



Exercise in Pregnancy

FLAME LECTURE: 47

BUTLER 12/31/14

Learning Objectives (CREOG)

- ▶ Counsel pregnant patients on exercise
- ▶ Prerequisites (suggested):
 - ▶ FLAME LECTURE 22: Normal anatomy and physiology of pregnancy
 - ▶ FLAME LECTURE 24: Normal maternal cardiovascular changes of pregnancy
 - ▶ FLAME LECTURE 25: Normal maternal respiratory changes of pregnancy.
- ▶ See also – for closely related topics:
 - ▶ FLAME LECTURE 45: Substance abuse in pregnancy
 - ▶ FLAME LECTURE 46: Nutrition and weight gain in pregnancy
 - ▶ FLAME LECTURE 48: Medications and environmental exposures in pregnancy

Learning Objectives

- ▶ To describe the CDC and Prevention & American College of Sports Medicine recommendations for exercise in pregnancy
- ▶ To understand the risks and benefits of exercise during pregnancy
- ▶ To list the contraindications to aerobic exercise during pregnancy
- ▶ To be aware of the warning signs to terminate exercise while pregnancy

CDC, ACOG, & American College of Sports Med Recs

- ▶ 30 minutes or more of moderate exercise a day should occur on most, if not all, days of the week
- ▶ This can be applied to pregnant women without medical or obstetric contraindications
- ▶ No absolute limit to maternal HR
- ▶ Healthy women should begin or continue moderate intensity aerobic activity
- ▶ Women who currently exercise vigorously may continue to do so during pregnancy

Evaluation of Patients



- ▶ A thorough clinical evaluation should be done before prescribing exercise in pregnancy
- ▶ Pre-exercise medical screening
 - ▶ Overall health, obstetrical history, and medical risks should be reviewed
- ▶ Make sure there are no contraindications to exercise in pregnancy (next slide)

Contraindications to Aerobic Exercise in Pregnancy

- ▶ Absolute contraindications:
 - ▶ Hemodynamically significant heart disease
 - ▶ Restrictive lung disease
 - ▶ Incompetent cervix/cerclage
 - ▶ Multiple gestation at risk for PTL
 - ▶ Persistent 2nd or 3rd trimester bleeding
 - ▶ Placenta previa after 26 weeks gestation
 - ▶ PTL or PPRM
 - ▶ Preeclampsia

Contraindications to Aerobic Exercise in Pregnancy

- ▶ Relative contraindications:
 - ▶ Severe anemia
 - ▶ Fetal growth restriction
 - ▶ Unevaluated maternal cardiac arrhythmia
 - ▶ Chronic bronchitis
 - ▶ Poorly controlled type 1 DM, HTN, seizure disorder or hyperthyroidism
- ▶ Extreme morbid obesity
- ▶ Extreme underweight (BMI < 12)
- ▶ History of extremely sedentary lifestyle
- ▶ Orthopedic limitations
- ▶ Heavy smoker

Risks and Benefits

▶ Benefits:

- ▶ Prevent excessive weight gain during pregnancy
- ▶ Reduce symptoms of low back pain (LBP)
- ▶ May reduce risk of developing GDM and preeclampsia
- ▶ May reduce risk of having a Cesarean section

▶ Risks:

- ▶ Fetus is able to tolerate maternal exercise in uncomplicated pregnancies
- ▶ Any fetal responses are transient with no lasting adverse effects

Do's and Don'ts

- ▶ Exercises generally considered safe in pregnancy:
 - ▶ Swimming, walking, dancing, cycling, rowing, jogging, light strength training
- ▶ Avoid activities that increase risk of abdominal trauma and falls:
 - ▶ Ice hockey, soccer, basketball, gymnastics, horseback riding, downhill skiing, vigorous racquet sports etc.
- ▶ Scuba diving not recommended in pregnancy
 - ▶ Fetus at risk for decompression sickness
 - ▶ Fetal pulmonary system unable to filter bubble formation
- ▶ Avoid supine position after the first trimester
 - ▶ Decreased venous return and decreased cardiac output 2/2 compression of inferior vena cava

Do's and Don'ts

- ▶ No reports that hyperthermia associated with exercise is teratogenic
 - ▶ However, best to stay well hydrated and avoid overheating
- ▶ When strength training:
 - ▶ Use lighter weights and more repetitions
 - ▶ Try to avoid walking lunges
 - ▶ Increases risk of injury to connective tissue in pelvic area
 - ▶ Be careful of free weights
 - ▶ Avoid injury to abdomen
 - ▶ Try not to lift while flat on back
 - ▶ Avoid excessive valsalva maneuver
 - ▶ May decrease oxygen flow to fetus

Warning Signs to Terminate Exercise in Pregnancy

- ▶ Vaginal bleeding
- ▶ Dyspnea prior to exertion
- ▶ Dizziness
- ▶ Headache
- ▶ Chest pain
- ▶ Muscle weakness or calf pain/swelling
- ▶ PTL
- ▶ Decreased FM
- ▶ Amniotic fluid leakage

Exercising Postpartum



- ▶ Prepregnancy exercise routines can resume gradually as soon as it's "physically and medically safe"
 - ▶ Will vary from one person to another
- ▶ No known maternal complications associated with resumption of training
- ▶ Moderate weight reduction when nursing is safe
- ▶ Associated with decreased incidence of postpartum depression

References

- ▶ **ACOG Committee Opinion Number 267**-Exercise During Pregnancy and the Postpartum Period
- ▶ UpToDate.Com, Artal R-Exercise during pregnancy and the postpartum period: Practical recommendations.
- ▶ Szymanski L, Satin A. Exercise During Pregnancy. *Obstet Gynecol* 2012; 119:603-610.
- ▶ Zavorsky G, Longo L. Adding Strength Training, Exercise Intensity and Caloric Expenditure to Exercise Guidelines in Pregnancy. *Obstet Gynecol* 2011; 117:1399-1402.