never stretch a cold muscle.
- 5... Drink water before, during, and after your activity to replace body fluids lost through perspiration.
- 6... Your body temperature should not exceed 38°C. Avoid being active in warm, humid weather especially during the first trimester or when you are ill and have a fever. Check the temperature of a heated pool before swimming. Avoid hot tubs or whirlpools.
- 7... Avoid exercises which require you to lie on your back after four months or 16 weeks of pregnancy. Instead, perform the exercises while lying on your side, sitting or standing.

Stretching

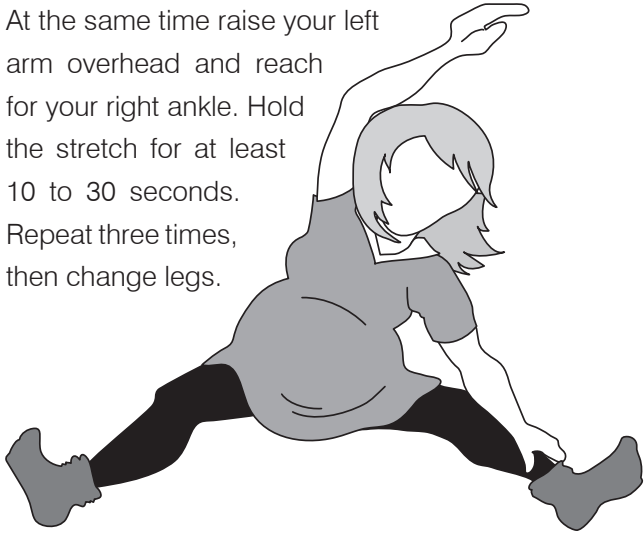
Stretching your muscles before and after activity will prevent muscle soreness and stiffness. Before aerobic activity, warm your muscles and joints with a slow movement such as walking or marching on the spot. After this slow movement, stretch using the exercises outlined below. These exercises can be used both before and after activity. Remember ... never stretch your muscles when they are cold or stiff.

Long Stretch

Knees should be slightly bent. Reach for your right ankle using your right hand.

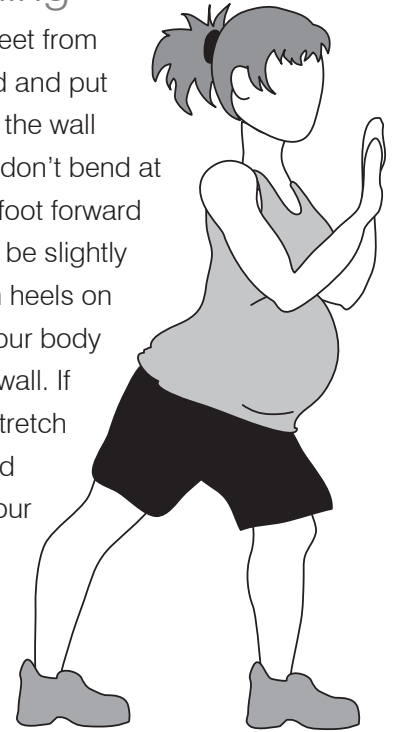
At the same time raise your left arm overhead and reach for your right ankle. Hold the stretch for at least 10 to 30 seconds.

Repeat three times, then change legs.



Calf Stretching

Stand about three feet from a wall. Lean forward and put your hands against the wall at shoulder height (don't bend at the waist). Put one foot forward (both knees should be slightly bent), keeping both heels on the ground. Lean your body slowly towards the wall. If you are doing the stretch correctly, you should feel the stretch in your calves. Hold the stretch for 10 to 30 seconds. Repeat three times, then change legs.

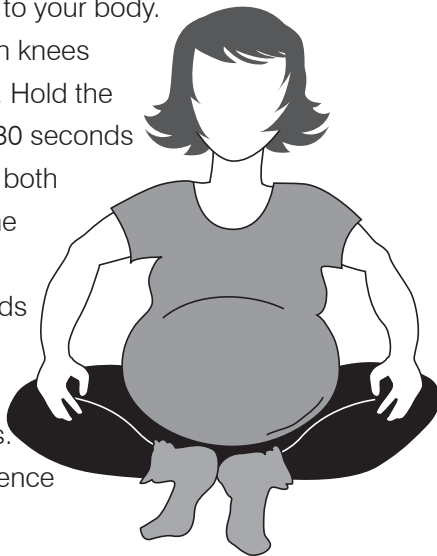


Thigh Stretching

Sit in the "butterfly" position with heels together and pulled close to your body.

Gently press both knees towards the floor. Hold the stretch for 10 to 30 seconds then relax. Press both knees towards the floor again by placing your hands on top of your knees. Hold for 10 to 30 seconds.

Repeat the sequence three times.



Alternative Arm Stretches

Keep your back straight while sitting or standing. Slowly reach overhead with your right arm, and then left arm. Reach until you have lifted each arm 20 times.



Aerobic Conditioning

Choose an activity you enjoy! Some of the best types of physical activities during pregnancy include, stationary cycling, swimming, walking and low impact aerobics. It is important to gradually increase the frequency, duration, and intensity of your activity. The best time to increase your activity is during your second trimester when the risks and discomforts of pregnancy are usually at their lowest.

Guidelines

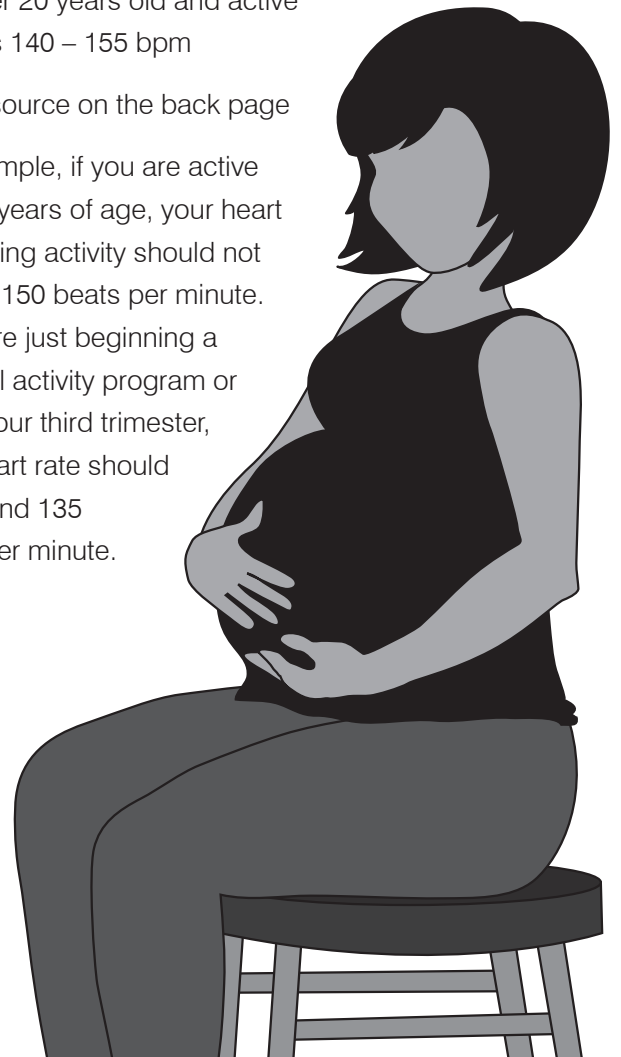
- 1... The frequency of your activity should gradually increase from three times to four times per week during your second trimester.
- 2... The duration of your activity should gradually increase from a minimum of 15 minutes to a maximum of 30 minutes per session during your second trimester.
- 3... The intensity of your activity is based on your age and how hard you are working. All aerobic activity should be done at a moderate-intensity. Moderate intensity activities allow you to carry on a conversation while being active. Slow down the intensity if you can't talk while performing the activity. Exercise at the lower end of the heart rate range if you are beginning a new program or if you are in your third trimester of pregnancy. The heart rate zones shown are appropriate for most healthy pregnant women.

FITNESS LEVEL	Age 20 - 29	Age 30 - 39	40 and over
FIT	145 - 160	140 - 156	125 - 140
ACTIVE	135 - 150	135 - 145	125 - 140
UNFIT	129 - 144	128 - 144	
OVERWEIGHT / OBESE	102 - 124	101 - 120	

*If under 20 years old and active range is 140 – 155 bpm

**See source on the back page

For example, if you are active and 28 years of age, your heart rate during activity should not exceed 150 beats per minute. If you are just beginning a physical activity program or are in your third trimester, your heart rate should be around 135 beats per minute.



Muscle Conditioning

There are many ways to maintain your muscle strength during pregnancy. Light hand weights or elastic resistance bands are recommended to build or maintain upper and lower body strength and improve posture. Another alternative is to perform the exercises on the next page. They will help you to maintain strength and muscle tone during your pregnancy.

Guidelines

- 1... Avoid lifting heavy weights. Do not lift any weights while lying on your back.
- 2... Begin slowly. Gradually increase the number of times you perform each exercise. Do not work your muscles to the point of fatigue.
- 3... Do not hold your breath. Exhale on exertion, inhale on relaxation using high repetitions and low weights.
- 4... If you are beyond four months or 16 weeks of pregnancy, avoid exercises while lying on your back. The enlarged uterus may decrease the flow of blood as it presses on a major vein or artery.

Pelvic Floor

Healthy pelvic muscles will support the growing uterus to stretch easily and recover quickly after childbirth. Kegel exercises, like the elevator, should be done several times each day. Do a set of five exercises at each session so your muscles do not tire easily.

Elevator

Stand comfortably or sit in a chair with your feet resting on a stool. Imagine you are on an elevator that is going from the first floor to the tenth floor. Tighten your pelvic muscles a little at a time at each floor until you reach the tenth floor. Release your muscles a little at a time as you go from the tenth floor to the first floor. By the time you reach the first floor, your muscles should feel back to normal. Try to release your muscles even more as you imagine moving down to the basement of the building. Tighten your muscles again to come up to the first floor. Repeat this exercise only five times.

Upper Body

Shoulder Shrug

Sit on the floor with your ankles crossed and hands relaxed in front. Raise your shoulders to your ears while breathing in, then let your shoulders drop while breathing out. Repeat ten times.



Shoulder Rotation

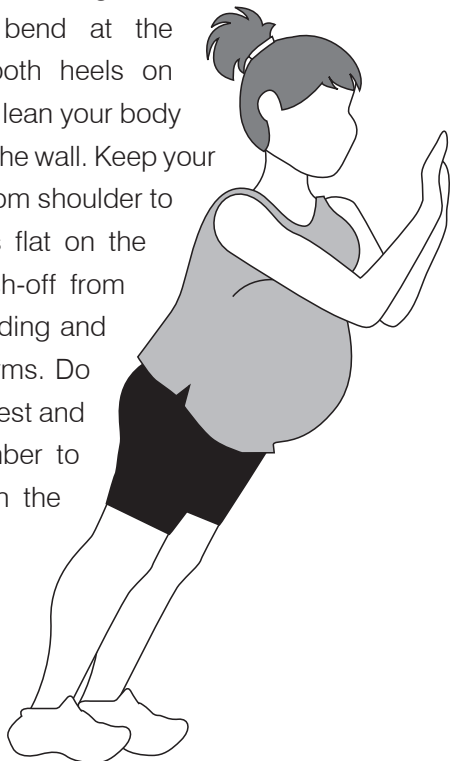
Place your fingertips on each shoulder and roll your elbows backward, making high enough circles so that the back of each hand touches your ears. Then, roll your elbows forward so that your elbows touch in front. Repeat 10 times in each direction.



Upper Body continued on next page...

Modified Push-Offs

Stand about three feet from a wall. Lean forward and put your hands against the wall at shoulder height (Don't bend at the waist). Keep both heels on the ground and lean your body slowly towards the wall. Keep your body straight from shoulder to feet, with heels flat on the floor. Then push-off from the wall by bending and straightening arms. Do one set of 10. Rest and repeat. Remember to breathe through the exercise.



Abdominal Exercises

Strengthening your abdominal muscles will help maintain your posture and may also be helpful in assisting with delivery. Exercises can be performed on your side, while sitting or standing. Avoid exercises while lying on your back if you are past 4 months (16 weeks).

Checking for Diastasis Recti:

Sit in a chair and contract your abdominal muscles. Using your fingers, feel your abdominal muscles around your belly button area. You should feel the hard abdominal muscle wall. If you feel soft tissue between the abdominal muscles (you usually can see a bulge in the centre of your abdomen) then you have Diastasis Recti.

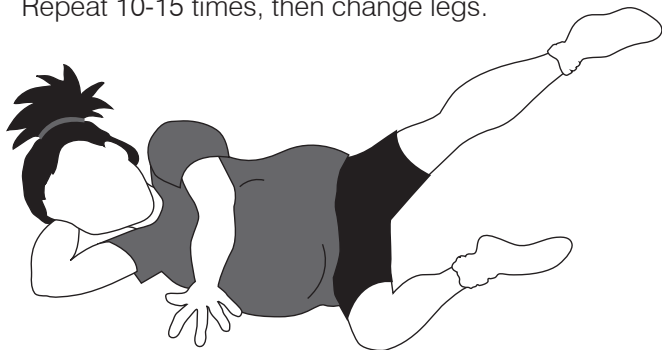
Modified Curl-up

If you have Diastasis Recti, a separation of your abdominal muscles, do not perform any abdominal exercise as this might make the condition worse. Sit on a chair with your feet flat on the floor. Keep your back flat and place your hands at the side of your ears. Gently lift one leg at a time in towards your abdomen. Slowly release your leg to the floor and repeat with the other leg. Repeat about 10 times each leg or as much as you can.

Lower Body

Reclining Leg Lifts

Lie on the floor on your right side. Bend your right leg at the knee for support and raise your left leg (keep your knee slightly bent) about 45° then lower. Repeat 10-15 times, then change legs.



Imaginary Chair

While standing, slide into an imaginary sitting position against a wall. Your thighs should be parallel to the floor, your back flat against the wall, feet are planted and your arms relaxed at your sides. Hold this position for no more than the duration of two complete breaths, remembering to breathe normally. Then slowly slide back up to a standing position. After a few seconds of rest, repeat the exercise. Do this 5-10 times.

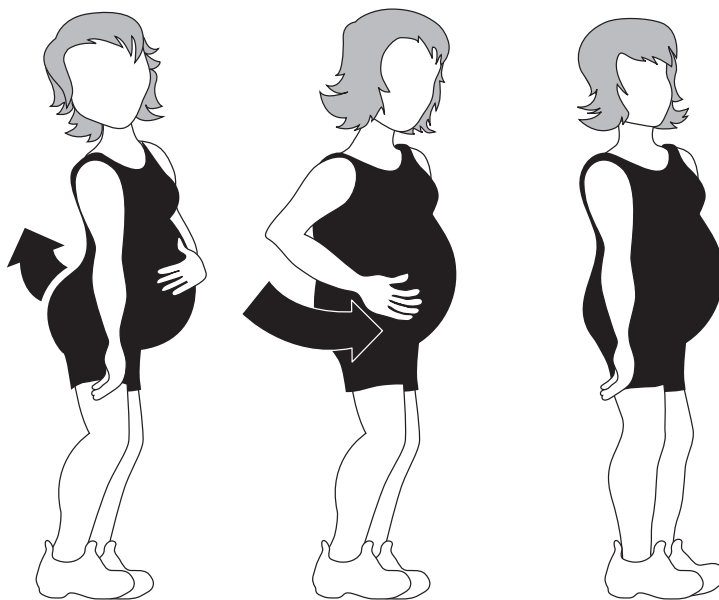


Posture

Posture is very important for pregnant women. Backaches are a frequent complaint among pregnant women. The following is excellent for developing good posture and may help to relieve back problems.

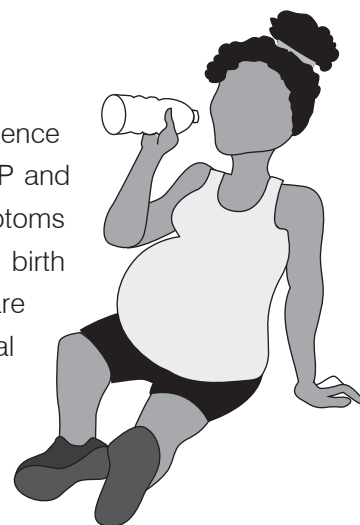
Neutral Pelvic Alignment (standing or sitting)

To find this position, stand with your feet shoulder width apart and your knees slightly bent. Accentuate the arch of your back and then move from this position into a forward pelvic tilt (pull in your abdominal muscles and squeeze your buttocks together so that your lower back is flattened against the wall or back of the chair). Then move into a neutral pelvic alignment by positioning your body half way between these two postures.



Relax

Remember . . . listen to your body. If you feel uncomfortable, experience pain, dizziness, shortness of breath, or other symptoms - STOP and decrease the amount and intensity of the activity. If symptoms persist, consult your health care provider. After the birth of your baby, consult with your health care provider before continuing your physical activity program.



Adapted from Fitness and Conditioning During Pregnancy, The University of Western Ontario and Middlesex-London Health Unit and the "PARmed-X for PREGNANCY", Canadian Society for Exercise Physiology and Health Canada.

www.csep.ca Edited by Dr. M. Mottola, Director of the Exercise & Pregnancy Lab, University of Western Ontario.



Hamilton

Adapted from a resource produced by the City of Hamilton Public Health Services.



Updated, redesigned and distributed by the Physical Activity Resource Centre (PARC)

**1) Davenport, M., Sopper, M.M., Charlesworth, S., Vanderspank, D., Mottola, M.F. 2008. Development and validation of exercise target heart rate zones for overweight and obese pregnant women. *Appl Physiol Nutr Metabol.* 33(5):984-9.

2) Mottola, M.F., Davenport, M., Brun, C.R., Inglis, S.D., Charlesworth, S., Sopper, M.M. 2006. VO2peak prediction and exercise prescription for pregnant women. *Med. Sci. Sports Exerc.* 38(8):1389-1395.