

# Preeclampsia - Topic of the Month

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## Hypertensive disorders

Hypertensive disorders during pregnancy result in one of the leading causes of maternal and perinatal mortality worldwide. Preeclampsia is just one of the hypertensive disorders that may occur during pregnancy; others include chronic hypertension, gestational hypertension, hemolysis elevated liver enzymes and low platelet count (HELLP) syndrome, and eclampsia. Historically, women and infants of color, and American Indian women and their infants, are disproportionately affected by hypertensive disorders during pregnancy.

### Shocking statistics:

- Preeclampsia and related hypertensive disorders affect 5-8% of all births in the U.S.
- Severe hypertension contributes to 7% of maternal deaths in the U.S.
- One-third of severe childbirth complications result from preeclampsia/eclampsia.

## 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 of which is sudden hypertension (blood pressure greater than or equal to 140 over 90 mm Hg) combined with the presence of proteinuria (protein in the urine greater than or equal to .03 g in 24 hours).

When proteinuria does not occur, preeclampsia may also be diagnosed as hypertension with thrombocytopenia (low platelet count), impaired liver function, renal insufficiency (poor kidney function), pulmonary edema (excess fluid in the lungs), and cerebral or visual disturbances

(brain and vision problems). Eclampsia is a more severe complication characterized by the sudden onset of seizures or coma, typically following preeclampsia.

## Maternal risk

Preeclampsia can happen to anyone, but some factors place a participant at greater risk. 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 the wall of the uterus), and even maternal and infant death. Maternal 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)

## Infant risk

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 birth weight, preterm delivery, and a chance of experiencing a stillbirth.

Prematurity is the leading cause of infant death in Minnesota. Infants who are born prematurely have a higher risk of long-term health and development difficulties. Preventing pre-term births is critical to supporting infant health, promoting health equity, and controlling healthcare costs.

## 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:

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

## Prevention

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.

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

## Preventative tips for families

A history of preeclampsia increases the risk of future hypertension, cardiovascular disease, and stroke. The healthy lifestyle habits below can help reduce the risks and support a healthy pregnancy now and in the future.

- 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.

Postpartum nutrition education contacts can provide an opportunity to follow up with participants to encourage healthy habits that support healing.

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

## WIC's role

Depending on when a pregnancy certification is completed, a participant may not be aware of or diagnosed with a hypertensive disorder. When completing the assessment, we can ask about diet, health and medical conditions, and if the doctor has any concerns about pregnancy. We can then provide preventive tips to ensure a healthy pregnancy outcome.

At the nutrition education visits, we can follow up with the participant by asking simple questions such as “Have there been changes in your health or pregnancy since your last visit?” or “Has anything new come up during recent prenatal visits with your provider?” This will help guide the education and resources that we provide.

## WIC pregnancy-related risk codes

If a participant shares that they have a history of preeclampsia or another hypertensive disorder during the initial certification, you may choose the appropriate risk factor.

- [304 History of Preeclampsia \(PDF\)](#): Presence of condition diagnosed, documented, or reported by a physician or someone working under a physician’s orders, or as self-reported by applicant/participant/caregiver.
- [345 - Hypertension and Prehypertension \(PDF\)](#): Presence of condition diagnosed, documented, or reported by a physician or someone working under a physician’s orders, or as self-reported by applicant/participant/caregiver

Refer to “Implications for WIC Services” to learn more about these related risk codes.

## Training Opportunity

MOM policy [Section 5.3: Nutrition Risk Assessment \(PDF\)](#) explains the importance for WIC staff to obtain and synthesize information about a participant’s medical, health, and nutrition status to assess for risk codes and to understand the most appropriate individualization of 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 \(PDF\)](#) complete question format during the assessment may help you to accurately determine if there are concerns the participant or their healthcare provider has regarding their medical, health, or nutrition.

### Exercise:

1. Read through the [Pregnant Woman \(PDF\)](#) 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

[Hypertensive Disorders of Pregnancy and Gestational Diabetes Module - 22 minutes](#) -MDH WIC

[Preeclampsia Foundation](#)

[HEAR HER Campaign](#) -Center for Disease Control and Prevention (CDC)

[Preeclampsia and High Blood Pressure During Pregnancy](#) -The American College of Obstetricians and Gynecologists (ACOG), 2026.

[Preterm Birth](#)- MDH, Oct. 16, 2025.

[National Adoption of World Health Organization Recommendations on Calcium Supplementation During Pregnancy](#)- National Library of Medicine. New York Academy of Sciences. Nov. 3, 2025.

## Reference – complete listing of hyperlinks

[calcium](https://ods.od.nih.gov/factsheets/Calcium-HealthProfessional/) (https://ods.od.nih.gov/factsheets/Calcium-HealthProfessional/)

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

[304 History of Preeclampsia](https://www.health.state.mn.us/docs/people/wic/localagency/nutrition/riskcodes/304.pdf)  
(https://www.health.state.mn.us/docs/people/wic/localagency/nutrition/riskcodes/304.pdf)

[345 - Hypertension and Prehypertension](https://www.health.state.mn.us/docs/people/wic/localagency/nutrition/riskcodes/345.pdf)  
(https://www.health.state.mn.us/docs/people/wic/localagency/nutrition/riskcodes/345.pdf)

[Section 5.3: Nutrition Risk Assessment](https://www.health.state.mn.us/docs/people/wic/localagency/program/mom/chsctns/ch5/sctn5_3_3.pdf)  
(https://www.health.state.mn.us/docs/people/wic/localagency/program/mom/chsctns/ch5/sctn5\_3\_3.pdf)

[Hypertensive Disorders of Pregnancy and Gestational Diabetes Module - 22 minutes](https://www.health.state.mn.us/training/cfh/wic/nutrition/modules/mod2hyperten/index.html)  
(https://www.health.state.mn.us/training/cfh/wic/nutrition/modules/mod2hyperten/index.html)

[Preeclampsia Foundation](https://www.preeclampsia.org/) (https://www.preeclampsia.org/)

[HEAR HER Campaign](https://www.cdc.gov/hearher/index.html) (https://www.cdc.gov/hearher/index.html)

[Preeclampsia and High Blood Pressure During Pregnancy](https://www.acog.org/womens-health/faqs/preeclampsia-and-high-blood-pressure-during-pregnancy) (https://www.acog.org/womens-health/faqs/preeclampsia-and-high-blood-pressure-during-pregnancy)

[Preterm Birth](https://www.health.state.mn.us/people/womeninfants/prematurity/index.html) (https://www.health.state.mn.us/people/womeninfants/prematurity/index.html)

[National Adoption of World Health Organization Recommendations on Calcium Supplementation During Pregnancy](https://pmc.ncbi.nlm.nih.gov/articles/PMC12728327/#:~:text=Adequate%20calcium%20intake%20during%20pregnancy,guidelines%20of%20WHO%20member%20states.)  
(https://pmc.ncbi.nlm.nih.gov/articles/PMC12728327/#:~:text=Adequate%20calcium%20intake%20during%20pregnancy,guidelines%20of%20WHO%20member%20states.)

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