

PREMATURITY

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Premature birth may be triggered by or lead to medical complications. Children with these conditions often require complex medical equipment. In 2019, 1 in 10 babies were born prematurely, and preterm birth and low birth weight accounted for 17% of infant deaths ([cdc.gov](https://www.cdc.gov)).

DEFINITION

A premature or preterm birth takes place before the 37th week of pregnancy (typical gestation is 40 weeks). Late preterm occurs between 34-36 weeks, moderately preterm occurs between 32-34 weeks, very preterm occurs less than 32 weeks, and extremely preterm births occur at or before 25 weeks of pregnancy. Most premature births occur at late preterm (MayoClinic.org).

ETIOLOGY

Risk factors include having a previous premature birth, carrying multiple babies (i.e., twins), short time period between pregnancies (6 – 18 months), *in vitro* fertilization, problems with maternal reproductive organs, cigarette or drug use, infections, maternal health or maternal trauma (MayoClinic.org).

Certain pre-existing conditions of the child can trigger premature birth. Many studies have found that the rate of premature birth in babies with birth defects is over twice that in babies born without birth defects (Behrman & Butler, 2007).

PATHOPHYSIOLOGY

Preterm babies, depending on gestational age, may experience the following issues:

- **Respiratory:** If the respiratory system is immature, the baby's lungs lack surfactant and cannot work properly. Many preterm babies also develop bronchopulmonary dysplasia or apnea. Respiratory issues may persist long term.
- **Heart:** Many preterm babies have patent ductus arteriosus (PDA), which is an opening between the aorta and the pulmonary artery. Low blood pressure is also common.
- **Brain:** Preterm babies are at risk of bleeding in the brain (intraventricular hemorrhage), which can lead to permanent brain injury. This risk increases the earlier the baby is born and can ultimately lead to a diagnosis of cerebral palsy.

- **Other:** Preterm babies may also have difficulty regulating body temperature, digestive issues, blood problems, poor metabolism and an underdeveloped immune system.

Infection, inadequate blood flow or injury to the baby's developing brain during pregnancy or while the preterm baby is immature can ultimately lead to a diagnosis of cerebral palsy. Premature babies are more likely to have learning disabilities, vision (i.e., retinopathy) and hearing impairments, dental issues and chronic health issues.

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REFERENCES:

MAYO CLINIC: PREMATURE BIRTH

[WWW.MAYOCLINIC.ORG/DISEASES-CONDITIONS/PREMATURE-BIRTH/SYMPTOMS-CAUSES/SYC-20376730](https://www.mayoclinic.org/diseases-conditions/premature-birth/symptoms-causes/syc-20376730)

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CENTERS FOR DISEASE CONTROL AND PREVENTION, REPRODUCTIVE HEALTH, PREMATURE BIRTH

[WWW.CDC.GOV/REPRODUCTIVEHEALTH/FEATURES/PREMATURE-BIRTH/INDEX.HTML](https://www.cdc.gov/reproductivehealth/features/premature-birth/index.html)

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