

Reference Guide for the Healthy Start Screening Tools Health and Health History: Medical Conditions

The medical conditions listed in the Health and Health History section of the Healthy Start Screening Tools can pose significant risk to the baby, the mother, or both. These conditions need to be on record so Healthy Start can emphasize the importance of addressing these medical conditions at each of the perinatal phases and support the participant with follow up on clinic visits and medical recommendations.

These questions are asked in three (3) screening tools perinatal phases to ensure they are collected: Preconception Tool (Question 21), Prenatal Tool (Question 29), and Interconception/Parenting Tool (Question 41).

Purpose: This document contains basic information on each of the medical conditions listed in the screening tools, and is intended as a reference for Healthy Start staff asking the screening questions.

Use: This document is NOT intended to be handed out to participants, and the information included is not meant to be offered as medical advice. Participants should discuss medical conditions with their health care provider. Use the references below to help Healthy Start staff prepare for screening and answer questions participants may have.

Disclaimer: This document is NOT to be used to diagnose Healthy Start with the medical conditions listed below. Healthy Start participants should consult a healthcare provider regarding any symptoms.

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Developed by JSI for the Healthy Start EPIC Center

1. Asthma (breathing problems/wheezing)

Asthma is a chronic disease that affects your airways. Your airways are tubes that carry air in and out of your lungs. If you have asthma, the inside walls of your airways become sore and swollen. That makes them very sensitive, and they may react strongly to things that you are allergic to or find irritating. When your airways react, they get narrower and your lungs get less air.

Symptoms of asthma include:

- Wheezing
- Coughing, especially early in the morning or at night
- Chest tightness
- Shortness of breath

Not all people who have asthma have these symptoms. Having these symptoms doesn't always mean that you have asthma. Your healthcare provider will diagnose asthma based on lung function tests, your medical history, and a physical exam. You may also have allergy tests.

When your asthma symptoms become worse than usual, it's called an asthma attack. Severe asthma attacks may require emergency care, and they can be fatal.

Asthma is treated with two kinds of medicines: quick-relief medicines to stop asthma symptoms and long-term control medicines to prevent symptoms.

Source: MedlinePlus - Asthma: medlineplus.gov/asthma.html

Additional References:

- CDC - Asthma: cdc.gov/asthma/faqs.htm
- MotherToBaby - Asthma: mothertobaby.org/fact-sheets/asthma-and-pregnancy/

2. Autoimmune Disease [Lupus (SLE), Rheumatoid Arthritis (RA), etc.]

Your body's immune system protects you from disease and infection. But if you have an autoimmune disease, your immune system attacks healthy cells in your body by mistake, examples include lupus and rheumatoid arthritis. Autoimmune diseases can affect many parts of the body.

No one is sure what causes autoimmune diseases. They do tend to run in families. Women - particularly African-American, Hispanic-American, and Native-American women - have a higher risk for some autoimmune diseases.

There are more than 80 types of autoimmune diseases, and some have similar symptoms. This makes it hard for your health care provider to know if you really have one of these diseases, and if so, which one. Often, the first symptoms are fatigue, muscle aches and a low fever. The classic sign of an autoimmune disease is inflammation, which can cause redness, heat, pain and swelling.

The diseases may also have flare-ups, when they get worse, and remissions, when symptoms get better or disappear. Treatment depends on the disease, but in most cases one important goal is to reduce inflammation. Sometimes doctors prescribe corticosteroids or other drugs that reduce your immune response.

Source: MedlinePlus - Autoimmune Diseases: medlineplus.gov/autoimmunediseases.html

Additional Reference:

- MotherToBaby - Lupus: mothertobaby.org/fact-sheets/lupus-pregnancy/

3. Cancer

Cancer begins in your cells, which are the building blocks of your body. Normally, your body forms new cells as you need them, replacing old cells that die. Sometimes this process goes wrong. New cells grow even when you don't need them, and old cells don't die when they should. These extra cells can form a mass called a tumor.

Tumors can be benign or malignant. Benign tumors aren't cancer while malignant ones are. Cells from malignant tumors can invade nearby tissues. They can also break away and spread to other parts of the body.

Cancer is not just one disease but many diseases. There are more than 100 different types of cancer. Most cancers are named for where they start. For example, lung cancer starts in the lung, and breast cancer starts in the breast. The spread of cancer from one part of the body to another is called metastasis.

Symptoms and treatment depend on the cancer type and how advanced it is. Most treatment plans may include surgery, radiation and/or chemotherapy. Some may involve hormone therapy, immunotherapy or other types of biologic therapy, or stem cell transplantation.

Source: MedlinePlus – Cancer: medlineplus.gov/cancer.html

4. Cardiovascular Disease (heart problems)

Cardiovascular disease is the broad term for problems with the heart and blood vessels. These problems are often due to atherosclerosis. This condition occurs when fat and cholesterol build up in blood vessel (artery) walls. This buildup is called plaque. Over time, plaque can narrow blood vessels and cause problems throughout the body. If an artery becomes blocked, it can lead to heart attack or stroke.

Types of Cardiovascular Disease

Coronary heart disease (CHD) is the most common type of heart disease, is when plaque builds up in the arteries leading to the heart. CHD is also called coronary artery disease (CAD). When arteries narrow, the heart cannot get enough blood and oxygen. A blocked artery can cause a heart attack. Over time, CHD can weaken the heart muscle and cause heart failure or arrhythmias.

Heart failure occurs when the heart muscle becomes stiff or weak. It cannot pump out enough oxygen-rich blood, which causes symptoms throughout the body. The condition may affect only the right side or only the left side of the heart. More often, both sides of the heart are involved. High blood pressure and CAD are common causes of heart failure.

Arrhythmias are problems with heart rate (pulse) or heart rhythm. This happens when the heart's electrical system doesn't work properly. The heart may beat too fast, too slow, or unevenly. Certain heart problems, such as heart attack or heart failure can cause problems with the heart's electrical system. Some people are born with an arrhythmia.

Heart valve diseases occur when one of the four valves in the heart does not work properly. Blood can leak through the valve in the wrong direction (called regurgitation), or a valve may not open far enough and block blood flow (called stenosis). An unusual heartbeat, called a heart murmur, is the most common symptom. Certain heart problems, such as heart attack, heart disease, or infection, can cause heart valve diseases. Some people are born with heart valve problems.

Peripheral artery disease occurs when the arteries to your legs and feet become narrow due to a buildup of plaque. Narrow arteries reduce or block blood flow. When blood and oxygen can't get to the legs, it can injure nerves and tissue.

High blood pressure (hypertension) is a cardiovascular disease that can lead to other problems, such as heart attack, heart failure, and stroke.

Stroke is caused by a lack of blood flow to the brain. This can happen because of a blood clot traveling to the blood vessels in the brain, or bleeding in the brain. Stroke has many of the same risk factors as heart disease.

Congenital heart disease (CHD) is a problem with the heart's structure and function that is present at birth. CHD can describe a number of different problems affecting the heart. It is the most common type of birth defect.

Source: MedlinePlus - Understanding cardiovascular disease:
medlineplus.gov/ency/patientinstructions/000759.htm

Additional References:

- CDC - Heart Disease: cdc.gov/heartdisease/facts.htm
- Goldman L. Approach to the patient with possible cardiovascular disease. In: Goldman L, Schafer AI, eds. Goldman-Cecil Medicine. 25th ed. Philadelphia, PA: Elsevier Saunders; 2016:chap 51.
- Newby DE, Grubb Nr, Bradbury A. Cardiovascular disease. In: Walker BR, Colledge NR, Ralston SH, Perman ID, eds. Davidson's Principles and Practice of Medicine. 22nd ed. Philadelphia, PA: Elsevier Churchill Livingstone; 2012:chap 18.
- Toth PP, Shamma NW, Foreman Bj, Byrd JB. Cardiovascular disease. In: Rakel RE, Rakel D, eds. Textbook of Family Medicine. 9th ed. Philadelphia, PA: Elsevier Saunders; 2016:chap 27.

5. Depression or other Mental Health Condition (anxiety, bipolar)

Depression is a serious medical illness. It's more than just a feeling of being sad or "blue" for a few days. If you are one of the more than 19 million teens and adults in the United States who have depression, the feelings do not go away. They persist and interfere with your everyday life.

Symptoms can include:

- Feeling sad or "empty"
- Loss of interest in favorite activities
- Overeating, or not wanting to eat at all
- Not being able to sleep, or sleeping too much
- Feeling very tired
- Feeling hopeless, irritable, anxious, or guilty
- Aches or pains, headaches, cramps, or digestive problems
- Thoughts of death or suicide

Depression is a disorder of the brain. There are a variety of causes, including genetic, biological, environmental, and psychological factors. Depression can happen at any age, but it often begins in teens and young adults. It is much more common in women. Women can also get postpartum depression after the birth of a baby. Some people get seasonal affective disorder in the winter. Depression is one part of bipolar disorder.

Source: MedlinePlus - Depression: medlineplus.gov/depression.html

Bipolar disorder is a serious mental illness. People who have it go through unusual mood changes. They go from very happy, "up," and active to very sad and hopeless, "down," and inactive, and then back again. They often have normal moods in between. The up feeling is called mania. The down feeling is depression.

There are effective treatments for depression, including antidepressants, talk therapy, or both.

Source: MedlinePlus – Bipolar Disorder: medlineplus.gov/bipolardisorder.html

Fear and anxiety are part of life. You may feel anxious before you take a test or walk down a dark street. This kind of anxiety is useful - it can make you more alert or careful. It usually ends soon after you are out of the situation that caused it. But for millions of people in the United States, the anxiety does not go away, and gets worse over time. They may have chest pains or nightmares. They may even be afraid to leave home. These people have anxiety disorders. Types include:

- Panic disorder
- Obsessive-compulsive disorder
- Post-traumatic stress disorder
- Phobias
- Generalized anxiety disorder

Treatment can involve medicines, therapy or both.

Source: MedlinePlus - Anxiety: <https://medlineplus.gov/anxiety.html>

Additional References:

- Medline Plus - Mental disorders: medlineplus.gov/mentaldisorders.html
- MotherToBaby - Depression: mothertobaby.org/fact-sheets/depression-pregnancy/
- National Institute of Mental Health - Generalized Anxiety Disorder: nimh.nih.gov/health/publications/generalized-anxiety-disorder-gad/index.shtml

6. Diabetes (high blood sugar)

Diabetes is a disease in which your blood glucose, or blood sugar, levels are too high. Glucose comes from the foods you eat. Insulin is a hormone that helps the glucose get into your cells to give them energy.

With type 1 diabetes, your body does not make insulin. With type 2 diabetes, the more common type, your body does not make or use insulin well. Without enough insulin, the glucose stays in your blood. You can also have prediabetes. This means that your blood sugar is higher than normal but not high enough to be called diabetes. Having prediabetes puts you at a higher risk of getting type 2 diabetes.

Over time, having too much glucose in your blood can cause serious problems. It can damage your eyes, kidneys, and nerves. Diabetes can also cause heart disease, stroke and even the need to remove a limb. Pregnant women can also get diabetes, called gestational diabetes.

Blood tests can show if you have diabetes. One type of test, the A1C, can also check on how you are managing your diabetes. Exercise, weight control and sticking to your meal plan can help control your diabetes. You should also monitor your blood glucose level and take medicine if prescribed.

Source: MedlinePlus - Diabetes: medlineplus.gov/diabetes.html

Additional References:

- CDC - Diabetes: cdc.gov/diabetes/home/index.html
- MotherToBaby - Diabetes: mothertobaby.org/fact-sheets/diabetes-pregnancy/

7. Gestational Diabetes

About seven out of every 100 pregnant women in the United States get gestational diabetes. Gestational diabetes is diabetes that happens for the first time when a woman is pregnant. Most of the time, it goes away after you have your baby. But it does increase your risk for developing type 2 diabetes later on. Your child is also at risk for obesity and type 2 diabetes.

Most women get a test to check for diabetes during their second trimester of pregnancy. Women at higher risk may get a test earlier.

If you already have diabetes, the best time to control your blood sugar is before you get pregnant. High blood sugar levels can be harmful to your baby during the first weeks of pregnancy - even before you know you are pregnant. To keep you and your baby healthy, it is important to keep your blood sugar as close to normal as possible before and during pregnancy.

Either type of diabetes during pregnancy increases the chances of problems for you and your baby. To help lower the chances talk to your health care team about:

- A meal plan for your pregnancy
- A safe exercise plan
- How often to test your blood sugar

Taking your medicine as prescribed. Your medicine plan may need to change during pregnancy.

Source: MedlinePlus - Diabetes and Pregnancy: medlineplus.gov/diabetesandpregnancy.html

Additional Reference:

- MotherToBaby - Diabetes: mothertobaby.org/fact-sheets/diabetes-pregnancy/

8. Eating Disorder (anorexia, bulimia)

Eating disorders are serious behavior problems. They can include severe overeating or not consuming enough food to stay healthy. They also involve extreme concern about your shape or weight.

Types of eating disorders include:

- Anorexia nervosa, in which you become too thin, but you don't eat enough because you think you are fat
- Bulimia nervosa, which involves periods of overeating followed by purging, sometimes through self-induced vomiting or using laxatives
- Binge-eating, which is out-of-control eating

Women are more likely than men to have eating disorders. They usually start in the teenage years and often occur along with depression, anxiety disorders, and substance abuse.

Eating disorders can lead to heart and kidney problems and even death. Getting help early is important. Treatment involves monitoring, talk therapy, nutritional counseling, and sometimes medicines.

Source: MedlinePlus - Eating Disorders: medlineplus.gov/eatingdisorders.html

9. High Blood Pressure

Blood pressure is the force of your blood pushing against the walls of your arteries. Each time your heart beats, it pumps blood into the arteries. Your blood pressure is highest when your heart beats, pumping the blood. This is called systolic pressure. When your heart is at rest, between beats, your blood pressure falls. This is called diastolic pressure.

Your blood pressure reading uses these two numbers. Usually the systolic number comes before or above the diastolic number.

A reading of:

- 119/79 or lower is normal blood pressure
- 140/90 or higher is high blood pressure
- Between 120 and 139 for the top number, or between 80 and 89 for the bottom number is called prehypertension. Prehypertension means you may end up with high blood pressure, unless you take steps to prevent it.

High blood pressure usually has no symptoms, but it can cause serious problems such as stroke, heart failure, heart attack and kidney failure.

You can control high blood pressure through healthy lifestyle habits such as exercise and the Dietary Approaches to Stop Hypertension (DASH) diet and taking medicines, if needed.

Source: MedlinePlus – High blood Pressure: medlineplus.gov/highbloodpressure.html

Additional Reference:

- CDC - Blood Pressure: cdc.gov/bloodpressure/

10. Iron Deficient Anemia

If you have anemia, your blood does not carry enough oxygen to the rest of your body. The most common cause of anemia is not having enough iron. Your body needs iron to make hemoglobin. Hemoglobin is an iron-rich protein that gives the red color to blood. It carries oxygen from the lungs to the rest of the body.

Anemia has three main causes: blood loss, lack of red blood cell production, and high rates of red blood cell destruction.

Conditions that may lead to anemia include:

- Heavy periods
- Pregnancy
- Ulcers
- Colon polyps or colon cancer
- Inherited disorders
- A diet that does not have enough iron, folic acid or vitamin B12
- Blood disorders such as sickle cell anemia and thalassemia, or cancer
- Aplastic anemia, a condition that can be inherited or acquired
- G6PD deficiency, a metabolic disorder

Anemia can make you feel tired, cold, dizzy, and irritable. You may be short of breath or have a headache.

Your doctor will diagnose anemia with a physical exam and blood tests. Treatment depends on the kind of anemia you have.

Source: MedlinePlus - Anemia: medlineplus.gov/anemia.html

11. Phenylketonuria (PKU)

Phenylketonuria (PKU) is a type of amino acid metabolism disorder. It is inherited. If you have it, your body can't process part of a protein called phenylalanine (Phe). Phe is in almost all foods. If your Phe level gets too high, it can damage your brain and cause severe intellectual disability. All babies born in U.S. hospitals must now have a screening test for PKU. This makes it easier to diagnose and treat the problem early.

The best treatment for PKU is a diet of low-protein foods. There are special formulas for newborns. For older children and adults, the diet includes many fruits and vegetables. It also includes some low-protein breads, pastas and cereals. Nutritional formulas provide the vitamins and minerals you can't get from their food.

Babies who get on this special diet soon after they are born develop normally. Many have no symptoms of PKU. It is important to stay on the diet for the rest of your life.

Source: MedlinePlus - Phenylketonuria: medlineplus.gov/phenylketonuria.html

Additional References:

- Baby's First Test - Phenylketonuria: babysfirsttest.org/newborn-screening/conditions/classic-phenylketonuria-pku#sthash.LbRbmjtc.dpuf
- MotherToBaby - Maternal PKU and Pregnancy: mothertobaby.org/fact-sheets/maternal-pku-pregnancy/

12. Renal Disease (kidney problems)

You have two kidneys, each about the size of your fist. They are near the middle of your back, just below the rib cage. Inside each kidney there are about a million tiny structures called nephrons. They filter your blood. They remove wastes and extra water, which become urine. The urine flows through tubes called ureters. It goes to your bladder, which stores the urine until you go to the bathroom.

Most kidney diseases attack the nephrons. This damage may leave kidneys unable to remove wastes. Causes can include genetic problems, injuries, or medicines. You have a higher risk of kidney disease if you have diabetes, high blood pressure, or a close family member with kidney disease. Chronic kidney disease damages the nephrons slowly over several years. Other kidney problems include:

- Cancer
- Cysts
- Stones
- Infections

Your doctor can do blood and urine tests to check if you have kidney disease. If your kidneys fail, you will need dialysis or a kidney transplant.

Dialysis is a treatment to replace the work your kidneys used to do. There are two main types of dialysis. Both types filter your blood to rid your body of harmful wastes, extra salt, and water:

1. Hemodialysis uses a machine. It is sometimes called an artificial kidney. You usually go to a special clinic for treatments several times a week.
2. Peritoneal dialysis uses the lining of your abdomen, called the peritoneal membrane, to filter your blood.

Source: MedlinePlus - Kidney Diseases: medlineplus.gov/kidneydiseases.html and Dialysis: medlineplus.gov/dialysis.html

13. Seizure Disorder (epilepsy)

Epilepsy occurs when permanent changes in the brain cause it to be too excitable or irritable. As a result, the brain sends out abnormal signals. This leads to repeated, unpredictable seizures. (A single seizure that does not happen again is not epilepsy.) Epilepsy may be due to a medical condition or injury that affects the brain. Or the cause may be unknown (idiopathic).

Common causes of epilepsy include:

- Stroke or transient ischemic attack (TIA)
- Dementia, such as Alzheimer disease
- Traumatic brain injury
- Infections, including brain abscess, meningitis, encephalitis, and HIV/AIDS
- Brain problems that are present at birth (congenital brain defect)
- Brain injury that occurs during or near birth
- Metabolism disorders present at birth (such as phenylketonuria)
- Brain tumor
- Abnormal blood vessels in the brain
- Other illness that damages or destroys brain tissue

Epileptic seizures usually begin between ages 5 and 20. There is also a higher chance of seizures in adults older than 60. But epileptic seizures can happen at any age. There may be a family history of seizures or epilepsy.

Source: MedlinePlus - Epilepsy: medlineplus.gov/ency/article/000694.htm

14. Sickle Cell

Sickle cell anemia is a disease in which your body produces abnormally shaped red blood cells. The cells are shaped like a crescent or sickle. They don't last as long as normal, round red blood cells. This leads to anemia. The sickle cells also get stuck in blood vessels, blocking blood flow. This can cause pain and organ damage.

A genetic problem causes sickle cell anemia. People with the disease are born with two sickle cell genes, one from each parent. If you only have one sickle cell gene, it's called sickle cell trait. About 1 in 12 African Americans has sickle cell trait.

The most common symptoms are pain and problems from anemia. Anemia can make you feel tired or weak. In addition, you might have shortness of breath, dizziness, headaches, or coldness in the hands and feet.

A blood test can show if you have the trait or anemia. Most states test newborn babies as part of their newborn screening programs.

Sickle cell anemia has no widely available cure. Treatments can help relieve symptoms and lessen complications. Researchers are investigating new treatments such as blood and marrow stem cell transplants, gene therapy, and new medicines.

Source: MedlinePlus - Sickle Cell Anemia: medlineplus.gov/sicklecellanemia.html

15. Thrombophilia (blood clots)

Normally, if you get hurt, your body forms a blood clot to stop the bleeding. Some people get too many clots or their blood clots abnormally. Many conditions can cause the blood to clot too much or prevent blood clots from dissolving properly.

Risk factors for excessive blood clotting include:

- Certain genetic disorders
- Atherosclerosis
- Diabetes
- Atrial fibrillation
- Overweight, obesity, and metabolic syndrome
- Some medicines
- Smoking

Blood clots can form in, or travel to, the blood vessels in the brain, heart, kidneys, lungs, and limbs. A clot in the veins deep in the limbs is called deep vein thrombosis (DVT). DVT usually affects the deep veins of the legs. If a blood clot in a deep vein breaks off and travels through the bloodstream to the lungs and blocks blood flow, the condition is called pulmonary embolism.

Other complications of blood clots include stroke, heart attack, kidney problems and kidney failure, and pregnancy-related problems. Treatments for blood clots include blood thinners and other medicines.

Source: MedlinePlus - Blood Clots: medlineplus.gov/bloodclots.html

16. Thyroid Disease - hypo/hyper (overactive or underactive thyroid)

Your thyroid is a butterfly-shaped gland in your neck, just above your collarbone. It is one of your endocrine glands, which make hormones. Thyroid hormones control the rate of many activities in your body. These include how fast you burn calories and how fast your heart beats. All of these activities are your body's metabolism.

Thyroid problems include:

- Goiter - enlargement of the thyroid gland
- Hyperthyroidism - when your thyroid gland makes more thyroid hormones than your body needs
- Hypothyroidism - when your thyroid gland does not make enough thyroid hormones
- Thyroid cancer
- Thyroid nodules - lumps in the thyroid gland
- Thyroiditis - swelling of the thyroid

To diagnose thyroid diseases, doctors use a medical history, physical exam, and thyroid tests. They sometimes also use a biopsy. Treatment depends on the problem, but may include medicines, radioiodine therapy, or thyroid surgery.

Source: MedlinePlus - Thyroid Disease: medlineplus.gov/thyroiddiseases.html