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Preeclampsia

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Overview

Preeclampsia is a complication of pregnancy. With preeclampsia, you might have high blood pressure, high levels of protein in urine that indicate kidney damage (proteinuria), or other signs of organ damage. Preeclampsia usually begins after 20 weeks of pregnancy in women whose blood pressure had previously been in the standard range.

Left untreated, preeclampsia can lead to serious — even fatal — complications for both the mother and baby.

Early delivery of the baby is often recommended. The timing of delivery depends on how severe the preeclampsia is and how many weeks pregnant you are. Before delivery, preeclampsia treatment includes careful monitoring and medications to lower blood pressure and manage complications.

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Symptoms

The defining feature of preeclampsia is high blood pressure, proteinuria, or other signs of damage to the kidneys or other organs. You may have no noticeable symptoms. The first signs of preeclampsia are often detected during routine prenatal visits with a health care provider.

Along with high blood pressure, preeclampsia signs and symptoms may include:

- Excess protein in urine (proteinuria) or other signs of kidney problems

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- Severe headaches
- Changes in vision, including temporary loss of vision, blurred vision or light sensitivity
- Shortness of breath, caused by fluid in the lungs
- Pain in the upper belly, usually under the ribs on the right side
- Nausea or vomiting

Weight gain and swelling (edema) are typical during healthy pregnancies. However, sudden weight gain or a sudden appearance of edema — particularly in your face and hands — may be a sign of preeclampsia.

When to see a doctor

Make sure you attend your prenatal visits so that your health care provider can monitor your blood pressure. Contact your provider immediately or go to an emergency room if you have severe headaches, blurred vision or other visual disturbances, severe belly pain, or severe shortness of breath.

Because headaches, nausea, and aches and pains are common pregnancy complaints, it's difficult to know when new symptoms are simply part of being pregnant and when they may indicate a serious problem — especially if it's your first pregnancy. If you're concerned about your symptoms, contact your doctor.

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Causes

The exact cause of preeclampsia likely involves several factors. Experts believe it begins in the placenta — the organ that nourishes the fetus throughout pregnancy. Early in a pregnancy, new blood vessels develop and evolve to supply oxygen and nutrients to the placenta.

In women with preeclampsia, these blood vessels don't seem to develop or work properly. Problems with how well blood circulates in the placenta may lead to the irregular regulation of blood pressure in the mother.

Other high blood pressure disorders during pregnancy

Preeclampsia is one high blood pressure (hypertension) disorder that can occur during pregnancy. Other disorders can happen, too:

- **Gestational hypertension** is high blood pressure that begins after 20 weeks without problems in the kidneys or other organs. Some women with gestational hypertension may develop preeclampsia.
- **Chronic hypertension** is high blood pressure that was present before pregnancy or that occurs before 20 weeks of pregnancy. High blood pressure that continues more than three months after a pregnancy also is called chronic hypertension.
- **Chronic hypertension with superimposed preeclampsia** occurs in women diagnosed with chronic high blood pressure before pregnancy, who then develop worsening high blood pressure and protein in the urine or other

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Risk factors

Conditions that are linked to a higher risk of preeclampsia include:

- Preeclampsia in a previous pregnancy
- Being pregnant with more than one baby
- Chronic high blood pressure (hypertension)
- Type 1 or type 2 diabetes before pregnancy
- Kidney disease
- Autoimmune disorders
- Use of in vitro fertilization

Conditions that are associated with a moderate risk of developing preeclampsia include:

- First pregnancy with current partner
- Obesity
- Family history of preeclampsia
- Maternal age of 35 or older
- Complications in a previous pregnancy
- More than 10 years since previous pregnancy

Other risk factors

Several studies have shown a greater risk of preeclampsia among Black women compared with other women. There's also some evidence of an increased risk among indigenous women in North America.

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access to prenatal care and health care in general, as well as social inequities and chronic stressors that affect health and well-being.

Lower income also is associated with a greater risk of preeclampsia likely because of access to health care and social factors affecting health.

For the purposes of making decisions about prevention strategies, a Black woman or a woman with a low income has a moderately increased risk of developing preeclampsia.

Complications

Complications of preeclampsia may include:

- **Fetal growth restriction.** Preeclampsia affects the arteries carrying blood to the placenta. If the placenta doesn't get enough blood, the baby may receive inadequate blood and oxygen and fewer nutrients. This can lead to slow growth known as fetal growth restriction.
- **Preterm birth.** Preeclampsia may lead to an unplanned preterm birth — delivery before 37 weeks. Also, planned preterm birth is a primary treatment for preeclampsia. A baby born prematurely has increased risk of breathing and feeding difficulties, vision or hearing problems, developmental delays, and cerebral palsy. Treatments before preterm delivery may decrease some risks.
- **Placental abruption.** Preeclampsia increases your risk of placental abruption. With this condition, the placenta separates from the inner wall of the uterus before delivery. Severe abruption can cause heavy bleeding, which can be life-threatening for both the mother and baby.
- **hemolysis elevated liver enzymes and low platelet count (HELLP) syndrome.** HELLP stands for hemolysis (the destruction of red blood cells), elevated liver enzymes and low platelet count. This severe form of preeclampsia affects several organ systems. HELLP syndrome is life-

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