Your First Trimester Panel

You can learn a lot about your overall health from a simple blood draw. When we draw your blood at an early prenatal visit, this is what we are testing:

Test	**Hemoglobin and Hematocrit (H&H)**
What It Measures	**Hemoglobin** measures red blood cells in grams per deciliter. **Hematocrit** measures the % of your blood made up of red blood cells.
Why It Matters	Red blood cells deliver **oxygen** to cells throughout your body and carry oxygen to the **placenta**, where it diffuses into your baby's bloodstream. **During pregnancy, your blood volume will increase dramatically to meet the needs of your growing baby and uterus.** However, your blood plasma will increase by 50% while your red blood cells will only increase by 30%. If your blood volume increases much more rapidly than your red blood cell count, you may develop **anemia of pregnancy**.
Other Information	Other tests measure the characteristics of your red blood cells. These tests help your midwives to distinguish between different types of anemia. If you have **iron deficiency anemia**, your midwives may recommend an **iron-rich diet** and iron **supplements.**

Test	**White Blood Cell Counts**
What It Measures	Your white blood cell count measures the number of white blood cells in your blood. A **white blood cell differential** can provide clues about your immune system activity.
Why It Matters	White blood cells play an important role in your **immune system.** Different white blood cells play different roles in fighting illness or inflammation. A low WBC count suggests **immunosuppression,** while a high WBC count suggests **infection** or **inflammation.**
Other Information	Your immune responses change during pregnancy. The Centers for Disease Control and Prevention (CDC) recommends flu shots for pregnant people.

Test	**Platelet Count**
What It Measures	This test measures the number of platelets found in one deciliter of blood.
Why It Matters	Platelets play an important role in the formation of blood clots.
Other Information	During pregnancy, your blood is more likely to **clot.** This happens because your body is preparing to prevent **blood loss** after birth. In rare cases, blood clots form inside a pregnant person's veins (usually in the legs). This can be dangerous if the clot travels to one of your essential organs. We recommend avoiding sitting still for long periods of time during pregnancy. **Getting up and moving helps to keep your blood flowing.**

Test	**Blood Type**
What It Measures	This test checks for **antigens** (proteins) on the surface of your red blood cells in order to determine whether your blood is **Type A, B, O, or AB.**
Why It Matters	This information is critical in the unlikely event that a blood transfusion is needed. Blood forms **antibodies** that attack unfamiliar **antigens,** so blood products used during emergencies must be compatible.
Other Information	Blood type is determined by genes inherited from both parents. This means your baby's blood type may differ from yours!

Test	**Rh Factor**
What It Measures	This tests checks for the **Rhesus (Rh) Factor** in your blood. You can be "Rh positive" (Rh+) or "Rh negative" (Rh-).
Why It Matters	Your blood supply and your baby's blood supply usually remain completely separate until birth, when your placenta separates from your uterine wall. When this happens, a little bit of your blood will mix with a little bit of your baby's blood. A little bit of mixing may also occur during chorionic villus sampling (CVS), amniocentesis, bleeding during pregnancy, an external cephalic version, or an injury. Occasionally, mixing occurs for unknown reasons. If you are Rh- but your baby is Rh+, your blood may produce **antibodies** that attack Rh+ blood cells. This is called **Rh sensitization**.
Other Information	If you are Rh- and your baby has the genetic potential to be Rh+, you will receive a shot to prevent **Rh sensitization**: ✓ At about 28 weeks of pregnancy ✓ Within 72 hours after the birth of an Rh+ baby ✓ After any event that could cause your blood to mix with your baby's

Test	**Antibody Screen**
What It Measures	This test checks whether your blood produces antibodies against any other blood type.
Why It Matters	If your blood produces antibodies against the Rh factor or any other proteins in your baby's blood, these antibodies may attack your baby's red blood cells. Broken down red blood cells release **bilirubin**. Excess bilirubin can cause **jaundice**.
Other Information	Babies who have jaundice (high bilirubin levels) need special care. Your midwife will review jaundice warning signs at the end of your pregnancy.

Test	**Lead Level**
What It Measures	This test measures whether there is **lead** in your blood.
Why It Matters	High blood levels are associated with several **adverse health outcomes** for both adults and children. Many New Yorkers are at risk for elevated lead levels. Risk factors include living in old buildings, working in certain trades, or participating in certain hobbies. Your midwife will ask you questions to assess your risk for lead exposure.
Other Information	If your lead level is elevated, your midwife will help you find ways to minimize your lead exposure. Your midwife may also prescribe extra iron and calcium supplements or other treatments.

Test	**Vitamin D**
What It Measures	This measures your 25-hydroxyvitamin D blood level.
Why It Matters	Vitamin D plays a role in immune function, cell division, and bone health. Vitamin D deficiency is very common-- and severe deficiencies are associated with prenatal complications.
Other Information	If your Vitamin D level is low, your midwife may recommend supplements.

Test	**Titers**
What It Measures	Titers measure your immunity to several infectious diseases, such as **mumps, measles, rubella (German measles), and varicella (chicken pox).**
Why It Matters	Some of these infectious diseases are dangerous to a developing fetus.
Other Information	If you are susceptible to one or more of these diseases, you may also be offered a **vaccine.** The **Tdap (tetanus, diphtheria, and pertussis) vaccine** is recommended during the third trimester of pregnancy. However, the **MMR (mumps, measles, and rubella) vaccine** is not recommended during pregnancy. This vaccine is available to postpartum clients.

Test	**Hepatits B and Hepatitis C**
What It Measures	These tests check for **antibodies** against Hepatitis B and Hepatitis C. The presence of antibodies suggests that you were exposed to the virus.
Why It Matters	Hepatitis B and C are sometimes **transmitted to newborns** during birth. If you are infected with Hepatitis B, an **early vaccine** and **another shot containing antibodies** can be given to your newborn.
Other Information	These tests are not very specific, so a positive result just lets us know that further testing is recommended. Other tests can determine whether you have an active Hepatitis virus and whether your liver function is affected.

Test	**Venereal Disease Research Laboratory (VDRL)** and **Rapid Plasma Reagin**
What It Measures	These tests screen for antibodies against **syphilis.**
Why It Matters	Syphilis can easily cross the **placenta** and infect the fetus. However, this infection can be treated with **Penicillin**, an antibiotic.
Other Information	These tests are not very specific, so a positive result just lets us know that further testing is recommended.

Test	**HIV Testing**
What It Measures	**Human Immunodeficiency Virus (HIV)** testing indicates whether the HIV virus is present in your blood.
Why It Matters	HIV can be transmitted to your baby during pregnancy, birth, or lactation. However, certain precautions and antiviral medications can reduce the risk of transmission to less than 2%.
Other Information	False negatives can occur if you were exposed to HIV within the last few months, so your midwife will recommend repeat testing if you think you are at risk.

For more information, please explore the following websites:

American College of Obstetricians and Gynecologists: ACOG.org
American Pregnancy Association: americanpregnancy.org
Centers for Disease Control and Prevention: CDC.gov