



PÉCSI TUDOMÁNYEGYETEM
ÁLTALÁNOS ORVOSTUDOMÁNYI KAR

Benefits of physical activity in the prenatal period

Kollárné dr. Kiss Gabriella

Physiotherapist

University of Pécs, Faculty of Medicine

Sport Medicine Department



Hormonal changes

Progestogen dominance



Physical changes

- Connective tissues become more lax (more compliant).
- The tone of smooth muscles decreases.
- Tissue water content increases.
- Iron deficiency
- Vitamin deficiency
- Increasing body weight
- Altered body proportions
- Shifted center of gravity, affecting balance
- Increased load on the joints
- Increased load on the pelvic floor muscles

- 
- Usual sports activities may be continued during an uncomplicated pregnancy, with gradually decreasing intensity until the 5th month.
 - Sports with a high risk of injury
 - Swimming
 - Yoga
 - Prenatal exercise (pregnancy exercise classes)



Recommendation of the American College of Obstetricians and Gynecologists (ACOG):

- Minimal risk and predominantly beneficial, provided that appropriate modifications are made
- Aerobic exercise
- Strength training
- **Timing** : After the 12th week of gestation
- **Frequency** : 3–5 times per week, 30–60 min/session
- **Intensity** : 60–80/90% of maximal aerobic capacity; HR < 140–150 bpm
- **Strength Training** : Low weights, high repetitions

Advantages :

- Counteracting the musculoskeletal changes associated with pregnancy
- EEG studies conducted on newborns have shown that regular physical activity during pregnancy may have beneficial effects on fetal brain development .
- Maternal exercise during pregnancy may reduce the presence of inflammatory factors .
- Low- to moderate -intensity resistance training during pregnancy has been shown to effectively improve mental and physical energy levels while reducing fatigue .
- Core -focused exercises reduce pain and improve quality of life and physical health during late pregnancy and up to two months postpartum .
- Strength training exercises may facilitate labor and childbirth .
- Resistance training has been demonstrated to positively influence maternal overall health and pregnancy outcomes .



Exercise should be discontinued immediately if:

- Dizziness or feeling faint
- Shortness of breath or difficulty breathing
- Vaginal bleeding
- Abdominal pain or low back pain
- Leakage of amniotic fluid

Contraindications :

- Heart disease
- Cervical insufficiency (incompetent cervix) or cervical cerclage
- Multiple pregnancy (e.g., twin pregnancy)
- Preeclampsia or gestational hypertension
- Signs and symptoms of threatened preterm labor during the current pregnancy
- Ruptured fetal membranes (premature rupture of membranes)
- Thyroid disease
- Placenta previa
- Diabetes mellitus
- Eating disorders or severe obesity



Prenatal exercise

- Breathing techniques for labor and childbirth
- Foot arch (arch of the foot)
- Abdominal muscles
- Back muscles
- Balance
- Pelvic floor muscles
- Relaxation
- General conditioning





PÉCSI TUDOMÁNYEGYETEM
ÁLTALÁNOS ORVOSTUDOMÁNYI KAR

Thank you for your attention !