



# **Antepartum Fetal assessment**

## هدف استفاده از روش های بررسی سلامت جنین

- تعیین جنین های در معرض خطر
- جلوگیری از مرگ جنین
- جلوگیری از عوارض نورولوژیکی که تدریجی و مزمن پیشرفت می کند
- انجام مداخلاتی جهت کاهش عوارض بارداری های پرخطر

- ▶ nonstress test
- ▶ biophysical profile
- ▶ modified biophysical profile
- ▶ contraction stress test
- ▶ fetal movement count
- ▶ Assessment of amniotic fluid volume
- ▶ Doppler velocimetry of fetal and funic vessels

▶ Chronic hypoxemia → biophysical change → physiological

adaptation → physiological DE compensation

▶ Heart rate, movement, breathing, tone are sensitive to fetal oxygenation and

PH level

# فاکتورهای غیر مرتبط با هیپوکسی که بر جنین اثر گذار است:

- سن حاملگی
- دارهای مصرفی در مادر
- مصرف سیگار
- سیکل خواب و بیداری جنین
- بیماری ها و ناهنجاری های جنین

# شرایط هیپوکسی حاد در جنین

□ دکلمان کامل جفت

□ حوادث بند ناف

# EFFICACY

- ▶ Observational studies that reported lower rates of fetal death in underwent fetal testing
- ▶ Same or lower fetal death in high risk pregnancies than lower risk

more intense prenatal care



# Potential benefits and **risks**

- ▶ Ability to identify fetuses at risk and timely intervention to prevent death or adverse neurologic outcomes
- ▶ **False positive tests** : unnecessary additional fetal evaluation or intervention
- ▶ **False negative tests**: do not alert ( fetal evaluation or intervention)

- ▶ Cerebral palsy and stillbirth may share a common etiologic pathway with common risk factors :

IUGR, congenital anomalies ,fetal hypoxia

- ▶ Effects of antenatal testing on maternal mental states: **ANXIETY**  
**OR**

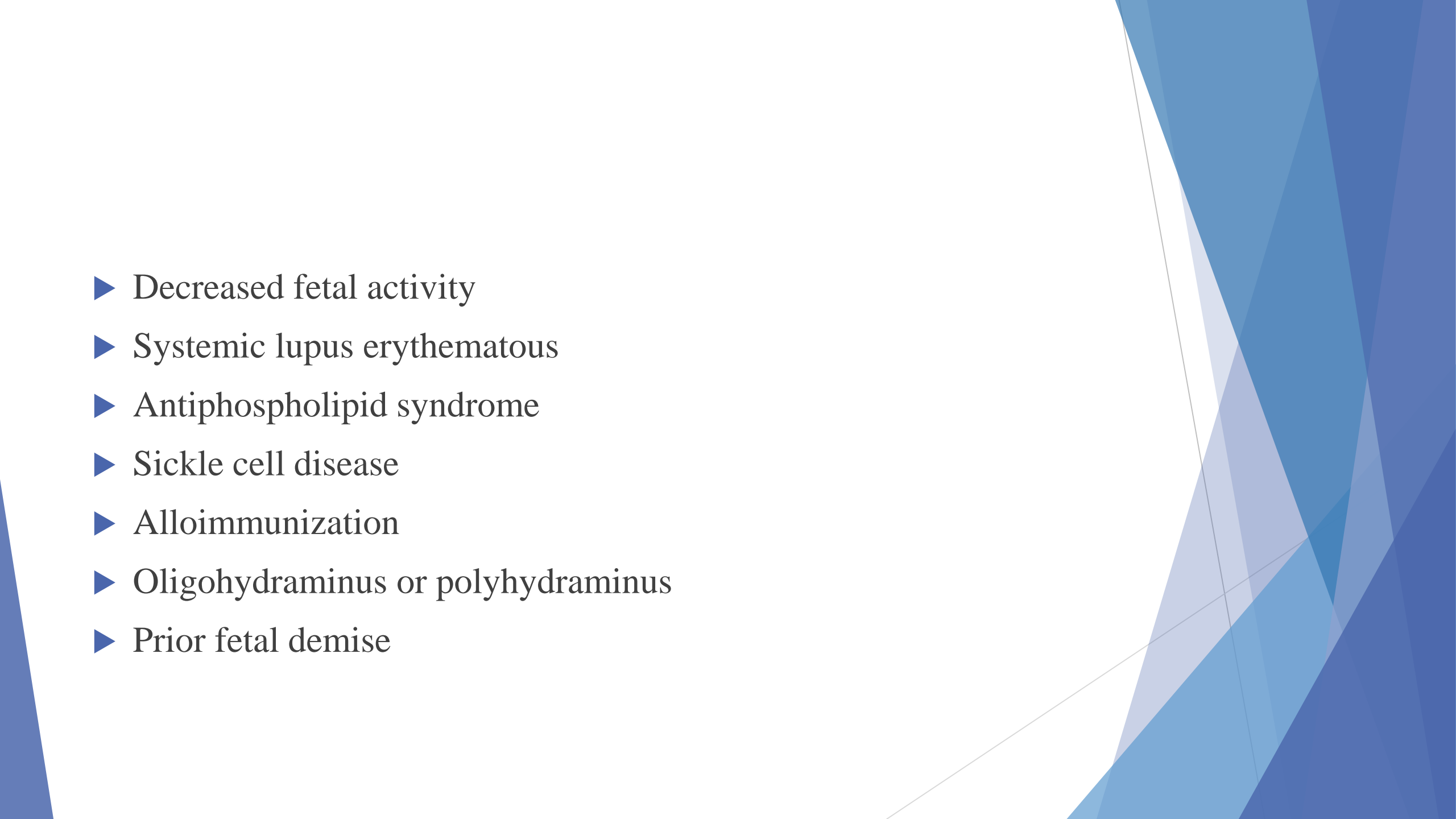
REASSURANCE OF FETAL WELL-BEING

▶ **Potential costs:** money and times, maternal and infant morbidity

or even mortality from iatrogenic delivery

# Indication for fetal surveillance

- ▶ Diabetes
- ▶ Hypertensive disorders
- ▶ Fetal growth restriction
- ▶ Twin pregnancy
- ▶ Post term pregnancy

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- ▶ Decreased fetal activity
  - ▶ Systemic lupus erythematosus
  - ▶ Antiphospholipid syndrome
  - ▶ Sickle cell disease
  - ▶ Alloimmunization
  - ▶ Oligohydraminus or polyhydraminus
  - ▶ Prior fetal demise

- ▶ Preterm prelabour rupture of membrane
- ▶ Other: non immune hydrops, maternal cyanotic heart disease, poorly controlled maternal hyperthyroidism, maternal vascular disease
- ▶ Possible indication: advanced maternal age, obesity, major fetal anomalies ,abnormalities in biomedical Down syndrome

# CHOICE OF TEST:

- ▶ Gestational age
- ▶ Availability
- ▶ Desire for fetal biometry or follow – up congenital anomaly
- ▶ Ability to monitor fetal heart rate
- ▶ cost

# TIMING

- ▶ 32 WEEKS become a threshold for initiation of fetal surveillance
- ▶ Before 32 weeks for perinatal benefit



# FOLLOW UP with normal test

## RESULTS

- ▶ Negative predictive value of a normal test result
- ▶ One week : 99.8 to 100 %
- ▶ Follow up for normal result
- ▶ ( expert opinion, clinical experience , community standards )

# Frequency is often increased to two to seven times per week

- ▶ Change in pregnancy
- ▶ High risk pregnancy
- ▶ At 36 weeks of gestation

# MANAGEMENT WITH ABNORMAL TEST

- ▶ Transient condition as a cause of abnormal test
- ▶ Chronic condition as a cause of abnormal results : followed by other test
- ▶ Clinical judgment
- ▶ Gestational age
- ▶ Severity of maternal and fetal disease
- ▶ Progression of disease
- ▶ Other information

**Route of delivery**

**Clinical judgment**

