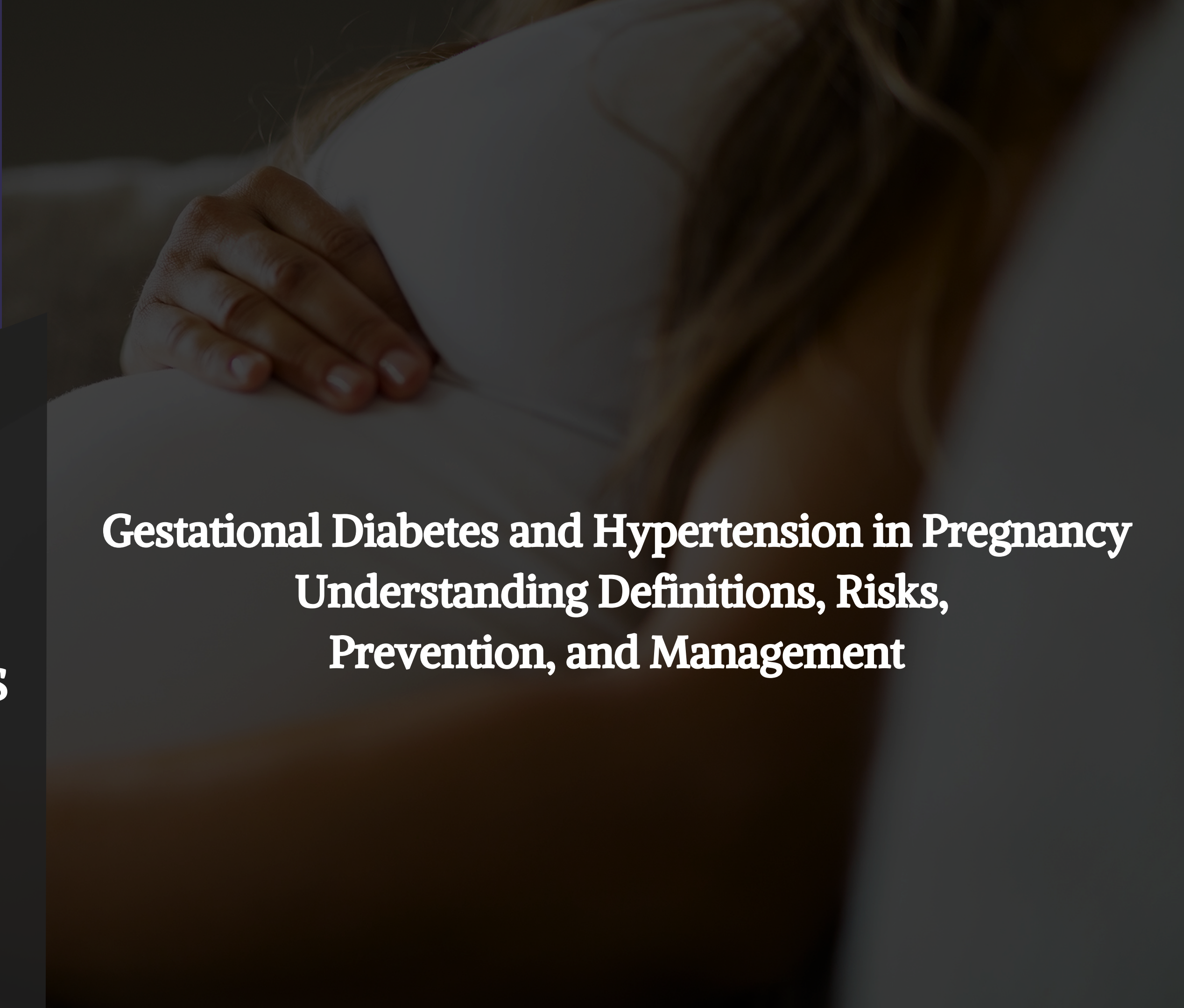




Public Health
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A close-up photograph of a pregnant woman's hand resting on her belly, with her fingers gently touching the skin. The image is dark and moody, with the hand and belly being the primary focus.

Gestational Diabetes and Hypertension in Pregnancy

Understanding Definitions, Risks, Prevention, and Management

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Objectives

- Define gestational diabetes and hypertensive disorders in pregnancy
- Recognize common symptoms and early warning signs associated with both conditions.
- Describe evidence-based prevention strategies, including lifestyle interventions and recommended screening timelines.
- Explain appropriate management approaches for both conditions, including monitoring, medication options, and follow-up care.
- Understand how the two conditions interact, increasing complications and long-term health impacts for mother and child.
- Apply key takeaways to support patient education, early detection, and improved pregnancy outcomes.



What Is Gestational Diabetes Mellitus (GDM)?

Gestational diabetes mellitus (GDM) is a form of diabetes first diagnosed during pregnancy, typically between weeks 24 and 28. It occurs when pregnancy hormones cause insulin resistance, leading to elevated blood sugar levels.

- Hormonal changes → progressive insulin resistance in late pregnancy.
- Affects 5–9% of U.S. pregnancies annually; U.S. birth data suggests ~8% in 2021
- Women with GDM have ~50% lifetime risk of developing type 2 diabetes; their children face increased obesity and diabetes risk





Symptoms and Risk Factors

Most individuals experience no noticeable symptoms.

When symptoms occur, they may include:

- Increased thirst
- Frequent urination
- Fatigue, blurred vision
- Yeast infections

Risk factors include:

- **Non-modifiable:** history of GDM, has given birth to a baby who weighed over nine pounds, and family history of type 2 diabetes and Polycystic ovary syndrome (PCOS).
- **Modifiable:** overweight/obesity, sedentary lifestyle
- **Ethnicity:** African American, Hispanic, Native American, Asian, Pacific Islander

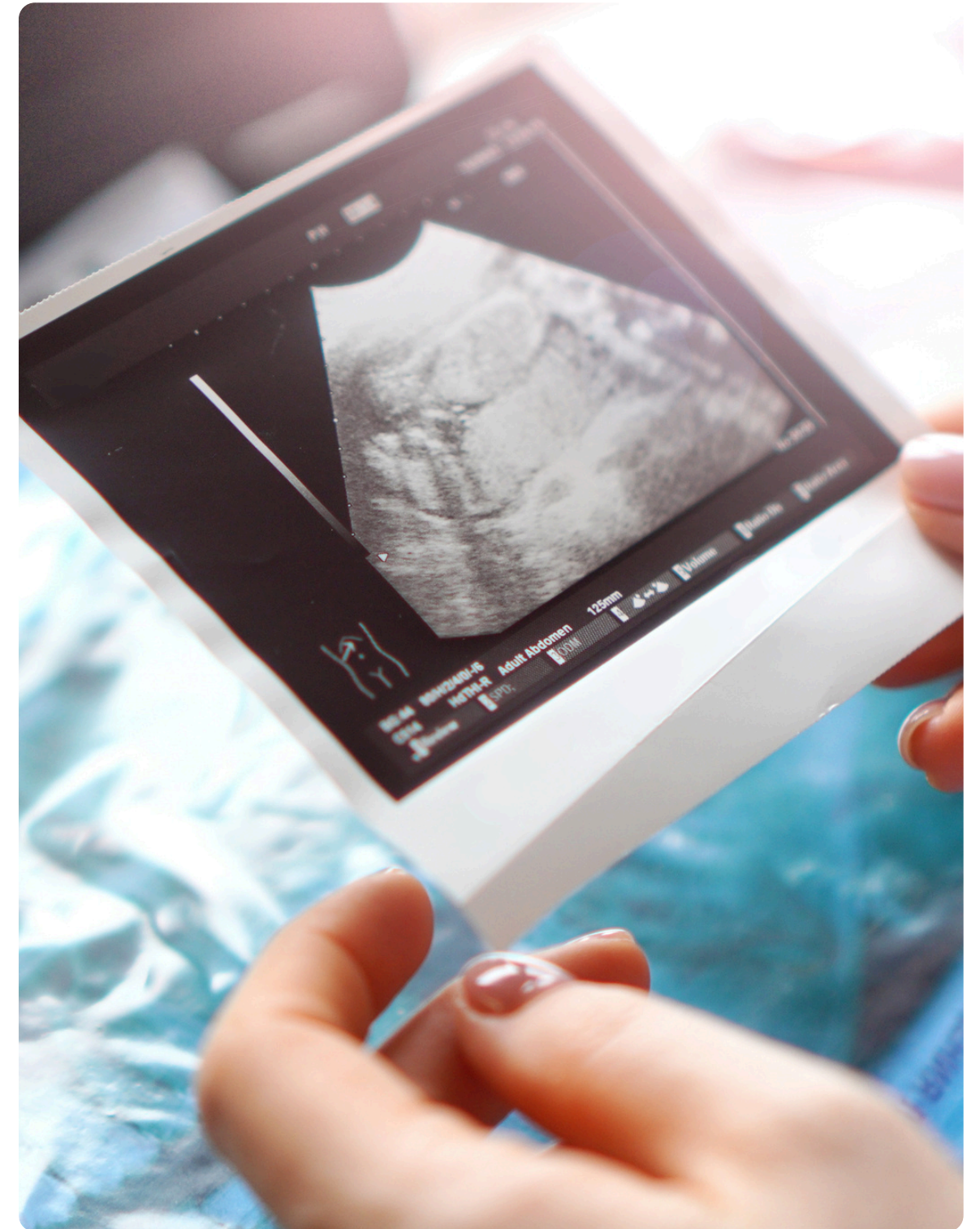


(CDC, 2024)
(John Hopkins, n.d.)



Screening and Diagnosis

- Diabetes is first diagnosed during pregnancy, most commonly between weeks 24 and 28
 - 1-hour 50 g glucose challenge; if abnormal, follow with oral glucose tolerance test
- Early screening (<24 weeks) for those with high-risk factors





Management

1. Lifestyle Modifications

- Nutritionally balanced diets: emphasize MyPlate, carbohydrate counting, and healthy gestational weight gain
- Physical activity: daily safe moderate exercise such as walking
- Frequent self-monitoring of blood glucose.

2. Pharmacotherapy

- First-line: insulin therapy.





Risks and Complications

For the mother:

- Increased chance of preeclampsia and cesarean delivery.
- Higher lifetime risk of developing type 2 diabetes.

For the baby:

- High birth weight, early delivery, newborn hypoglycemia, and breathing difficulties.
- Increased risk of childhood obesity and type 2 diabetes later in life.

(ACOG, 2024)
(CDC, 2024)



Postpartum Follow-Up

- Universal screening between 24–28 weeks
- Perform a blood test at 4–12 weeks postpartum to assess resolution or early type 2 diagnosis.
- Annual glucose monitoring
- Adoption of sustained lifestyle interventions to reduce future diabetes risk.





Gestational Hypertension



What is Gestational Hypertension?

These are the key features of gestational hypertension:

- Onset: after 20 weeks of pregnancy; blood pressure greater than or equal to 140/90 mm Hg
- No proteinuria: no signs of organ damage
- Prevalence: occurs in approximately 6% to 8% of pregnancies.
- Resolution: Usually goes away after childbirth



(Cleveland Clinic, 2022)



What are the Common Signs and Symptoms of Gestational Hypertension?

- Headaches: persistent or severe
- Nausea and/or vomiting
- Vision changes
- Dizziness or lightheadedness
- Swelling (edema)
- Abdominal pain
- Reduced urine output



(Cleveland Clinic, 2022)



Symptoms and Risk Factors

- Anyone under age 20 or over age 40
- Previous history of gestational hypertension or preeclampsia
- Family history of gestational hypertension
- Diagnosis of diabetes, gestational diabetes, or kidney disease
- Autoimmune disorders such as Systemic Lupus Erythematosus
- Multiparous expecting twins, triplets, or more



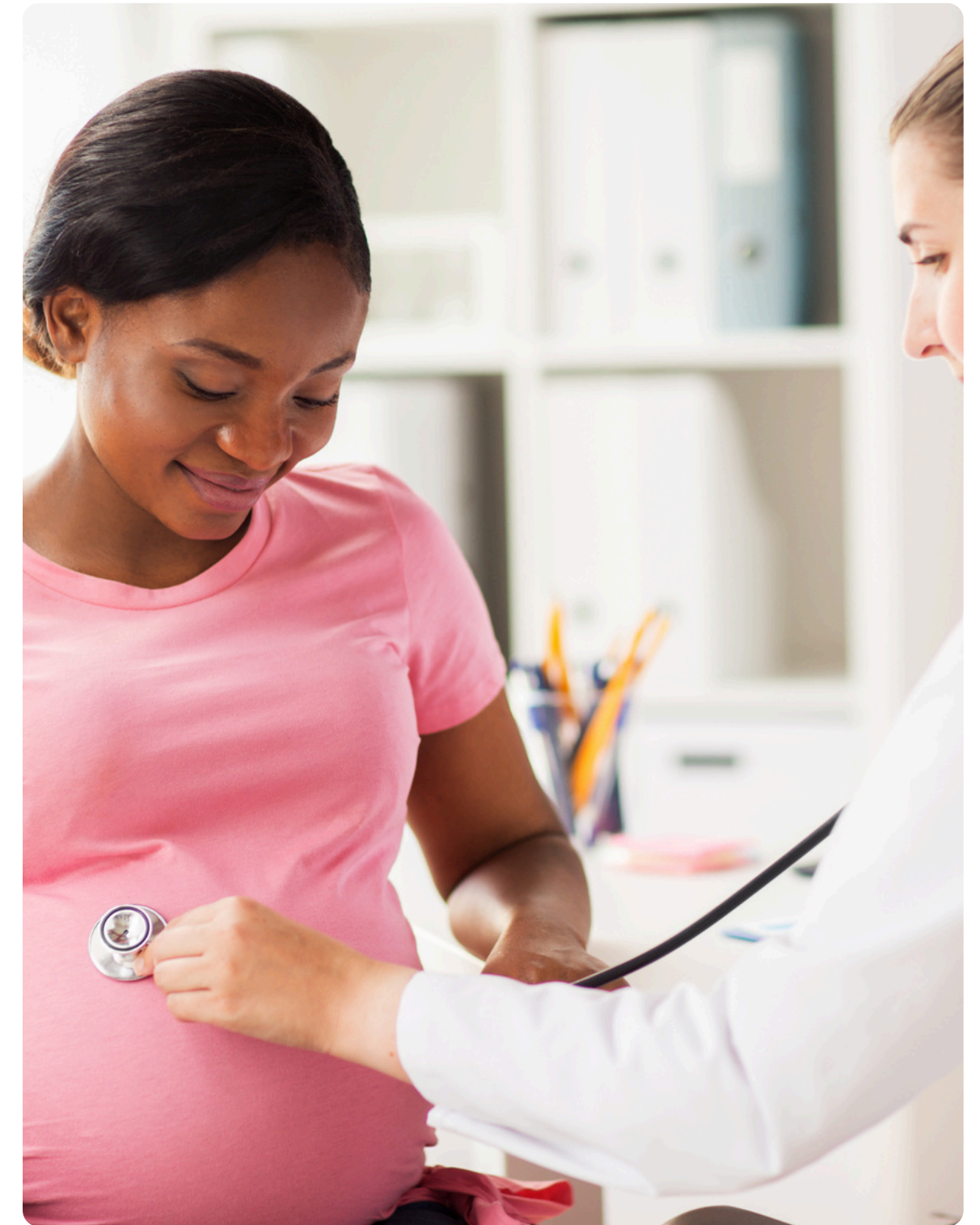
(Cleveland Clinic, 2022)



What Complications Can Develop As a Result of Gestational Hypertension?

Pregnant women diagnosed with gestational high blood pressure are at risk for:

- Seizures
- Stroke
- Blood clotting problems
- Liver problems
- Acute kidney failure



(Cleveland Clinic, 2022)



What to do to Reduce the Risk of Developing Complications?

- Keep all prenatal appointments
- Take blood pressure medications and low-dose aspirin as prescribed
- Follow the provider's instructions regarding activity and exercise
- Eat a healthy diet
- Eliminate smoking, alcohol, and illicit drugs

([Mayo Clinic](#), 2025)



How Can Gestational Hypertension Affect the Baby?

Hypertension during pregnancy can prevent the placenta from receiving the food and oxygen supply that is essential for fetal development. This decrease in blood and nutrients can contribute to:

- low birth weight or intrauterine growth restriction (IUGR)
- premature birth
- stillbirth
- labor induction



([Mayo Clinic, 2025](#))



What is the Treatment for Gestational Hypertension?

Treatment will depend on overall health, gestational stage, and severity of the condition.

Lifestyle Modifications:

- Diet: a healthy, balanced diet low in sodium
- Physical activity: regular, moderate exercise as tolerated
- Weight management: maintaining a healthy weight during pregnancy

Medical Management:

- Monitoring the blood pressure more frequently; more frequent prenatal visits to check blood pressure
- Monitoring blood pressure at home
- Prescription medication to decrease blood pressure

Goal: Reduce the blood pressure or prevent it from getting worse



Postpartum Care After a Diagnosis of Gestational Hypertension in Pregnancy

Immediate Postpartum Monitoring:

- Moms should pay attention to how they are feeling after delivery
- Moms may still be at risk for persistent hypertension, peaking 5–7 days after delivery
- Continue to monitor your blood pressure closely 1–2 weeks after delivery
- Report signs/symptoms of high blood pressure to the provider immediately
- Comply with lifestyle counseling that focuses on diet, physical activity, weight management, and stress reduction
- Take medications as prescribed by the provider



After delivery - recognizing these signs can save your life

Call your healthcare provider right away

If you can't reach your healthcare provider, call 911 or go to an Emergency Department and report that you have recently been pregnant.

- Blood pressure at or exceeding 140/90
- Severe headache that won't go away
- Vision changes
- Stomach pain
- Swelling in your hands and face
- Feeling nauseous or throwing up

Have someone take you to the ER or call 911

- Blood pressure at or exceeding 160/110
- Shortness of breath or trouble breathing
- Seeing spots
- Seizures



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www.stillatrisk.org

(Preeclampsia Foundation, 2019)



Key Takeaways:

- Maintain a healthy weight before and during pregnancy to lower risks of gestational diabetes and hypertension.
- Follow a balanced diet rich in whole grains, lean proteins, fruits, and vegetables to support healthy blood sugar and blood pressure.
- Engage in regular moderate exercise to improve insulin sensitivity and reduce hypertension risk.
- Watch out for maternal warning signs and symptoms.
- Get early and consistent prenatal care to monitor glucose and blood pressure changes.
- Follow provider recommendations, including dietary guidance and postpartum follow-up plans.



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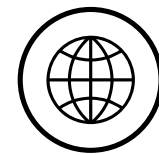
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