World Health Organization

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Pre-eclampsia

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Key Facts

- **Pre-eclampsia affects 2–8% of pregnancies worldwide.**
- **There are around 46 000 maternal deaths due to pre-eclampsia per year and around 500 000 fetal or newborn deaths *(1)*.**
- **Pre-eclampsia and eclampsia are responsible for approximately 10% of maternal deaths in Asia and Africa, and 25% in Latin America.**
- **Magnesium sulfate reduces the risk of eclampsia by more than half. Despite the availability of magnesium sulfate, its use is still limited in many low-resource settings.**
- **Pre-eclampsia and eclampsia contribute significantly to maternal and perinatal morbidity and mortality.**

Overview

Pre-eclampsia is a high blood pressure disorder that typically develops after 20 weeks into pregnancy. It can present serious risks to both mother and baby. Early detection and management are crucial to prevent progression to eclampsia, which involves seizures. Both conditions can be life-threatening.

Diagnosis

Pre-eclampsia is diagnosed based on the onset of hypertension (blood pressure ≥140/90 mm Hg) and proteinuria (≥0.3 g/24 hours) after 20 weeks of gestation. Severe pre-eclampsia may include symptoms such as severe headaches, visual disturbances and upper abdominal pain.

Risk factors

Several factors can increase the risk of developing pre-eclampsia during pregnancy. Understanding these risk factors is essential for proactive monitoring and management. Having a risk factor doesn't always mean pre-eclampsia will occur, but closer medical supervision beyond routine screening is recommended.

Several factors can increase the risk of developing pre-eclampsia, including:

- **first-time pregnancies**
- **multiple pregnancies (twins, triplets, etc.)**
- **obesity**
- **pre-existing conditions such as hypertension, diabetes or kidney disease**
- **family history of pre-eclampsia.**

Symptoms

Symptoms of pre-eclampsia can vary significantly among individuals. While some may experience a range of noticeable symptoms, others may remain asymptomatic. It is important to be aware of potential indicators and seek medical attention if any concerns arise during pregnancy or after childbirth.

Common symptoms of pre-eclampsia include:

- **persistent high blood pressure**
- **proteinuria**
- **severe headaches**
- **visual disturbances (e.g., blurred vision, seeing spots)**
- **upper abdominal pain**
- **nausea and vomiting (after the first trimester)**
- **swelling in the hands and face.**

Complications

Pre-eclampsia, if left untreated, can lead to serious complications for both mother and baby. These complications can range from short-term issues to long-term health problems. Prompt medical intervention is crucial to minimize these risks.

Complications can be severe and include:

- **eclampsia (seizures)**
- **HELLP syndrome (hemolysis, elevated liver enzymes, low platelet count)**
- **organ damage (kidneys, liver, brain)**
- **placental abruption**
- **preterm birth**
- **fetal growth restriction**
- **maternal and fetal death.**

Treatment and management

The primary treatment for pre-eclampsia is the administration of magnesium sulfate to prevent seizures.

The treatment and management of pre-eclampsia depend on the severity of the condition and the gestational age of the pregnancy. The goal is to prevent complications and have the best possible outcomes for the mother and the pregnancy. Determining when to end the pregnancy and deliver the baby is critical for treating pre-eclampsia.

Other management strategies include:

- **antihypertensive medications to control blood pressure**
- **corticosteroids to accelerate fetal lung maturity if preterm delivery is anticipated**
- **close monitoring of maternal and fetal health.**

Prevention

While there's no guaranteed way to prevent pre-eclampsia, certain strategies can help lower the risk. Early and consistent prenatal care is essential for monitoring and managing potential risk factors.

Preventive measures focus on regular prenatal care to monitor for early signs of pre-eclampsia. Recommendations include:

- **regular blood pressure checks**
- **urine tests for proteinuria**
- **monitoring for symptoms such as headaches and visual disturbances**

- **lifestyle considerations, such as maintaining a healthy weight and activity (when permitted)**
- **managing pre-existing conditions, especially pre-existing high blood pressure.**

Additional prevention measures include:

- **low dose of aspirin by 20 weeks or when antenatal care begins**
- **calcium supplementation in settings with low dietary intake**
- **treatment of pre-existing high blood pressure with antihypertensive medications.**

WHO response

The World Health Organization (WHO) develops guidelines to improve health during pregnancy. This includes prevention and treatment of pre-eclampsia and eclampsia and continuously reviewing evidence to see if revisions in the recommendations are needed so that improvements in care can be effected. These guidelines aim to reduce maternal and perinatal morbidity and mortality by promoting evidence-based clinical practices. Key WHO recommendations include:

- **calcium supplementation during pregnancy in areas with low dietary calcium intake**
- **low-dose aspirin during pregnancy for women at high risk of pre-eclampsia**
- **use of magnesium sulfate for the prevention of eclampsia**
- **training health-care providers in the early detection and management of pre-eclampsia**
- **strengthening health systems to ensure timely and effective care for pregnant women.**

By implementing these guidelines, WHO aims to address the profound inequities in maternal and perinatal health globally and achieve the health targets of the Sustainable Development Goals (SDGs).

References

1. **Global and regional causes of maternal deaths 2009–20: a WHO systematic analysis. Lancet Glob Health. 2025.**

- **WHO recommendations for prevention and treatment of pre-eclampsia and eclampsia, 2011**
- **WHO recommendations on antiplatelet agents for the prevention of pre-eclampsia, 2021**
- **WHO recommendation: Calcium supplementation during pregnancy for the prevention of pre-eclampsia and its complications, 2018**
- **WHO recommendations on drug treatment for non-severe hypertension in pregnancy, 2020**
- **WHO recommendations: drug treatment for severe hypertension in pregnancy, 2018**

- **WHO recommendations on antenatal care for a positive pregnancy experience, 2016**