



PRETERM BIRTH



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Preterm birth refers to a delivery that occurs before 37 weeks of gestation.



Uterine contractions (≥ 4 every 20 minutes or ≥ 8 in 60 minutes) **and**

- Cervical dilation ≥ 3 cm **or**
- Cervical length < 20 mm on transvaginal ultrasound **or**
- Cervical length 20 to < 30 mm on transvaginal ultrasound and positive fetal fibronectin



World Health Organization

Moderate to late preterm	32 to <37 weeks
Very preterm	28 to <32 weeks
Extremely preterm	<28 weeks

Centers for Disease Control and Prevention

Preterm	<37 weeks
Late preterm	34 to 36 weeks
Early preterm	<34 weeks



70-80 percent of preterm births (PTBs) are spontaneous due to:

- preterm labor (40 to 50 percent)
- PPRM (20 to 30 percent)
- rarely cervical insufficiency



20 to 30 percent of PTBS are iatrogenic due to :

- preeclampsia,
- placenta previa,
- abruptio placenta,
- fetal growth restriction,
- multiple gestation



Risk factors for preterm birth

No partner

Low socioeconomic level

Anxiety, stress

Depression, use of selective serotonin inhibitors

Life events (divorce, separation, death)

Abdominal surgery during pregnancy



Occupational issues (upright posture, use of industrial machines, physical exertion, mental or environmental stress related to work or working conditions)

Multiple gestation

Polyhydramnios

Uterine anomaly, including diethylstilbestrol-induced changes in uterus and leiomyomas

Preterm premature rupture of membranes



History of second-trimester abortion

History of cervical surgery

Premature cervical dilatation or effacement (short cervical length)

Sexually transmitted infections

Systemic infection, pyelonephritis, appendicitis, pneumonia

Bacteriuria



Periodontal disease

Placenta previa

Placental abruption

Vaginal bleeding, especially in more than one trimester

Previous preterm delivery

Substance abuse



Smoking

Maternal age (<18 or >40)

African-American race

Poor nutrition and low body mass index

Inadequate prenatal care

Anemia (hemoglobin <10 g/dL)



Excessive uterine contractility

Low level of educational achievement

Maternal first-degree family history of spontaneous preterm birth, especially if the pregnant woman herself was born preterm

Fetal anomaly

Fetal growth restriction



Environmental factors (eg, heat, air pollution)

Fetal demise

Positive fetal fibronectin test result in vaginal secretions



History of spontaneous preterm birth is the major risk factor for recurrence, at the same gestational age

Women at highest risk are those with:

- No term pregnancy between the previous sPTB and the current pregnancy
- A history of multiple sPTBs



- Approximately 5 percent of women who had an early sPTB at 23 to 27 weeks in their prior pregnancy delivered at <28 weeks
- if there was no previous history of sPTB, then the risk of sPTB <28 weeks was only 0.2 percent.



Women who were born preterm are at modestly increased risk of having as PTB compared with women who were born at term.



A prior PTB of twins, especially if before 34 weeks, is associated with an increased risk of PTB in a subsequent singleton pregnancy .



ASSISTED REPRODUCTION :

Pregnancies conceived by ART are at higher risk for sPTB, even in the absence of multifetal gestation.

The increased risk may be related to

Baseline maternal factors subfertility

Factors related to ART



Preterm birth, LBW, and SGA :

Singleton IVF pregnancies, with or without ICSI, are at higher risk of preterm birth and LBW (≤ 2500 g) compared to spontaneously conceived pregnancies.



LBW was significantly more common among term singleton, but not twin, infants conceived by ART compared with the general population (for singletons 6.5 versus 2.5 percent).

Preterm LBW was also significantly more common among singleton, but not twin, infants conceived by ART (for singletons 6.6 versus 4.7 percent).



The increased risk persisted after adjustment for maternal age and parity, gestational age at delivery, multifetal reduction procedures, and cause of infertility.



PTB was associated with standing and walking at work for more than 3 hours per day ,lifting and carrying >5 kg, lifting and carrying in the third trimester, and having a job that required physical effort or physical exertion .

women were at higher risk of PTB if they worked longer than 42 hours/week, stood more than six hours/day, or had low job satisfaction.



Exercise :

women with uncomplicated pregnancies, exercise during pregnancy did not increase the risk for PTB .

The optimum time appeared to be two to four hours of physical activity/week.

healthier women and those at low risk of PTB are more likely to continue to exercise in pregnancy.

it has also been hypothesized that exercise may reduce the risk of PTB by reducing oxidative stress or increasing placental vascularization.



Coitus :

Sexual intercourse is not a risk factor for PTB.



Thank you for your attention

