What is prenatal screening?
Prenatal screening is testing offered during your pregnancy to find out if you are at increased risk to have a baby with certain problems.

What do prenatal screening tests look for?
Prenatal screening tests can help find a number of conditions and problems in a pregnancy. 

- **Down syndrome**: People with Down syndrome are mentally impaired and have health problems. Many individuals with Down syndrome live into adulthood.
- **Open fetal defects**: These defects are openings in the baby's spine, head, or belly that shouldn't be there. Babies with open fetal defects have problems that range from mild to very severe.
- **Trisomy 18 and Smith-Lemli-Opitz syndrome**: These conditions are rare and cause severe mental impairment and birth defects.

Babies with any of these conditions and their mothers may need extra medical care. If a woman knows that her baby will be born with one of these problems, she may choose to deliver at a specialty hospital or make other pregnancy decisions.

Prenatal screening can also help show if you may be having twins, how far along you are in your pregnancy, or if you have a higher risk of premature delivery, low birth weight baby or problems with the placenta.

Am I at risk for these conditions if they are not in my family?
All women are at risk to have a baby with one of these conditions. Most of the time, there is no family history.

What does prenatal screening involve?
All screening tests require a small amount of blood from the mother, and some combine additional information from an early ultrasound called an NT. The laboratory tests the level of certain pregnancy related substances in the mother's blood. These levels may suggest a problem or provide reassurance. Prenatal screening tests can provide information that cannot always be detected on ultrasound scans.

What screening tests are available to me?
The tests include the **First Trimester Test**, the **Quad Test**, the **Serum Integrated Test**, Full Integrated Test and the **Sequential Test**. Each of these tests is offered at different times during pregnancy. Please see the chart below for more details and to compare options.

How are these tests different?

<table>
<thead>
<tr>
<th>Test Type</th>
<th>Blood Sample Time</th>
<th>NT Ultrasound Measurement Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIRST TRIMESTER TEST</td>
<td>between 10 &amp; 13 weeks 6 days</td>
<td>between 10 &amp; 13 weeks 6 days</td>
</tr>
<tr>
<td>QUAD TEST</td>
<td>between 15 &amp; 22 weeks 6 days</td>
<td>-</td>
</tr>
<tr>
<td>SERUM INTEGRATED TEST</td>
<td>between 10 &amp; 13 weeks 6 days</td>
<td>between 15 &amp; 22 weeks 6 days</td>
</tr>
<tr>
<td>FULL INTEGRATED TEST</td>
<td>between 10 &amp; 13 weeks 6 days</td>
<td>NT ultrasound between 10 &amp; 13 weeks 6 days</td>
</tr>
<tr>
<td>SEQUENTIAL TEST</td>
<td>1st blood sample between 10 &amp; 13 weeks 6 days</td>
<td>NT ultrasound between 10 &amp; 13 weeks 6 days</td>
</tr>
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What are the benefits of having a prenatal screening test?
The test will provide you with more information about the health of your pregnancy and baby. Many women will get reassuring information from their screening result. Some women will be found to be at high risk and may benefit from follow-up testing. If additional testing confirms a problem with the pregnancy, this information may help you and your doctor be better prepared. If there is a problem with the baby, you will have an opportunity to learn more about it. Some people will use this information to prepare for a child with special needs. Others will choose to place the child for adoption or to end the pregnancy.

The tests look for different conditions and each has a different detection rate for Down syndrome. The detection rate means the percent of babies with the condition that will be found by this testing. The higher the detection rate, the more likely the test will detect an affected baby. Some babies with these conditions will be missed because there is no screening test that can detect all affected pregnancies.
What follow up tests will be recommended if my screening result is abnormal?

If you have not already had an ultrasound, one may be done to date your pregnancy. If the ultrasound changes your due date, your test result may change. A level II ultrasound can find certain birth defects including most open fetal defects such as spina bifida. Level II ultrasounds cannot diagnose or rule out Down syndrome, trisomy 18 or Smith-Lemli-Opitz syndrome. Women at risk for these conditions may consider an amniocentesis.

An amniocentesis takes a small amount of the fluid that surrounds the baby. Amniocentesis is very accurate and can give a yes or no answer. However, if a confirmed NT sonographer is not available at your clinic, you may call MSU Radiology at 517-353-4920 to have an NT ultrasound in East Lansing. If you cannot have this done, you may choose to have one of the other test that does not require an NT ultrasound such as the Quad or Serum Integrated Test.

The Michigan State University Division of Human Genetics wishes you a happy, healthy pregnancy and baby. If you are interested in prenatal screening, please speak with your healthcare provider. If you have questions or would like to schedule an appointment in our MSU Genetics Clinic, please call 517-353-7427. Please read your screening information carefully. If you have any questions, please call the Michigan State University Division of Human Genetics at 517-353-4920.

Where can I get an NT ultrasound performed?

If a certified NT sonographer is not available at your clinic, you may call MSU Radiology at 517-353-4920 to have an NT ultrasound in East Lansing. If you cannot have this done, you may choose to have one of the other tests that does not require an NT ultrasound such as the Quad or Serum Integrated Test. A normal or screen negative result means a baby is likely healthy and further testing may not be needed. Remember that a normal test result cannot guarantee a healthy baby. For instance, a 25 year old woman has a screening result for Down syndrome that gives her a risk of about 1 in 1,000. If pregnancy substances in her blood are at normal levels, her risk may be lowered to 1 in 20,000. Her new chance might be 1 in 20,000. Her baby may still have Down syndrome, but the chance is much lower now.

What does a normal result mean?

A normal, or screen negative test result does not mean that the baby definitely has a problem. It only suggests a greater chance. Most women with abnormal results will have healthy babies. A woman may choose not to undergo additional screening tests that raise her chance to have an abnormal result. A screen positive result does not mean that the baby definitely has a problem. It means that the baby may have a problem. Further tests may be offered.