

Preeclampsia - Topic of the Month

JULY 6, 2022

What is preeclampsia?

Preeclampsia is a life-threatening disorder that most often occurs during pregnancy, although ten percent of cases occur in the postpartum period. The disorder is defined by **two major symptoms** found after 20 weeks of pregnancy, the most significant is a rapid rise in blood pressure (hypertension) combined with the presence of protein in the urine (proteinuria). For some women, proteinuria does not occur; for these women, preeclampsia is diagnosed as hypertension with thrombocytopenia (low platelet count), impaired liver function, renal insufficiency (poor kidney function), pulmonary edema (excess fluid in the lungs), and/or cerebral or visual disturbances (brain and vision problems).

Preeclampsia is just one of the hypertensive disorders that may occur during pregnancy, others include chronic hypertension, gestational hypertension, HELLP syndrome, and eclampsia. Hypertensive disorders during pregnancy result in one of the leading causes of maternal and perinatal mortality worldwide.⁴ Historically, women and infants of color and American Indian women and their infants are disproportionately affected.³

Shocking statistics³:

- Hypertensive disorders affect 4-10% of pregnancies in the US.
- Severe hypertension contributes to 9% of maternal deaths in the US.
- One-third of severe childbirth complications result from preeclampsia/eclampsia.

Who is at risk?

Preeclampsia can happen to anyone, but there are some factors that place a parent at greater risk.

Risk factors include:

- First pregnancy (Primip)
- History of Preeclampsia
- Pregnancy of multiples
- History of Hypertension
- Diabetes
- Kidney or Autoimmune disease
- COVID-19 during pregnancy
- Age 40 and above
- Having high maternal weight, BMI > 30
- African American/Black or Native American ethnicity
- Immediate family history of preeclampsia (parent/sibling)

What are the maternal risks?

Preeclampsia puts great stress on the heart and can impair liver and kidney function. There is also a risk of suffering a stroke, seizures, hemorrhaging, multiple organ failure, placenta abruption (placenta separates from wall of uterus), and even maternal and/or infant death.

What are the risks to the infant?

Preeclampsia may restrict the flow of blood to the placenta, decreasing the oxygen and nutrients the fetus needs to thrive. Lack of these essential components can contribute to low infant birth weight, preterm delivery, and a chance of experiencing a stillbirth.

Prematurity is the second leading cause of infant death in Minnesota.³ Infants that are born premature have a higher risk of long-term health and development difficulties. The prevention of preterm birth is critical to supporting infant health, promoting health equity, and controlling healthcare costs.³

WIC Pregnancy Related Risk Codes – refer to Implications for WIC Services

[304 History of Preeclampsia](#)

[345 Hypertension and Prehypertension](#)

What are the warning signs?

Preeclampsia typically occurs during the third trimester of pregnancy (after 28 weeks). For the postpartum parent, preeclampsia can occur within 48 hours of delivery or up to six weeks later. Parents who recognize **any** of these symptoms below should immediately contact their healthcare provider.

Common warning signs of preeclampsia:

- Persistent headache that gets worse overtime
- Any changes in vision such as seeing spots or blurred vision
- Sudden and severe swelling in hands or face
- Sudden weight gain
- Nausea and vomiting in second half of pregnancy
- Pain in right upper abdomen or shoulder
- Shortness of breath or heavy chest

Is preeclampsia preventable?

It is not widely understood what causes preeclampsia. For this reason, doctors recommend parents maintain regular prenatal and postnatal visits with their healthcare providers and be vigilant of the signs and symptoms of the condition.

Preventative care is the best defense against any pregnancy related hypertensive disorders.

Preventative tips:

PREECLAMPSIA- TOPIC OF THE MONTH

- Attend regular healthcare visits and all prenatal visits
- Follow a healthy dietary pattern with regular daily meals and snacks
 - Aim for an adequate calcium intake. While it is not yet conclusive, when dietary calcium is inadequate, research suggests that adequate calcium intake may help prevent preeclampsia.
- Maintain a healthy pre-pregnancy weight and gain appropriately during pregnancy
- Stay active with 150 minutes of moderate activity each week
- Reduce intake of tobacco products or consider smoking cessation

A history of preeclampsia increases the risk of future hypertension, cardiovascular disease, and stroke. The above healthy lifestyle habits can help reduce the risk. Postpartum nutrition education contacts can provide an opportune time to follow up on this.

For more information about Hypertensive Disorders of pregnancy: [Blood Pressure During Pregnancy](#)- December 14, 2021, Bay State Health

Training Opportunity

[Section 5.3: Nutrition Risk Assessment](#) policy explains the importance for WIC staff to obtain and synthesize information about a participant medical/health/nutrition status to most appropriately individualize WIC services. This includes asking questions that allow for education based on the participant's concerns and offering referrals when necessary.

Using the [Pregnant Woman](#) complete question format during the assessment may help you to most accurately determine if there are concerns the participant or their healthcare provider have regarding their medical, health, and/or nutrition.

Exercise:

1. Read through the [Pregnant Woman](#) complete question format alone or as a group.
2. Discuss with a co-worker or as a group what questions would help identify some of the risk factors for preeclampsia. (HINT: Read through the risk factors above.)
3. What education can you offer to support the health of the at-risk participant? (HINT: Read through the preventative tips above.)

Resources

1. [Preeclampsia Foundation](#)
2. [HEAR HER Campaign](#) -Center for Disease Control and Prevention (CDC)
3. [Hypertension in Pregnancy](#) -Minnesota Perinatal Quality Collaborative (MNPQC)
4. [Hypertension and Preeclampsia in Pregnancy](#) -The American College of Obstetricians and Gynecologists (ACOG)

Topic ideas? Share your future topic suggestion with carole.Kelnhofer@state.mn.us.

Reference – Complete Listing of Hyperlinks

304 History of Preeclampsia

(<https://www.health.state.mn.us/docs/people/wic/localagency/nutrition/riskcodes/bioclinmed/304mn.pdf>)

345 Hypertension and Prehypertension

(<https://www.health.state.mn.us/docs/people/wic/localagency/nutrition/riskcodes/bioclinmed/345mn.pdf>)

Blood Pressure During Pregnancy (<https://www.youtube.com/watch?v=Ff061nIXPx0&t=537s>)

Preeclampsia Foundation (<https://www.preeclampsia.org/>)

HEAR HER Campaign (<https://www.cdc.gov/hearher/index.html>)

Hypertension in Pregnancy (<https://minnesotaperinatal.org/hypertension-in-pregnancy/>)

Hypertension and Preeclampsia in Pregnancy (<https://www.acog.org/topics/hypertension-and-preeclampsia-in-pregnancy>)

Minnesota Department of Health - WIC Program, 85 E 7th Place, PO BOX 64882, ST PAUL MN 55164-0882; 1-800-657-3942, health.wic@state.mn.us, www.health.state.mn.us; to obtain this information in a different format, call: 1-800-657-3942.