

Condition	Mom's Experience During Pregnancy	Risks to Baby	Apple Watch Support
High Blood Pressure (Hypertension)	Headaches, swelling, shortness of breath	Low birth weight, early birth, preeclampsia	Tracks blood pressure, heart rate, stress levels
Diabetes	Fatigue, sugar cravings, nausea	Large baby, low blood sugar, birth defects	Syncs with glucose monitors, reminds to move
Thyroid Problems	Mood swings, weight changes, anxiety	Development delays, miscarriage	Tracks heart rate, sleep, mood
Asthma	Breathing issues, chest tightness	Early labor, low oxygen for baby	Monitors oxygen levels and breathing
Kidney Disease	Fatigue, back pain, high BP	Growth issues, early delivery	Tracks BP, hydration reminders
Heart Disease	Chest pain, dizziness, breathlessness	Premature birth, stillbirth	ECG app, heart rate alerts
Obesity	Back pain, breathlessness, mobility issues	Diabetes, high BP, C-section risk	Tracks activity, calories, movement goals
PCOS (Polycystic Ovary Syndrome)	Mood swings, cramps, diabetes signs	Miscarriage, high BP, early birth	Tracks cycle, weight, stress
Anemia	Weakness, dizziness, pale skin	Low birth weight, infant anemia	Monitors oxygen levels, fatigue alerts
Autoimmune Disorders	Joint pain, flare-ups, anxiety	Growth issues, miscarriage, neonatal lupus	Tracks stress, sleep, heart rate

Can be tracked directly / partially via Apple Watch

1. Metabolic & Endocrine (Diabetes, Thyroid, PCOS)

Apple Watch itself doesn't measure blood sugar, but integrates with **continuous glucose monitors (CGM)** like Dexcom/GlucoMe (shows real-time glucose on watch). **Heart rate, activity, sleep, weight trends** → indirectly useful for diabetes, thyroid, PCOS management.

2. Cardiovascular Diseases (Hypertension, Heart Disease)

Heart rate (resting, variability, trends)

ECG (AFib detection)

Blood pressure requires external **BP monitor paired with Health app**.

3. Respiratory Disorders (Asthma, COPD)

Blood oxygen (SpO₂) monitoring

Breathing rate during sleep

Activity/sleep → track flare-ups indirectly.

4. Neurological Disorders (Epilepsy, Migraines)

Seizure triggers indirectly via heart rate spikes, sleep tracking.

Migraine diary apps integrated with Watch (user logs headaches, sleep, triggers).

5. Obesity & Related Risks

Daily activity (steps, calories, workouts)

Sleep quality

Weight trends (if paired with smart scale).

Partially trackable (need integrations/manual logging)

6. Kidney & Liver Disorders

Apple Watch can track **hydration reminders, BP (via external device), activity**.

No direct kidney/liver function tracking (blood tests required).

7. Autoimmune Disorders (Lupus, RA, APS)

Track **activity, fatigue, sleep** (flare-up indicators).

Symptoms (pain, stiffness) need **manual logging apps**.

8. Infectious Diseases (HIV, Hepatitis, TB)

Watch cannot track infection, but can log **medication adherence, weight, heart rate, activity trends**.

9. Hematological Disorders (Sickle Cell, Thalassemia, Clotting issues)

Indirect tracking: **SpO₂, HR, activity tolerance**.

No direct hemoglobin/clotting monitoring.

10. Mental Health (Depression, Anxiety, Bipolar, Schizophrenia)

Mindfulness app (breathing, HRV trends, stress indicators)

Sleep tracking

Journaling apps for mood (paired with Watch).

Common feelings/symptoms during pregnancy if she has them:

1. Metabolic & Endocrine Disorders (Diabetes, Thyroid, PCOS)

Fatigue, frequent urination, excessive thirst (diabetes).

Feeling unusually tired, mood swings, hair/facial changes (thyroid/PCOS).

Worry about baby's growth and risks of complications.

2. Cardiovascular Diseases (Hypertension, Heart Disease)

Headaches, dizziness, chest discomfort, breathlessness.

Swelling in feet/hands, anxiety due to blood pressure checks.

May feel more exhausted than typical pregnancy fatigue.

3. Kidney & Liver Disorders

Nausea, vomiting, swelling (ankles, eyes), itching (liver-related).

Constant worry about fluid balance and baby's growth.

May feel more fragile and weak compared to a healthy pregnancy.

4. Autoimmune Disorders (Lupus, RA, APS)

Joint pain, stiffness, body aches (RA).

Extreme fatigue, skin rashes (Lupus).

Fear of miscarriage (APS), emotional stress.

5. Respiratory Disorders (Asthma, COPD)

Breathlessness, wheezing, chest tightness.

More anxious during physical activity.

Sleep may feel disturbed due to breath issues.

6. Infectious Diseases (HIV, Hepatitis, TB)

Often no symptoms if controlled, but can feel weak or fatigued.

Stress and anxiety about transmission to the baby.

Side effects from medication can also affect daily well-being.

7. Neurological Disorders (Epilepsy, Migraines)

Anxiety about seizures affecting the baby.

Migraine → severe headache, nausea, sensitivity to light/sound.

Fear or stress due to medication effects.

8. Hematological Disorders (Sickle Cell, Thalassemia, Clotting issues)

Severe fatigue, body pain (sickle cell crises).

Pale skin, weakness, dizziness (anemia).

Constant worry about blood clots or baby's growth.

9. Mental Health Conditions (Depression, Anxiety, Bipolar, Schizophrenia)

Mood swings, sadness, hopelessness, irritability.

Difficulty bonding with pregnancy experience.

Anxiety about ability to care for baby.

10. Obesity & Related Risks

More tired during physical activity, joint/back pain.

Sleep disturbances (sometimes sleep apnea).

Emotional stress about weight gain and complications.

Pre-existing Diseases :Effect on Child + Apple Watch Precautions

1. Metabolic & Endocrine (Diabetes, Thyroid, PCOS)

Child risk: Birth defects, miscarriage, large baby size, growth restriction.

Apple Watch precaution:

Track **activity, sleep, HR trends** to maintain healthy metabolism.

Integrate **CGM glucose apps** (for diabetic mothers).

Alert mother if daily activity is too low/high.

2. Cardiovascular (Hypertension, Heart Disease)

Child risk: Preterm birth, low birth weight, placental problems.

Apple Watch precaution:

ECG + heart rate monitoring (detect irregular rhythms).

Reminders for **stress management & mindfulness**.

paired **BP monitor integration** with Health app.

3. Kidney & Liver Disorders

Child risk: Poor growth, preterm birth, stillbirth.

Apple Watch precaution:

Daily hydration reminders.

Track **sleep & fatigue** to catch worsening symptoms.

Gentle activity monitoring to avoid overexertion.

4. Autoimmune Disorders (Lupus, RA, APS)

Child risk: Miscarriage, growth restriction, premature birth.

Apple Watch precaution:

Symptom journaling apps (pain, flares).

HRV trends → detect stress or fatigue.

Reminders for **medication & rest breaks**.

5. Respiratory (Asthma, COPD)

Child risk: Low oxygen supply → preterm birth, low birth weight.

Apple Watch precaution:

SpO₂ monitoring (oxygen drops trigger alert).

Track **breathing rate during sleep**.

Alert if **activity causes breathlessness**.

6. Infectious Diseases (HIV, Hepatitis, TB)

Child risk: Vertical transmission (infection passed to baby).

Apple Watch precaution:

Medication reminders for antivirals.

Weight & fatigue tracking to monitor immune health.

Symptom logging for cough, fever, or flare-ups.

7. Neurological (Epilepsy, Migraines)

Child risk: Seizure-related oxygen loss, drug effects, developmental delays.

Apple Watch precaution:

Seizure detection support (via HR spikes, motion apps).

Sleep monitoring (lack of sleep triggers seizures).

Journaling apps to record migraine triggers.

8. Hematological (Sickle Cell, Thalassemia, Clotting issues)

Child risk: Miscarriage, stillbirth, growth restriction.

Apple Watch precaution:

SpO₂ tracking (low oxygen alerts).

Track **fatigue via HR & activity levels**.

Reminders for **hydration & medications**.

9. Mental Health (Depression, Anxiety, Bipolar, Schizophrenia)

Child risk: Poor bonding, preterm birth, developmental delays.

Apple Watch precaution:

Mindfulness & breathing app reminders.

Sleep tracking to stabilize mood.

Journaling/mood apps for early detection of emotional dips.

10. Obesity & Related Risks

Child risk: Stillbirth, neural tube defects, childhood obesity risk.

Apple Watch precaution:

Track **daily steps, calories, workouts**.

Weight trend monitoring (via smart scale sync).

Alerts for **sedentary time**.

Safe Prenatal Yoga for Women with Pre-Existing Medical Conditions

A Comprehensive Guide for All Trimesters

Executive Summary

Managing pregnancy with pre-existing medical conditions requires careful attention to exercise choices and modifications. This guide provides evidence-based recommendations for safe prenatal yoga practices specifically designed for women with high blood pressure, obesity, asthma, anemia, and diabetes or thyroid disorders. All recommended poses and breathing techniques are safe for practice throughout all three trimesters when performed with appropriate modifications and professional guidance.

Medical Conditions Overview

The following pre-existing conditions affect a significant portion of pregnant women globally and require specialized yoga approaches:

- **High Blood Pressure:** Affects 5-10% of women daily^{[1][2]}
- **Obesity:** Increasing trend globally, affecting 15-25% of pregnant women^{[19][21]}
- **Asthma:** Affects 3-14% of pregnancies^{[36][39]}
- **Anemia:** Affects approximately 50% of women globally^{[52][55]}
- **Diabetes/Thyroid Disorders:** Affects 5-7% of women globally^{[70][73]}

Evidence-Based Benefits of Prenatal Yoga

For High Blood Pressure

- Reduces both systolic and diastolic blood pressure^{[1][2]}
- Improves heart rate variability and cardiovascular function^{[2][5]}
- Decreases risk of pregnancy-induced hypertension and preeclampsia^{[1][8]}
- Activates parasympathetic nervous system for stress reduction^{[3][5]}

For Obesity

- Controls excessive gestational weight gain^{[21][23]}
- Reduces inflammation and improves body composition^[^28]
- Enhances metabolic function and insulin sensitivity^[^28]
- Supports healthy pregnancy outcomes^{[19][26]}

For Asthma

- Improves lung function and respiratory muscle strength^{[38][40]}
- Reduces stress-induced bronchial obstruction^{[36][37]}
- Enhances oxygen supply for mother and baby^{[12][39]}
- Provides anxiety management techniques^{[39][40]}

For Anemia

- Increases ferritin levels and improves iron metabolism^{[52][55][^58]}
- Reduces hepcidin levels, improving iron absorption^{[55][61]}
- Enhances blood circulation and oxygen delivery^{[52][57]}
- Improves hemoglobin stability^{[55][58]}

For Diabetes and Thyroid Disorders

- Significantly reduces blood glucose levels and HbA1c^{[73][78]}
- Improves insulin sensitivity and reduces medication requirements^[^73]
- Stimulates thyroid gland function through specific poses^{[75][77]}
- Enhances hormonal balance and stress management^{[72][77]}

Safe Yoga Poses for All Conditions

Universal Safe Poses (All Trimesters)

1. Child's Pose (Balasana)

Perfect for: High blood pressure, asthma, anemia, stress relief

- **Benefits:** Relaxes nervous system, reduces blood pressure, relieves back pain^{[101][109]}
- **How to practice:** Kneel with knees wide, fold forward with forehead on ground
- **Modification:** Use pillow under forehead, keep knees wide for belly space
- **Safety:** Safe all trimesters with modifications after 20 weeks

2. Cat-Cow Pose (Marjariasana-Bitilasana)

Perfect for: All conditions, especially back pain and diabetes

- **Benefits:** Improves spinal mobility, reduces back pain, enhances digestion^{[24][106]}
- **How to practice:** On hands and knees, alternate arching and rounding spine
- **Safety:** One of the safest poses throughout pregnancy^[^103]

3. Easy Pose (Sukhasana)

Perfect for: High blood pressure, diabetes, thyroid disorders, anxiety

- **Benefits:** Reduces stress, lowers blood pressure, improves breathing control^[101]^[109]
- **How to practice:** Sit cross-legged with straight spine, hands on knees
- **Modification:** Use wall support and cushions under hips
- **Safety:** Safe for all trimesters^[^104]

4. Mountain Pose (Tadasana)

Perfect for: All conditions - improves posture and circulation

- **Benefits:** Strengthens legs, improves posture, calms mind^[^106]
- **How to practice:** Stand tall, feet hip-width apart, arms at sides
- **Safety:** Excellent foundation pose for all trimesters^[^24]

5. Butterfly Pose (Baddha Konasana)

Perfect for: Anemia, circulation issues, hip flexibility

- **Benefits:** Improves circulation, reduces swelling, opens hips^[22]^[24]
- **How to practice:** Sit with soles of feet together, gently bounce knees
- **Safety:** Excellent for improving blood flow throughout pregnancy^[^110]

Standing Poses with Modifications

6. Warrior II (Virabhadrasana II)

Perfect for: All conditions with proper modifications

- **Benefits:** Strengthens legs, improves circulation, builds stamina^[24]^[106]
- **Modification:** Widen stance as pregnancy progresses, use wall support^[^24]
- **Safety:** Safe all trimesters with modifications^[^104]

7. Triangle Pose (Trikonasana)

Perfect for: All conditions when practiced with wall support

- **Benefits:** Strengthens legs, improves balance, aids digestion^[^106]
- **Modification:** Always use wall support, avoid deep side bending
- **Safety:** Safe all trimesters with proper modifications^[^104]

8. Goddess Pose (Utkata Konasana)

Perfect for: All conditions, especially for building lower body strength

- **Benefits:** Strengthens hips, prepares for labor, improves circulation^[^22]
- **How to practice:** Wide-legged squat with arms raised or hands on hips
- **Safety:** Excellent for labor preparation throughout pregnancy^[^111]

Restorative Poses

9. Supported Bridge Pose (Setu Bandhasana)

Perfect for: Thyroid conditions, chest opening, back strengthening

- **Benefits:** Opens chest, strengthens back, improves thyroid function^[^111]
- **Modification:** Always use props, avoid after 20 weeks if uncomfortable
- **Safety:** Safe all trimesters with proper support^[^111]

10. Legs Up the Wall (Modified)

Perfect for: Anemia, circulation, reducing swelling

- **Benefits:** Improves circulation, reduces swelling, promotes relaxation^[^88]
- **Modification:** Lie on side near wall, extend legs up with support
- **Safety:** Safe all trimesters with proper positioning^[^104]

11. Corpse Pose (Shavasana) - Modified

Perfect for: High blood pressure, stress relief, deep relaxation

- **Benefits:** Deep relaxation, reduces blood pressure, calms nervous system^[^109]
- **Modification:** Side-lying position after 20 weeks, use pillows for support
- **Safety:** Safe all trimesters with modifications^[^104]

Essential Breathing Techniques (Pranayama)

1. Nadi Shodhana (Alternate Nostril Breathing)

Perfect for: Diabetes, thyroid disorders, stress management

- **Benefits:** Balances nervous system, regulates hormones, calms mind^{[36][77]}
- **Technique:** Use thumb and ring finger to alternate closing nostrils
- **Safety:** Practice gently without force, safe all trimesters

2. Ujjayi Breathing (Ocean Breath)

Perfect for: Asthma, high blood pressure, anxiety

- **Benefits:** Improves lung function, reduces anxiety, promotes calm^[37]^[43]
- **Technique:** Breathe through nose with slight throat constriction
- **Safety:** Never force the breath, safe all trimesters^[40]

3. Deep Abdominal Breathing

Perfect for: High blood pressure, stress, general relaxation

- **Benefits:** Activates parasympathetic nervous system, reduces blood pressure^[5]
- **Technique:** Place hands on belly, breathe deeply into abdomen
- **Safety:** Lie on side after 20 weeks, safe all trimesters^[105]

4. Three-Part Breath (Dirga Pranayama)

Perfect for: Asthma, improving lung capacity, oxygen flow

- **Benefits:** Improves lung function, increases oxygen supply, calms mind^[37]^[38]
- **Technique:** Breathe into belly, ribs, then chest in sequence
- **Safety:** Excellent for respiratory conditions, safe all trimesters^[40]

5. Bhramari Pranayama (Bee Breath)

Perfect for: High blood pressure, anxiety, insomnia

- **Benefits:** Calms nervous system, reduces blood pressure, improves sleep
- **Technique:** Make gentle humming sound while exhaling
- **Safety:** Safe all trimesters with gentle practice

Trimester-Specific Guidelines

First Trimester (Weeks 1-13)

- Focus on establishing regular practice routine
- Emphasize breathwork over intense physical poses
- All listed poses are generally safe with gentle approach
- Avoid overheating and stay well-hydrated

Second Trimester (Weeks 14-27)

- Widen stance in all standing poses to accommodate belly growth^{[88][92]}
- Use open twists rather than closed twists^{[92][96]}
- Incorporate more props like blocks and bolsters for support
- Focus on poses that prepare the body for labor

Third Trimester (Weeks 28-Birth)

- Avoid supine positions (lying on back) after 20 weeks^{[90][92]}
- Use side-lying Savasana instead of traditional relaxation^{[88][92]}
- Focus on labor preparation and comfort poses
- Emphasize gentle movements and breath awareness

Safety Guidelines and Precautions

Universal Safety Rules

- **Always get medical clearance** before starting any yoga practice^{[105][108]}
- **Work with certified prenatal yoga instructors** familiar with medical conditions^{[105][112]}
- **Listen to your body** - stop if you feel dizzy, short of breath, or uncomfortable^[^108]
- **Modify positions** as your body changes throughout pregnancy^{[92][98]}
- **Use props liberally** - blocks, bolsters, walls, and chairs for support^{[92][94]}
- **Stay hydrated** and avoid overheating^[^108]
- **Practice regularly but gently** - consistency over intensity^{[110][112]}

Warning Signs to Stop Practice Immediately

- Severe shortness of breath
- Chest pain or palpitations
- Dizziness or faintness
- Vaginal bleeding
- Severe headaches
- Sudden swelling of face or hands
- Decreased fetal movement

Research-Backed Safety Evidence

A comprehensive study monitoring 25 pregnant women (35-38 weeks) performing 26 different yoga poses found **no adverse effects** on maternal or fetal health, with all participants reporting feeling safe during practice^{[104][108]}. This demonstrates that when practiced correctly with appropriate modifications, prenatal yoga is both safe and beneficial.

Conclusion

The evidence strongly supports prenatal yoga as a safe and beneficial practice for women with pre-existing medical conditions when practiced with appropriate modifications and professional guidance. The combination of gentle physical movement, breathing techniques, and stress reduction provides comprehensive support for maternal health while accommodating the unique challenges of each medical condition throughout all stages of pregnancy.

Regular practice of these recommended poses can significantly improve pregnancy outcomes, manage medical conditions naturally, and prepare both body and mind for labor and delivery. The key is focusing on gentle, supported movements that enhance circulation, reduce stress, and promote overall wellbeing while maintaining safety as the top priority.

Remember that every pregnancy is unique, and what works for one person may need modification for another. Always consult with your healthcare provider and work with qualified prenatal yoga instructors to ensure the safest and most beneficial practice for your individual circumstances.

This guide is based on current research and evidence-based practices. Always consult with healthcare providers before beginning any new exercise program during pregnancy.

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<https://my.clevelandclinic.org/health/diseases/17952-preeclampsia> - 1
<https://www.hopkinsmedicine.org/health/conditions-and-diseases/diabetes/gestational-diabetes-2>
<https://www.hopkinsmedicine.org/health/conditions-and-diseases/staying-healthy-during-pregnancy/medical-conditions-and-pregnancy-3>
<https://pmsma.mohfw.gov.in/wp-content/uploads/2016/10/High-Risk-Conditions-in-preg-modified-Final.pdf> -4 important link
<https://www.nhs.uk/conditions/pre-eclampsia/> - 5

Diabetes and Pregnancy

Diabetes is a condition in which the body does not make enough insulin or the body is unable to use the insulin that is made. Insulin is the hormone that allows glucose to enter the cells of the body to make fuel. When glucose cannot enter the cells, it builds up in the blood and the body's cells starve to death. If not managed properly, diabetes can have serious consequences for you and your growing baby.

Pre-Gestational Diabetes

If you already have diabetes and become pregnant, your condition is known as pre-gestational diabetes. The severity of your symptoms and complications often depends on the progression of your diabetes, especially if you have vascular (blood vessel) complications and poor blood glucose control.

Gestational Diabetes

Gestational diabetes is a condition in which the glucose level is elevated and other diabetic symptoms appear during pregnancy. Unlike other types of diabetes, gestational diabetes is not caused by a lack of insulin but by other hormones that block the insulin that is made. This condition is known as insulin

resistance. If you have gestational diabetes, you may or may not be dependent on insulin.

In most cases, all diabetic symptoms disappear following delivery. However, if you experience gestational diabetes, you will have an increased risk of developing diabetes later in life. This is especially true if you were overweight before pregnancy.

Causes of Gestational Diabetes

Although the specific cause of gestational diabetes is unknown, there are several theories about the origin of this condition. For example, the placenta supplies the growing fetus with nutrients and water. It also makes a variety of hormones to maintain the pregnancy. Some of these hormones (estrogen, cortisol and human placental lactogen) can have a blocking effect on the mother's insulin, which usually begins about 20 to 24 weeks into pregnancy.

As the placenta grows, it produces more of these hormones, increasing the level of insulin resistance in the mother. Normally, the mother's pancreas is able to make additional insulin to overcome insulin resistance. However, if the mother's production of insulin is not enough to overcome the effect of the placental hormones, gestational diabetes results.

Risk Factors of Gestational Diabetes

The following factors increase your risk of developing gestational diabetes:

Age (over 25 years old)

A family history of diabetes

Previous delivery of a very large infant, a stillborn or a child with certain birth defects

Obesity

Although increased glucose in the urine is often included in the list of risk factors, it is not believed to be a reliable indicator for gestational diabetes.

Diagnosing Gestational Diabetes

A glucose screening test is usually done between 24 and 28 weeks of pregnancy. To complete this test, you will be asked to drink a special glucose beverage. Then, your doctor will measure your blood sugar level one hour later.

If the test shows an increased blood sugar level, a three-hour glucose tolerance test may be done. If the results of the second test are in the abnormal range, you will be diagnosed with gestational diabetes.

Treatment Options for Gestational Diabetes

Your health care provider or midwife will determine your specific treatment plan for gestational diabetes based on:

Age, overall health and medical history

Condition and the severity of the disease

Long-term expectations for the course of the disease

Personal preference

Tolerance for specific medicines, procedures or therapies

Treatment for gestational diabetes focuses on keeping blood glucose levels in the normal range. Your specific treatment plan may include:

A special diet

Daily blood glucose monitoring

Exercise

Insulin injections or oral medications

Possible Fetal Complications from Gestational Diabetes

Unlike other types of diabetes, gestational diabetes generally does not cause birth defects. Birth defects usually originate sometime during the first trimester of pregnancy. They are more likely if you have pre-gestational diabetes, as you may have changes in blood glucose during that time. If you have gestational diabetes, you most likely had normal blood sugar levels during your critical first trimester.

The complications of gestational diabetes are usually manageable and preventable. The key to prevention is careful control of blood sugar levels as soon as the diagnosis of gestational diabetes is made.

Infants of mothers with gestational diabetes are vulnerable to several imbalances, such as low-serum calcium and low-serum magnesium levels. In addition, gestational diabetes may cause the following:

Fetal macrosomia. This condition describes a baby that is considerably

larger than normal. All of the nutrients your baby receives come directly from your blood. If your blood has too much glucose, your baby's pancreas senses the high glucose levels and makes more insulin in an attempt to use this glucose. The extra glucose is then converted to fat. Even when you have gestational diabetes, your fetus is able to make all the insulin it needs. The combination of your high blood glucose levels and your baby's high insulin levels may result in large deposits of fat that cause your baby to grow excessively large.

Birth injury. If your baby is large in size, it may be difficult to deliver and become injured in the process.

Hypoglycemia. This refers to low blood sugar in your baby right after delivery. This problem happens if your blood sugar levels have been consistently high, causing the fetus to have a high level of insulin in its circulation. After delivery, your baby continues to have a high insulin level, but it no longer has the high level of sugar from you. This results in the newborn's blood sugar level becoming very low. Following delivery, your baby's blood sugar level will be tested. If the level is too low, it may be necessary to administer glucose intravenously until your baby's blood sugar stabilizes.

Respiratory distress (difficulty breathing). Too much insulin or too much glucose in a baby's system may delay lung maturation and cause respiratory problems. This is more likely if it is born before 37 weeks of pregnancy.

High Blood Pressure and Pregnancy

High blood pressure during pregnancy can lead to placental complications and slowed fetal growth. If left untreated, severe hypertension may cause dangerous seizures, [stroke](#) and even death in the mother and fetus.

If you have high blood pressure, your doctor will perform kidney function tests, ultrasounds for growth and testing of your baby more frequently to monitor your health and fetal development.

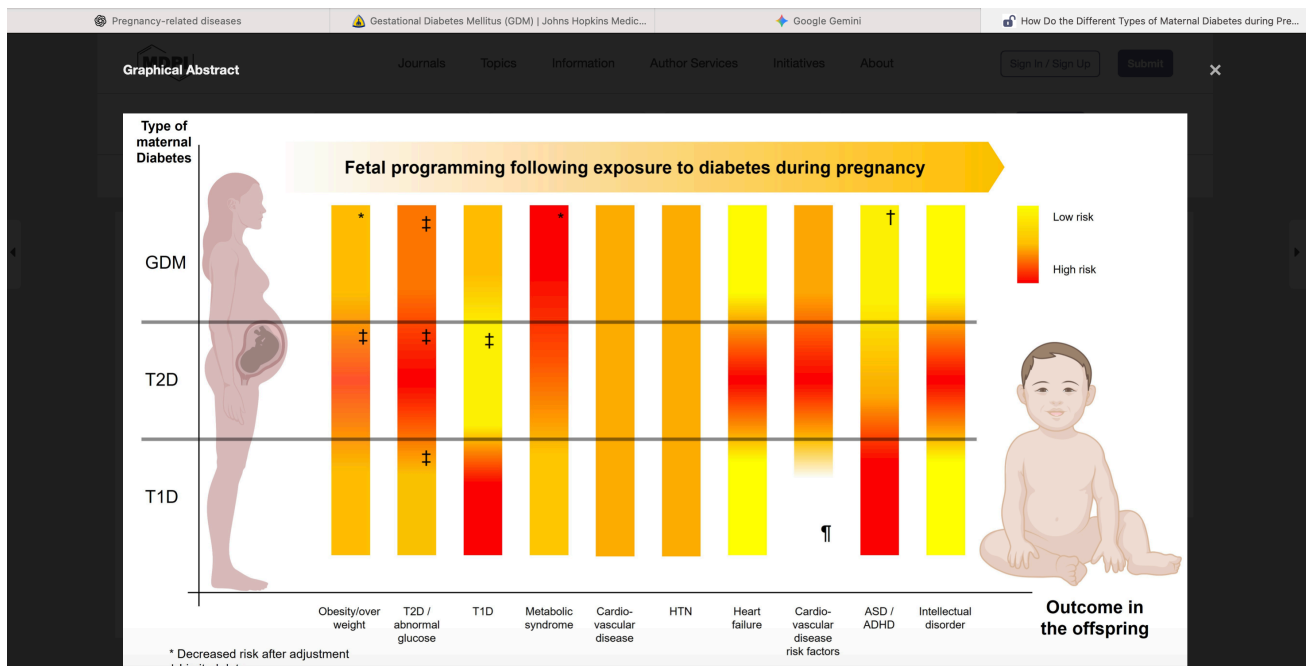
Chronic Hypertension

If you have high blood pressure before pregnancy, you will likely need to continue taking your antihypertensive medicine. Your health care provider may switch you to a safer antihypertensive medicine during pregnancy to help manage your condition.

Gestational Hypertension

Gestational hypertension occurs most often during a young woman's first pregnancy. You are more likely to develop gestational hypertension during a [twin pregnancy](#) or if you had blood pressure problems during a previous pregnancy.

[Pre-eclampsia](#) (formerly called toxemia) is characterized by pregnancy-induced high blood pressure. This condition is usually accompanied by protein in the urine and may cause swelling due to fluid retention. If you have pre-eclampsia, you may need bed rest. Eclampsia, the most severe form of this condition, is diagnosed when you have a seizure caused by pre-eclampsia. Your doctor may recommend hospitalization, medications and often delivery to treat pre-eclampsia or eclampsia.



Infectious Diseases and Pregnancy

Infections during pregnancy can pose a threat to your baby. Even a simple [urinary tract infection](#), which is common during pregnancy, should be treated right away. An infection that goes untreated can lead to preterm labor and a rupturing of the membranes surrounding the fetus.

Toxoplasmosis

Toxoplasmosis is an infection caused by a single-celled parasite called *Toxoplasma gondii* (*T. gondii*). Although many people may have toxoplasma infection, very few exhibit symptoms because the immune system usually keeps the parasite from causing illness. Babies who became infected with toxoplasmosis before birth can be born with serious mental or physical problems.

Toxoplasmosis often causes flulike symptoms, including swollen lymph glands or muscle aches and pains, which last for a few days to several weeks. You can be tested to see if you have developed an antibody to the illness. Fetal testing may

include [ultrasound](#) and/or testing of the [amniotic fluid](#) or cord blood. Treatment may include antibiotics.

The following measures can help prevent toxoplasmosis infection:

Have someone who is healthy and not pregnant change your cat's litter box, since cat feces can carry *T. gondii*. If this is not possible, wear gloves and clean the litter box daily. (The parasite found in cat feces can only infect you a few days after being passed.) Wash your hands well with soap and warm water afterward.

Wear gloves when you garden or do anything outdoors that involves handling soil. Since cats may use gardens and sandboxes as litter boxes, be cautious when handling soil/sand that could contain the parasite. Thoroughly wash your hands with soap and warm water after outdoor activities, especially before you eat or prepare any food.

Have someone who is healthy and not pregnant handle raw meat for you. If this is not possible, wear clean latex gloves when you touch raw meat. Wash any surfaces and utensils that may have touched the raw meat. After handling the meat, wash your hands with soap and warm water.

Cook all meat thoroughly. It should be cooked until it is no longer pink in the center or until the juices run clear. Do not sample meat before it is fully cooked.

Food Poisoning

If you are pregnant, you should avoid eating undercooked or raw foods because of the risk of food poisoning. Food poisoning can dehydrate a mother and deprive the fetus of nourishment. In addition, food poisoning can cause [meningitis](#) and [pneumonia](#) in a fetus, resulting in possible death.

Follow these tips to prevent food poisoning:

Thoroughly cook raw food from animal sources, such as beef, pork or poultry.

Wash raw vegetables before eating them.

Store uncooked meats in an area of the refrigerator that's separate from vegetables, cooked foods and ready-to-eat foods.

Avoid raw (unpasteurized) milk or foods made from raw milk.

Wash hands, knives and cutting boards after handling uncooked foods.

Sexually Transmitted Disease

Chlamydia

Chlamydia may be associated with premature labor and rupture of the membranes.

Hepatitis

Patients with [hepatitis](#) experience inflammation of the liver, resulting in liver cell damage and destruction. Hepatitis B virus (HBV) is the most common type that occurs during pregnancy in the United States.

HBV spreads mainly through contaminated blood and blood products, sexual contact, and contaminated intravenous needles. The later in pregnancy you get the virus, the greater the risk of infecting your baby.

HBV Symptoms and Related Conditions

Signs and symptoms of HBV include jaundice (yellowing of skin, eyes and mucous membranes), fatigue, stomach pain, loss of appetite, intermittent nausea and vomiting.

Although HBV resolves in most people, about 10 percent will develop chronic HBV. HBV can lead to chronic hepatitis, [cirrhosis](#), [liver cancer](#), liver failure and death. Infected pregnant women can pass the virus to their fetus during pregnancy and at delivery.

HBV Screening and Vaccination

A blood test for HBV is part of routine prenatal testing. If a risk of HBV is present, the following should occur:

Infants of HBV-positive mothers should receive hepatitis B immune globulin and the hepatitis B vaccine during the first 12 hours of birth.

Babies of mothers with unknown HBV status should receive the hepatitis B vaccine in the first 12 hours of birth.

Babies of mothers with negative HBV status should be vaccinated before leaving the hospital.

Premature infants weighing less than 4.5 pounds who are born to mothers with negative HBV status should have their first vaccine dose delayed until one month after birth or leaving the hospital.

All babies should complete the hepatitis B vaccine series to be fully protected from HBV infection.

HIV/AIDS

If you have [HIV](#), you have a one in four chance of infecting your fetus with the virus if you are not on medication. AIDS is caused by HIV. This virus kills or impairs cells of the immune system and progressively destroys the body's ability to fight infections and certain cancers. The term AIDS applies to the most advanced stages of an HIV infection.

HIV Transmission

HIV is most commonly transmitted by sexual contact with an infected partner. HIV may also be spread through contact with infected blood. This happens mostly by sharing needles, syringes or drug use equipment with someone who is infected with the virus.

According to the National Institutes of Health, HIV transmission from mother to child during pregnancy, labor/delivery or breast-feeding has accounted for nearly all AIDS cases reported among children in the United States.

HIV Symptoms

Some people may develop a flulike illness within a month or two of exposure to the HIV virus, although many people do not develop any symptoms at all when they first become infected. In adults, it may take 10 years or more for persistent or severe symptoms to surface. Symptoms may appear within two years in children born with an HIV infection.

HIV Testing and Treatment

Prenatal care that includes HIV counseling, testing and treatment for infected mothers and their children saves lives and resources. Since the Centers for Disease Control and Prevention began recommending routine HIV screening for all pregnant women in 1995, the estimated incidence of mother-to-child

transmission has dropped by approximately 85 percent.

If you have tested positive for HIV while pregnant, your doctor may recommend:

Having blood tests to check the amount of virus present.

Taking a number of drugs during pregnancy, labor and delivery.

Delivering via [Cesarean section](#) if you have a high viral load.

Administering medicine to your newborn baby. Studies have found that giving a mother antiretroviral medicines during pregnancy, labor and delivery, and then to the baby for six weeks after delivery can reduce the chance of a mother's transmission of HIV to her baby. This reduction is from 25 percent to less than 2 percent.

Refraining from breast-feeding. Studies show that breast-feeding increases the risk of HIV transmission.

Hypothyroidism symptoms include fatigue, weight gain, feeling cold, dry skin and hair, muscle aches, constipation, and depression. These symptoms develop slowly and can vary, but untreated hypothyroidism can lead to complications like high cholesterol and other health problems, so seeking medical advice is essential. [↗](#)

Common Symptoms of Hypothyroidism [↗](#)

- **Fatigue and Weakness:** Feeling excessively tired and lacking energy.
- **Cold Sensitivity:** Being more sensitive to cold temperatures than usual.
- **Weight Gain:** Mild weight gain and difficulty losing weight.
- **Skin and Hair Changes:** Dry, coarse skin and thinning or coarse hair.
- **Muscle Issues:** Muscle weakness, pain, tenderness, and stiffness.

- **Digestive Problems:** Constipation.
- **Mental Changes:** Difficulty concentrating, poor memory, or depression.
- **Voice Changes:** A hoarse voice.
- **Facial Features:** A puffy face or drooping eyelids.

Other Possible Symptoms Heavy or irregular menstrual periods, Numbness or tingling in the hands, Increased cholesterol levels, and Slowed heart rate. [🔗](#)

When to See a Doctor

If you experience several of these symptoms simultaneously, it is important to contact a healthcare provider. Diagnosis is typically done through blood tests.

Untreated hypothyroidism can lead to more serious health issues, so early diagnosis and treatment are crucial.

Systolic and diastolic are the two numbers that make up a blood pressure reading. They measure the pressure in your arteries at different stages of your heart's cycle.

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Systolic Blood Pressure

The **systolic** pressure is the **top number** in a blood pressure reading. It measures the force your blood exerts on artery walls when your heart contracts, or beats. This is when the pressure is at its maximum. Think of it as the "working" pressure when your heart is actively pumping blood out to your body.

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Diastolic Blood Pressure

The **diastolic** pressure is the **bottom number** in a blood pressure reading. It measures the pressure in your arteries when your heart is at rest, between beats. This is when your heart is refilling with blood, and the pressure in your arteries is at its minimum.

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A typical blood pressure reading is written as systolic over diastolic, for example, 120/80 mmHg.

Having high blood pressure (hypertension) during pregnancy needs close monitoring. Here's what to know about the potential risks. Also learn how to take care of yourself and your baby.

What are the types of high blood pressure during pregnancy?

Sometimes high blood pressure begins before pregnancy. In other cases, the condition develops during pregnancy.

- **Chronic hypertension.** In chronic hypertension, high blood pressure develops either before pregnancy or during the first 20 weeks of pregnancy. Because high blood pressure usually doesn't have symptoms, it might be hard to know exactly when it began.
- **Chronic hypertension with superimposed preeclampsia.** This condition occurs when chronic hypertension leads to worsening high blood pressure during pregnancy. People with this condition may develop protein in the urine or other complications.
- **Gestational hypertension.** People with gestational hypertension have high blood pressure that develops after 20 weeks of pregnancy. There's no excess protein in the urine and there are no other signs of organ damage. But in some

cases, gestational hypertension can eventually lead to preeclampsia.

- **Preeclampsia.** Preeclampsia occurs when hypertension develops after 20 weeks of pregnancy. Preeclampsia is associated with signs of damage to other organ systems, including the kidneys, liver, blood or brain.

Untreated preeclampsia can lead to serious — even fatal — complications for mother and baby. Complications may include eclampsia, in which seizures develop.

Previously, preeclampsia was diagnosed only when both high blood pressure and protein in the urine were present. Experts now know that it's possible to have preeclampsia without having protein in the urine.

Why is high blood pressure a problem during pregnancy?

High blood pressure during pregnancy poses the following risks:

- **Less blood flow to the placenta.** If the placenta doesn't get enough blood, the fetus might receive less oxygen and fewer nutrients. This can lead to slow growth (intrauterine growth restriction), low birth weight or premature birth. Babies born early can have breathing problems, increased risk of infection and other complications.
- **Placental abruption.** In this condition, the placenta separates from the inner wall of the uterus before delivery. Preeclampsia and high blood pressure increase the risk of placental abruption. Severe abruption can cause heavy bleeding, which can be life-threatening for you and your baby.
- **Intrauterine growth restriction.** High blood pressure might result in slowed or decreased fetal growth.
- **Injury to other organs.** Poorly controlled high blood pressure can result in injury to the brain, eyes, heart, lungs, kidneys, liver and other major organs. In severe cases, it can be life-threatening.
- **Premature delivery.** Sometimes an early delivery is needed to prevent life-threatening complications from high blood pressure during pregnancy.
- **Future cardiovascular disease.** Having preeclampsia might increase the risk of future heart and blood vessel (cardiovascular) disease. The risk of future cardiovascular disease is higher if you've had preeclampsia more than once. It's also higher if you've had a premature birth due to having high blood

pressure during pregnancy.

Common Non-fatal Diseases/Conditions During Pregnancy

1. Morning Sickness / Hyperemesis Gravidarum (mild form)

- Nausea & vomiting in the 1st trimester.
- Very common, usually not dangerous (unless very severe).

2. Heartburn & Indigestion

- Caused by hormonal changes + pressure of growing uterus.
- Discomfort but not fatal.

3. Constipation & Hemorrhoids

- Due to hormonal changes, less activity, iron supplements.
- Painful but not life-threatening.

4. Back Pain & Joint Pain

- From weight gain and posture changes.
- Common, especially in later months.

5. Urinary Tract Infections (UTIs) – mild

- Common due to hormonal relaxation of urinary tract.
- Needs treatment but not usually fatal.

6. Vaginal Yeast Infections

- Caused by hormonal imbalance.

- Itching, discharge, discomfort but not dangerous.

7. Anemia (Mild to Moderate)

- Due to iron or folate deficiency.
- Causes tiredness, weakness, pale skin.

8. Gestational Diabetes (well-controlled)

- If managed with diet/exercise/insulin, not fatal.
- Needs monitoring but many mothers deliver safely.

9. Swelling (Edema) in Feet & Ankles

- Due to water retention.
- Common in later pregnancy, usually harmless.

10. Varicose Veins

- Swollen leg veins from extra blood flow & pressure.
- Uncomfortable but not dangerous in most cases.

11. Skin Changes

- Stretch marks, dark patches (melasma), itching (mild).
- Harmless cosmetic changes.

12. Leg Cramps

- Painful but very common in the second & third trimester.

Common Pregnancy Complications

- **Gestational Diabetes**: A type of diabetes that first appears during pregnancy, causing high blood sugar levels that can affect the baby's

health. [↗](#)

- **Preeclampsia**: A condition characterized by high blood pressure and protein in the urine, with eclampsia being the more severe form that involves seizures. [↗](#)
- **Infections**: These can include urinary tract infections (UTIs), yeast infections, bacterial vaginosis, and sexually transmitted infections (STIs). [↗](#)
- **High Blood Pressure**: Pregnancy-induced hypertension is a form of high blood pressure that can occur during pregnancy. [↗](#)
- **Placental Complications**: Issues like placenta previa (where the placenta covers the cervix) or placental abruption can interfere with pregnancy. [↗](#)
- **Low Amniotic Fluid (Oligohydramnios)**: When there is less amniotic fluid than normal, it can increase the risk of preterm birth. [↗](#)
- **Depression and Anxiety**: Mental health conditions can arise during pregnancy and can impact the health of the mother and child. [↗](#)
- **Severe Nausea and Vomiting (Hyperemesis Gravidarum)**: This is a severe form of nausea and vomiting that can occur during pregnancy.