



CANADIAN ACADEMY OF SPORT MEDICINE
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POSITION STATEMENT

Exercise and Pregnancy

(Revised and updated 2008)

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This position Statement was prepared by the Canadian Academy of Sport Medicine Sport Safety Committee. This position statement was approved by the CASM Board of Directors as a CASM position statement in December 2007.

Introduction:

Current research supports the recommendation that a moderate level of exercise on a regular basis during a low risk pregnancy has minimal risk for the fetus and beneficial metabolic and cardio respiratory effects for the exercising woman. Many women perceive this life stage as an opportunity to improve their lifestyle and adopt healthier behaviors such as eating a balanced diet and participating in regular physical activity (4, 21, 34).

Recommendations on exercise in pregnancy have undergone significant changes over the last three decades, with initial guidelines in the 1980's regarded as conservative and lacking scientific support (1) More recent guidelines have been more flexible in exercise prescription and are now evidence-based. The PARmed-X for Pregnancy tool is recommended to assess the appropriate and safe parameters for medical screening and exercise prescription.

Recommendations for Exercise during Low Risk Pregnancy

- Women who have been previously active may continue their exercise during the first trimester to a maximum of 30-40 minutes at a frequency of 3-4 x week as tolerated.
- Preliminary studies indicate that the exercising pregnant woman may be able to tolerate mild changes in core body temperature within the established exercise guidelines.
- Current literature supports moderate intensity exercise of 2-4 x a week in a pregnant woman without adverse effect on fetal birth weight.
- Studies confirm that guidelines are necessary for maternal exercise because there is still some controversy regarding the threshold for exercise and fetal stress.



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- Studies indicate that moderate low impact exercise during pregnancy has not been associated with a reported incidence of maternal injury; however, the risk for potential maternal injury may occur at higher impact or contact physical activity due to the musculoskeletal changes during pregnancy.
- There are defined psychological benefits of exercise during pregnancy that can be attained by moderate physical activity participation.
- Research studies related to exercise in the Post-partum currently support exercise as a therapeutic intervention for healthy lifestyle without adverse effects.

Exercise Prescription Parameters:

Frequency:

- Women who have been exercising prior to pregnancy may continue their regular exercise regimen during pregnancy, by following the PARmed-X guidelines.
- Women who did not exercise regularly prior to pregnancy should not start an exercise program until the second trimester.
- It is currently recommended to exercise at a frequency of 3 times per week, progressing to a maximum of 4 to 5 times per week.

Intensity:

- Heart rate is less reliable in pregnancy for determining exercise intensity.
- The modified heart rate target zones, as outlined in the PARmed-X, are recommended for use in measuring exercise intensity in pregnant women.
- Borg’s 15-point *Rating of Perceived Exertion* (RPE) scale and the “talk test” are recommended as alternate methods of quantifying exercise intensity. A target range of 12 to 14 is suggested in pregnancy.
- The “talk test” implies that a pregnant woman can carry on a verbal conversation during exercise, if she is exercising at a safe intensity.

Time:

- When first beginning an exercise program, it is recommended that the woman begin with 15 minutes of continuous exercise.
- The duration of exercise may be gradually increased, as pregnancy progresses, to 30 minute sessions.

Type:

- Aerobic and strength-conditioning exercises are recommended in pregnancy.
- Less strenuous but continuous aerobic exercise (i.e. brisk walking, stationary cycling, cross-country skiing and swimming) are recommended.
- Avoid any exposure to hyperbaric, hyperthermic, humid or hypoxic environmental conditions.



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- Avoid aerobic activities with increased risk of blunt abdominal trauma and loss of balance (i.e. downhill skiing, horse-back riding, and gymnastics).
- Avoid exercises in supine position after the fourth month of pregnancy, to prevent hypotensive episodes. Avoid breath-holding during weight-training exercise.
- Abdominal exercises are not recommended if diastasis recti develops.

References available in the Discussion Paper

Short List:

- Canadian Society for Exercise Physiology. Physical Activity Readiness Medical Examination for Pregnancy (PARmed-X for Pregnancy). www.csep.ca. 2002.
- Davies, G., Wolfe, L., Mottola, M., MacKinnon, C. Joint SOGC/CSEP Clinical Practice Guideline: Exercise in Pregnancy and the Postpartum Period. Can. J. Appl. Physiol. 2003; 28(3): 329-341.
- Paisley, T., Joy, E. Price, R. Exercise During Pregnancy: A Practical Approach. Current Sports Medicine Reports. 2003; 2: 325-330.
- Wolfe L. and Davies G. Canadian Guidelines for Exercise in Pregnancy. Clinical Obstetrics and Gynecology. 2003; 46(2): 488-495