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HIGH RISK PREGNANCY AND LOW BIRTH WEIGHT

OBJECTIVES

Discuss

Definition of preterm birth and low birth weight

Discuss

Pregnancy factors associated with preterm birth and low birth weight infants

Discuss

Neonatal management and concerns of preterm and low birth weight infants

NOT THE SAME

- NOT EXCLUSIVE

Premature Infant

- Born before the 37th week of pregnancy



Low Birth Weight



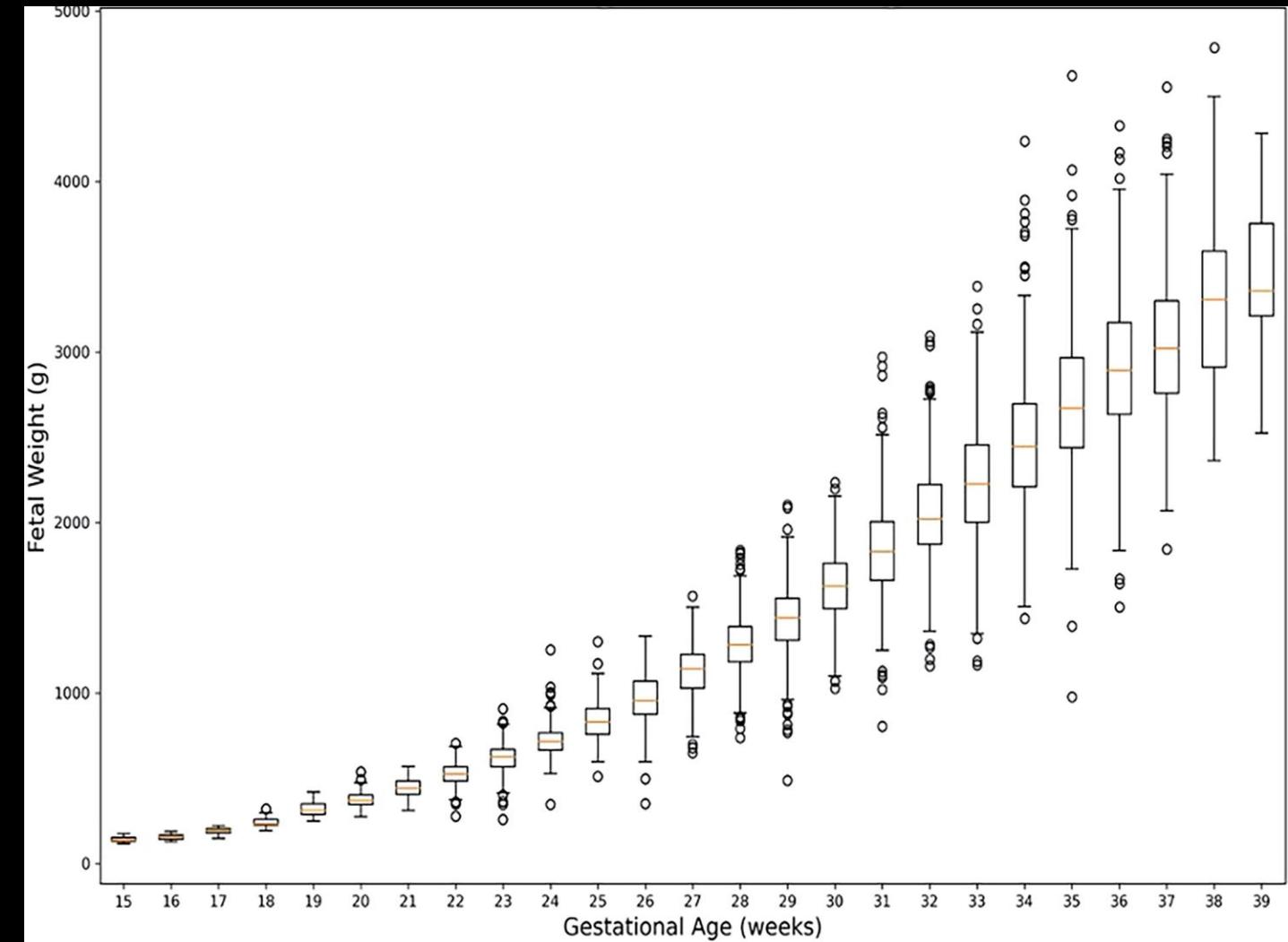
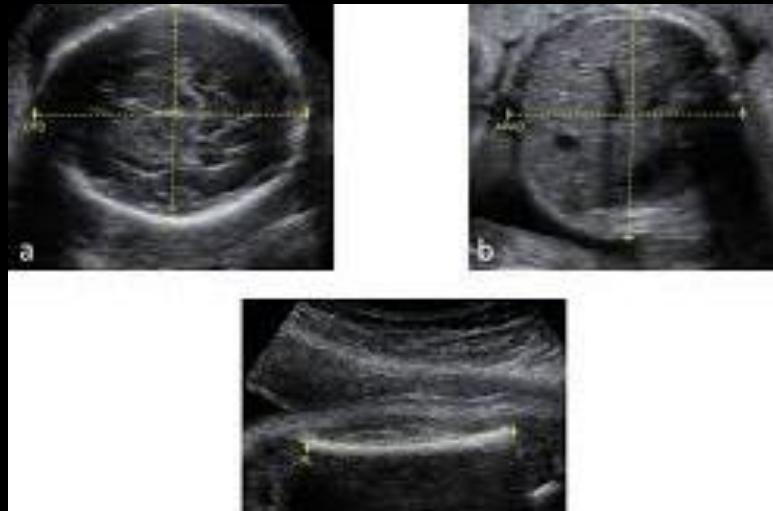
- Fetal weight
 - < 2500 g (5 lbs 8 oz)
- Primarily caused by premature birth

FACTORS ASSOCIATED WITH PREMATURITY AND LOW BIRTH WEIGHT

- Prior history of premature birth or low birth weight
- **Hypertensive disease of pregnancy (HDP)**
- Preexisting health conditions (e.g., SLE, DM, Anemia)
- **Smoking/Substance Abuse**
- Placental problems (e.g., placenta previa, abruption)
- **Multiple gestation**
- Maternal age (< 16 or > 35)
- Race/ethnicity
- Lack of prenatal care
- Socioeconomic status
- **Infection**
- **Stress**

ESTIMATED FETAL WEIGHT

- Sonographic estimation in pregnancy
- EFW < 10th percentile - FGR
- EFW < 3rd percentile - severe FGR
- Earlier onset more concerning
- Less accuracy in EFW later pregnancy



HYPERTENSIVE DISEASE IN PREGNANCY (HDP)

- **Underlying HTN**
 - HTN before pregnancy or < 20 weeks' gestation
 - BP > 140/90 mmHg in pregnancy
- **Gestational HTN**
 - Hypertension occurring after 20 weeks' gestation without proteinuria
- **Preeclampsia**
 - HTN and proteinuria ($> 300 \text{ mg/24 hr}$; $\text{P/C} > 0.3$) and/or end-organ dysfunction
 - Severe and non-severe forms



HYPERTENSION



American College of Cardiology (ACC)
&
American Heart Association (AHA)

Classification

- Normal $< 120/80$ mm Hg
- Elevated – $120\text{-}129/80$ mmHg
- Stage I HTN – $130\text{-}139/80\text{-}89$ mmHg
- Stage II HTN – $140/90$ mmHg or more

**ACOG still utilizes 140/90 mmHg definition for HTN*

CIGARETTE SMOKING

Cigarette smoking

Well over 4000 different chemicals identified in cigarette smoke

Carbon monoxide and nicotine are 2 concerning compounds

Associated with LBW and placental abruption

Maternal risks

Cancer (throat, lung, cervical, skin)
Lung disease
Placental abruption

Fetal risks

LBW
Placental abruption

Neonatal risks

SIDS
Lung disease

VAPING

- No regulation of contents
- VALI-
 - Vaping
 - Associated
 - Lung
 - Injury



MARIJUANA

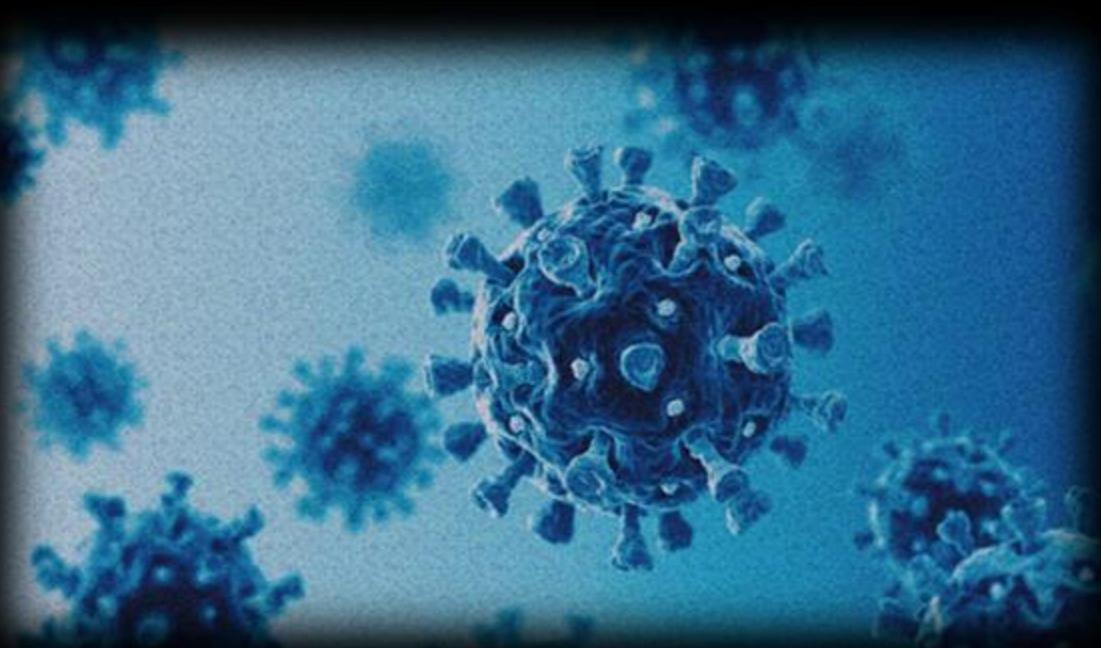
American College of OB/Gyn

- Children whose mothers used marijuana during pregnancy may have learning and behavioral problems later in life

American Cardiology Association

- Recent data links marijuana use to cardiovascular disease which is dose dependent similar to cigarette smoking





INFECTION

Infection can lead to a cascade of events lead to preterm labor

- Inflammation leads to prostaglandin release
- Examples:
 - Chorioamnionitis
 - Urinary tract infection
 - Flu, Measles, Polio, Varicella
 - STD (e.g., syphilis)

ADVANCED MATERNAL AGE

- Defined as age 35 years or older
- Association with LBW not solely based on age
- Other factors play a role
(e.g., medical health, SES, ART)





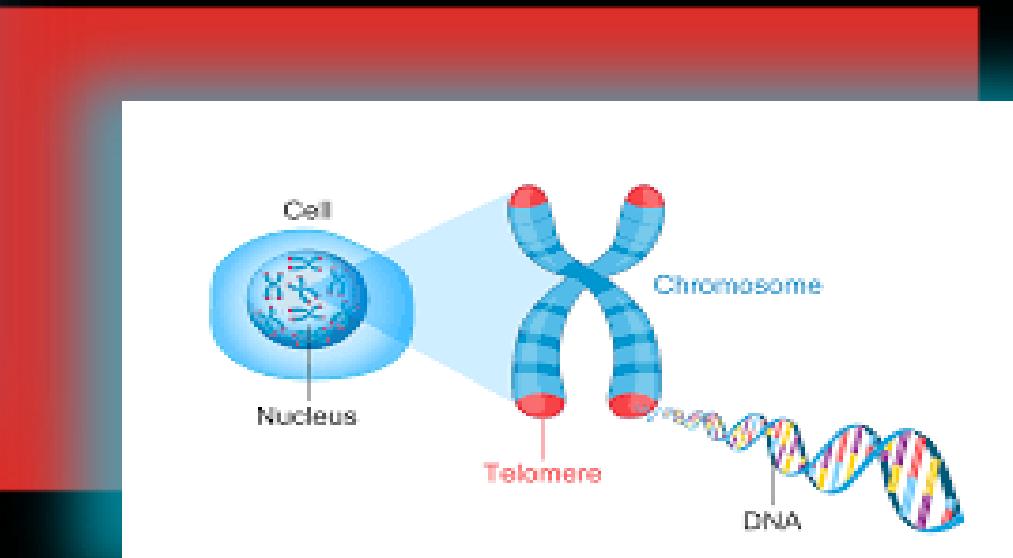
MULTIPLE GESTATION



WEATHERING



Chronic stress can lead to pregnancy complications



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