

Physical Activity Recommendations During Pregnancy From 3 Guideline Documents

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	US (CDC, NIH) (2018)	ACOG (2015/2017/2020) ACSM	Canada (2019)
Duration	≥150 min/wk	≥20–30 min/d	150 min/wk
Frequency	Spread throughout the week	Most or all days of the week	Minimum of 3 d/wk; being active every day is encouraged
Intensity	Light to moderate intensity, RPE 5–6 on a scale of 0 to 10, “talk test”—can talk while exercising; additionally women who engaged in vigorous-intensity aerobic activity can continue these activities if they remain healthy and discuss with their health care provider	Moderate intensity, RPE 13–14 on a scale of 6 to 20, “talk test”—can talk while exercising	Moderate intensity defined as physical activity intense enough to noticeably increase heart rate; a person can talk but not sing during activities of this intensity Target heart rate zones for pregnant women based on age, “talk test”
Type	Aerobic and muscle strengthening	Aerobic and strength-conditioning exercises including walking, swimming, stationary cycling, low-impact aerobics, modified yoga or pilates, running, racquet sports	Aerobic and resistance training activities including brisk walking, stationary cycling (moderate effort), swimming or aquafit, carrying moderate loads, household chores (eg, gardening, washing windows, etc.)
RPE indicates rating of perceived exertion from the Borg scale			



Absolute Contraindications to Exercise During Pregnancy

Absolute Contraindications			
	IOC (2016-2018)	ACOG (2015/2017/2020) ACSM, CDC, NIH	Canada (2019)
Hemodynamically significant heart disease or other serious cardiovascular disorders	X	X	X
Incompetent cervix, cervical insufficiency, or cerclage	X	X	X
Intrauterine growth restriction	X	X	X
Multiple gestation at risk of premature labor	X	X	X
Persistent second- or third-trimester bleeding	X	X	
Placenta previa after 26th week (ACOG, IOC) to 28th week (Canada) of gestation Preeclampsia (all) or pregnancy-induced hypertension (ACOG, IOC)	X	X	X
Premature labor during the current pregnancy	X	X	X
Restrictive lung disease or other serious respiratory disorders		X	X
Ruptured membranes	X	X	X
Severe anemia	X		X
Uncontrolled or poorly controlled hypertension	X	X	X
Uncontrolled thyroid disease		X	X
Uncontrolled type 1 diabetes or other serious systemic disorders		X	X
Unexplained persistent vaginal bleeding (Canada), such as in second or third trimester (IOC)	X		X



Relative Contraindications to Exercise During Pregnancy

Relative Contraindications			
	IOC (2016-2018)	ACOG (2015/2017/2020) ACSM, CDC, NIH	Canada (2019)
Anemia (ACOG) or symptomatic anemia (Canada)	X		X
Cervical dilation	X		
Chronic bronchitis (ACOG, IOC), mild/moderate respiratory disease (Canada), or other respiratory disorders (IOC)	X	X	X
Eating disorder			X
Extreme morbid obesity		X	
Heavy smoker		X	
History of extremely sedentary lifestyle		X	
History of spontaneous preterm birth (Canada, IOC), premature labor (IOC), miscarriage (IOC), or fetal growth restriction (IOC)	X		X
Malnutrition (Canada) or extreme underweight (ACOG, IOC)	X	X	X
Mild/moderate cardiovascular disease			X
Orthopedic limitations	X	X	
Poorly controlled seizure disorder	X	X	
Poorly controlled type 1 diabetes	X	X	
Recurrent pregnancy loss			X
Unevaluated maternal cardiac arrhythmia	X	X	
Other significant medical conditions			X



Warning Signs to Stop Physical Activity During Pregnancy

Warning Signs to Stop Physical Activity During Pregnancy From 3 Guideline Documents

	IOC (2016-2018)	ACOG (2015/2017/2020) ACSM, CDC, NIH	Canada (2019)
Amniotic fluid leakage (ACOG, IOC) or other vaginal fluid loss including rupture of the membranes (Canada)	X	X	X
Calf pain or swelling	X	X	
Chest pain	X	X	X
Dizziness (all), syncope (IOC), or faintness that does not resolve on rest (Canada)	X	X	X
Headache	X	X	
Muscle weakness (IOC) or muscle weakness affecting balance (ACOG)	X	X	
Regular painful uterine contractions	X	X	X
Shortness of breath prior to exertion (ACOG, IOC) or that is persistent and excessive that does not resolve on rest (Canada)	X	X	X
Vaginal bleeding	X	X	X



Selected Safety Precautions for Physical Activity During Pregnancy

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	IOC (2016-2018)	ACOG (2015/2017/2020) ACSM, CDC, NIH	Canada (2019)
Safety Precaution Heat	Hyperthermia should be avoided, especially in the first trimester.	Avoid physical activity in the excessive heat, especially with high humidity	Prolonged exercise should be performed in a thermal-neutral or controlled environment. Wear loose fitting clothing, and avoid high heat and humidity to protect against heat stress, particularly in the first trimester.
High altitude	Refrain from high intensity training at altitudes >1500–2000 m during pregnancy for those not acclimated.	Women living <2500 m should avoid physical activity at higher altitudes. Those considering physical activity >2500 m should seek supervision from an obstetrician with knowledge of the impact of high altitude on maternal and fetal outcomes.	
Nutrition and hydration	Women are advised to follow their country-specific recommendations. Pregnant elite athletes should pay special attention to adequate energy intake to achieve recommended gestational weight gain	Maintain adequate nutrition and hydration. Drink water before, during, and after physical activity.	Stay well hydrated.
Supine position, standing motionless	If dizziness occurs while engaging in supine or standing motionless and then discontinue the activity. To reduce risk, exercises normally done in the supine position may be modified by tilting the torso to 45 degrees or completing the exercises while standing, sitting, or side-lying.	If a woman experiences lightheadedness or nausea or feel unwell when lying on her back, she should modify her exercise position to avoid the supine position.	Motionless posture (eg, supine, certain yoga positions) should be avoided as much as possible.
High-intensity or competitive athletics	Pregnant elite athletes are recommended to refrain from training at intensities >90% of their maximal aerobic capacity.	Those exercising significantly above the recommendations or considering athletic competition should seek supervision from an obstetrician with knowledge of the impact of high-intensity physical activity on maternal and fetal outcomes.	Competitive athletes require frequent and closer supervision and should pay particular attention to avoiding hyperthermia, sustaining adequate calorie intake, and maintaining proper hydration.
Previously sedentary		Previously inactive women are strongly recommended to be physically active throughout pregnancy. They are encouraged to start gradually at lower intensity and increase duration and intensity as their pregnancy progresses.	Previously inactive women should follow a more gradual progression of exercise during pregnancy.
Overweight or obese		Women who are overweight or obese are strongly recommended to be physically active throughout pregnancy.	Women who are overweight or obese are encouraged to engage in health lifestyle modification during pregnancy that includes physical activity. Start with low intensity and short duration of exercise, and build up as able.

