PARmed-X for PREGNANCY PHYSICAL ACTIVITY READINESS MEDICAL EXAMINATION

PARmed-X for PREGNANCY is a guideline for health screening prior to participation in a prenatal fitness class or other exercise.

Healthy women with uncomplicated pregnancies can integrate physical activity into their daily living and can participate without significant risks either to themselves or to their unborn child. Postulated benefits of such programs include improved aerobic and muscular fitness, promotion of appropriate weight gain, and facilitation of labour. Regular exercise may also help to prevent gestational glucose intolerance and pregnancy-induced hypertension.

The safety of prenatal exercise programs depends on an adequate level of maternal-fetal physiological reserve. PARmed-X for PREGNANCY is a convenient checklist and prescription for use by health care providers to evaluate pregnant patients who want to enter a prenatal fitness program and for ongoing medical surveillance of exercising pregnant patients.

Instructions for use of the 4-page PARmed-X for PREGNANCY are the following:

- The patient should fill out the section on PATIENT INFORMATION and the PRE-EXERCISE HEALTH CHECKLIST (PART 1, 2, 3, and 4 on p. 1) and give the form to the health care provider monitoring her pregnancy.
- The health care provider should check the information provided by the patient for accuracy and fill out SECTION C on CONTRAINDICATIONS (p. 2) based on current medical information
- 3. If no exercise contraindications exist, the HEALTH EVALUATION FORM (p. 3) should be completed, signed by the health care provider, and given by the patient to her prenatal fitness professional.

In addition to prudent medical care, participation in appropriate types, intensities and amounts of exercise is recommended to increase the likelihood of a beneficial pregnancy outcome. PARmed-X for PREGNANCY provides recommendations for individualized exercise prescription (p. 3) and program safety (p. 4).

Sections A and B should be completed by the patient before the appointment with the health care provider.

	PATIENT INFORMATION					
ADDRESS						
TELEPHON	NEBIRTHDATE _			HEALTH INSURANCE No		
NAME OF PRENATAL FITNESS PROFESSIONAL			PRENATAL FITNESS PROFESSIONAL'S PHONE NUMBER			
ВР	PRE-EXERCISE HEALTH CHE	CKL	IST	PART 3: ACTIVITY HABITS DURING THE PAST MONTH		
PART 1	: GENERAL HEALTH STATUS			List only regular fitness/recreational activities:		
 Misca Other I have 	est, have you experienced (check YES or NO): carriage in an earlier pregnacy? er pregnancy complications? er completed a PAR-Q within the last 30 days. eswered YES to question 1 or 2, please explain:	YES	NO 	INTENSITY FREQUENCY TIME (times/week) (minutes/day) 1-2 2-4 4+ <20 20-40 40+ Heavy Medium		
				Does your regular occupation (job/home) activity involve: YES NO		
PART 2	Number of previous pregnancies? PART 2: STATUS OF CURRENT PREGNANCY			Heavy Lifting? Frequent walking/stair climbing? Occasional walking (>once/hr)?		
Due Date:	:			Prolonged standing?		
Ü	is pregnancy, have you experienced:	YES	NO	Mainly sitting?		
	ked fatigue?			3. Do you currently smoke tobacco?* □ □		
	eding from the vagina ("spotting")?			4. Do you consume alcohol?*		
	xplained faintness or dizziness?			PART 4: PHYSICAL ACTIVITY INTENTIONS		
	xplained abdominal pain? den swelling of ankles, hands or face?					
	sistent headaches or problems with headaches?			What physical activity do you intend to do?		
	lling, pain or redness in the calf of one leg?	0				
	ence of fetal movement after 6th month?	_	_	Is this a change from what you currently do? YES NO		
	ure to gain weight after 5 th month?	_	_			
	swered YES to any of the above questions, please	explain	1:	*NOTE: PREGNANT WOMEN ARE STRONGLY ADVISED NOT TO SMOK OR CONSUME ALCOHOL DURING PREGNANCY AND DURING LACTATION		

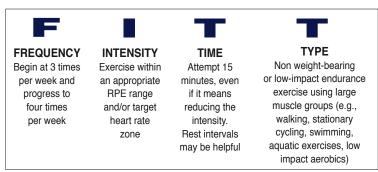
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C CONTRAINDICATIONS TO EXERCISE: to be completed by your health care provider				
Absolute Contraindications			Relative Contraindications	
Does the patient have: 1. Ruptured membranes, premature labour?	YES	NO	Does the patient have: YES NO 1. History of spontaneous abortion or premature labour in previous pregnancies?	
Persistent second or third trimester bleeding/placenta previa? Pregnancy-induced hypertension or pre-eclampsia?		<u> </u>	2. Mild/moderate cardiovascular or respiratory disease (e.g., chronic hypertension, asthma)? □ □ □	
Incompetent cervix?	۵		3. Anemia or iron deficiency? (Hb < 100 g/L)?	
5. Evidence of intrauterine growth restriction?6. High-order pregnancy (e.g., triplets)?			4. Malnutrition or eating disorder (anorexia, bulimia)?5. Twin pregnancy after 28th week?	
7. Uncontrolled Type I diabetes, hypertension or thyroid disease, other serious cardiovascular, respiratory or systemic disorder?	٥	٥	6. Other significant medical condition? Please specify: NOTE: Risk may exceed benefits of regular physical activity. The decision to be physically active or not should be made with qualified medical advice.	
PHYSICAL ACTIVITY RECOMMENDATION: Recommended/Approved Contraindicated				

Prescription for Aerobic Activity

RATE OF PROGRESSION: The best time to progress is during the second trimester since risks and discomforts of pregnancy are lowest at that time. Aerobic exercise should be increased gradually during the second trimester from a minimum of 15 minutes per session, 3 times per week (at the appropriate target heart rate or RPE to a maximum of approximately 30 minutes per session, 4 times per week (at the appropriate target heart rate or RPE).

WARM-UP/COOL-DOWN: Aerobic activity should be preceded by a brief (10-15 min.) warm-up and followed by a short (10-15 min.) cool-down. Low intensity calesthenics, stretching and relaxation exercises should be included in the warm-up/cool-down.



"TALK TEST" - A final check to avoid overexertion is to use the "talk test". The exercise intensity is excessive if you cannot carry on a verbal conversation while exercising.

PRESCRIPTION/MONITORING OF INTENSITY: The best way to prescribe and monitor exercise is by combining the heart rate and rating of perceived exertion (RPE) methods.

TARGET HEART RATE ZONES

The heart rate zones shown below are appropriate for most pregnant women. Work during the lower end of the HR range at the start of a new exercise program and in late pregnancy.

	Heart
	Rate
Age	Range
< 20	140-155
20-29	135-150
30-39	130-145

RATING OF PERCEIVED EXERTION (RPE)

Check the accuracy of your heart rate target zone by comparing it to the scale below. A range of about 12-14 (somewhat hard) is appropriate for most pregnant women.

6	
7	Very, very light
8	
9	Somewhat light
10	
11	Fairly light
12	, -
13	Somewhat hard
14	
15	Hard
16	
17	Very hard
18	•
19	Very, very hard
20	

The original PARmed-X for PREGNANCY was developed by L.A. Wolfe, Ph.D., Queen's University. The muscular conditioning component was developed by M.F. Mottola, Ph.D., University of Western Ontario. The document has been revised based on advice from an Expert Advisory Committee of the Canadian Society for Exercise Physiology chaired by Dr. N. Gledhill, with additional input from Drs. Wolfe and Mottola, and Gregory A.L. Davies, M.D.,FRCS(C) Department of Obstetrics and Gynaecology, Queen's University, 2002.

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Additional copies of the PARmed-X for PREGNANCY, the PARmed-X and/or the PAR-Q can be downloaded from: http://www.csep.ca/forms.asp. For more information contact the:

Canadian Society for Exercise Physiology 185 Somerset St. West, Suite 202, Ottawa, Ontario CANADA K2P 0J2 tel.: 1-877-651-3755 FAX (613) 234-3565 www.csep.ca

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Prescription for Muscular Conditioning

It is important to condition all major muscle groups during both prenatal and postnatal periods.

WARM-UPS & COOL DOWN: Range of Motion: neck, shoul-

der girdle, back, arms, hips, knees, ankles, etc. Static Stretching: all major

muscle groups

(DO NOT OVER STRETCH!)

	EXAMPLES OF MUSCULAR STRE	NGTHENING EXERCISES
CATEGORY	PURPOSE	EXAMPLE
Upper back	Promotion of good posture	Shoulder shrugs, shoulder blade pinch
Lower back	Promotion of good posture	Modified standing opposite leg & arm lifts
Abdomen	Promotion of good posture, prevent low-back pain, prevent diastasis recti, strengthen muscles of labour	Abdominal tightening, abdominal curl-ups, head raises lying on side or standing position
Pelvic floor ("Kegels")	Promotion of good bladder control, prevention of urinary incontinence	"Wave", "elevator"
Upper body	Improve muscular support for breasts	Shoulder rotations, modified push-ups against a wall
Buttocks, lower limbs	Facilitation of weight-bearing, prevention of varicose veins	Buttocks squeeze, standing leg lifts, heel raises

	PRECAUTIONS FOR MUSCULAR CONDITIONII	NG DURING PREGNANCY
VARIABLE	EFFECTS OF PREGNANCY	EXERCISE MODIFICATIONS
Body Position	in the supine position (lying on the back), the enlarged uterus may either decrease the flow of blood returning from the lower half of the body as it presses on a major vein (inferior vena cava) or it may decrease flow to a major artery (abdominal aorta)	past 4 months of gestation, exercises normally done in the supine position should be altered such exercises should be done side lying or standing
Joint Laxity	ligaments become relaxed due to increasing hormone levels joints may be prone to injury	avoid rapid changes in direction and bouncing during exercises stretching should be performed with controlled movements
Abdominal Muscles	presence of a rippling (bulging) of connective tissue along the midline of the pregnant abdomen (diastasis recti) may be seen during abdominal exercise	abdominal exercises are not recommended if diastasis recti develops
Posture	increasing weight of enlarged breasts and uterus may cause a forward shift in the centre of gravity and may increase the arch in the lower back this may also cause shoulders to slump forward	emphasis on correct posture and neutral pelvic alignment. Neutral pelvic alignment is found by bending the knees, feet shoulder width apart, and aligning the pelvis between accentuated lordosis and the posterior pelvic tilt position.
Precautions for Resistance Exercise	 emphasis must be placed on continuous breathing throughout exercise exhale on exertion, inhale on relaxation using high repetitions and low weights Valsalva Manoevre (holding breath while working against a resistance) causes a change in blood pressure and therefore should be avoided avoid exercise in supine position past 4 months gestation 	

Q	
0	

PARmed-X for Pregnancy - Health Evaluation Form (to be completed by patient and given to the prenatal fitness professional

after obtaining medical clearance to exercise)		
I, PLEASE PRIN activity during my current pregnancy with my health care provider	Γ (patient's name), have discussed my plans to participate in physical and I have obtained his/her approval to begin participation.	
Signed:(patient's signature)	Date:	
	HEALTH CARE PROVIDER'S COMMENTS:	
Name of health care provider:		
Address:		
Telephone:		
	(health care provider's signature)	

Advice for Active Living During Pregnancy

Pregnancy is a time when women can make beneficial changes in their health habits to protect and promote the healthy development of their unborn babies. These changes include adopting improved eating habits, abstinence from smoking and alcohol intake, and participating in regular moderate physical activity. Since all of these changes can be carried over into the postnatal period and beyond, pregnancy is a very good time to adopt healthy lifestyle habits that are permanent by integrating physical activity with enjoyable healthy eating and a positive self and body image.

Active Living:

- see your doctor before increasing your activity level during pregnancy
- exercise regularly but don't overexert
- exercise with a pregnant friend or join a prenatal exercise program
- follow FITT principles modified for pregnant women
- know safety considerations for exercise in pregnancy

Healthy Eating:

- the need for calories is higher (about 300 more per day) than before pregnancy
- follow Canada's Food Guide to Healthy Eating and choose healthy foods from the following groups: whole grain or enriched bread or cereal, fruits and vegetables, milk and milk products, meat, fish, poultry and alternatives
- drink 6-8 glasses of fluid, including water, each day
- salt intake should not be restricted
- limit caffeine intake i.e., coffee, tea, chocolate, and cola drinks
- dieting to lose weight is not recommended during pregnancy

Positive Self and Body Image:

- remember that it is normal to gain weight during pregnancy
- accept that your body shape will change during pregnancy
- enjoy your pregnancy as a unique and meaningful experience

For more detailed information and advice about pre- and postnatal exercise, you may wish to obtain a copy of a booklet entitled *Active Living During Pregnancy: Physical Activity Guidelines for Mother and Baby* © 1999. Available from the Canadian Society for Exercise Physiology, 185 Somerset St. West, Suite 202, Ottawa, Ontario Canada K2P 0J2 Tel. 1-877-651-3755 Fax: (613) 234-3565 Email: info@csep.ca (online: www.csep.ca). Cost: \$11.95

For more detailed information about the safety of exercise in pregnancy you may wish to obtain a copy of the Clinical Practice Guidelines of the Society of Obstetricians and Gynaecologists of Canada and Canadian Society for Exercise Physiology entitled *Exercise in Pregnancy and Postpartum* © 2003. Available from the Society of Obstetricians and Gynaecologists of Canada online at www.sogc.org

For more detailed information about pregnancy and childbirth you may wish to obtain a copy of *Healthy Beginnings: Your Handbook for Pregnancy and Birth* © 1998. Available from the Society of Obstetricians and Gynaecologists of Canada at 1-877-519-7999 (also available online at www.sogc.org) Cost \$12.95.

For more detailed information on healthy eating during pregnancy, you may wish to obtain a copy of *Nutrition for a Healthy Pregnancy: National Guidelines for the Childbearing Years* © 1999. Available from Health Canada, Minister of Public Works and Government Services, Ottawa, Ontario Canada (also available online at www.hc-sc.gc.ca).

SAFETY CONSIDERATIONS

- Avoid exercise in warm/humid environments, especially during the 1st trimester
- Avoid isometric exercise or straining while holding your breath
- Maintain adequate nutrition and hydration drink liquids before and after exercise
- Avoid exercise while lying on your back past the 4th month of pregnancy
- Avoid activities which involve physical contact or danger of falling
- Know your limits pregnancy is not a good time to train for athletic competition
- Know the reasons to stop exercise and consult a qualified health care provider immediately if they occur

AND CONSULT YOUR HEALTH CARE PROVIDER

- Excessive shortness of breath
- Chest pain
- Painful uterine contractions (more than 6-8 per hour)
- Vaginal bleeding
- Any "gush" of fluid from vagina (suggesting premature rupture of the membranes)
- Dizziness or faintness