

## Lab and Diagnostic Tests During Pregnancy (Other Visits)

After the initial prenatal visit, ongoing care is aimed to evaluate the health status of the mother and fetus, as well as prevent morbidity and mortality. At 10-13 weeks, chorionic villus sampling (CVS) may be offered to expecting mothers, depending on certain risk factors. Early in the second trimester, a quad screen is performed to test for chromosomal abnormalities and neural tube defects. Later in the second trimester, an ultrasound is performed to assess for gross fetal abnormalities, and a one-hour glucose challenge test is administered to screen for gestational diabetes. In the third trimester, patients are screened for group B strep.



PLAY PICMONIC

### Diagnosis

#### 10-13 Weeks

[10-13 on Weekly-newspaper](#)

During weeks 10 to 13, chorionic villus sampling (CVS) may be offered to patients with certain risk factors or other indications such as an abnormal 1st trimester combined screen. CVS obtains tissue from the chorion to test for certain genetic defects.

#### Offer Chorionic Villus Sampling (CVS)

[CVS-store](#)

Chorionic villus sampling (CVS) is a procedure performed under ultrasound guidance in which small samples of placenta are obtained for prenatal genetic testing. The samples can help determine if the fetus has chromosomal or genetic disorders. CVS may be offered to patients after an abnormal quad screen or to women of advanced maternal age (>35 years old at time of delivery), those with a previous child with chromosomal abnormalities, or a congenital anomaly detected on first trimester ultrasound. Many women may opt out of this test because there is a small risk of miscarriage.

#### 15-18 Weeks

[15-18 on Weekly-newspaper](#)

Early in the second trimester, a quad screen is performed to test for chromosomal abnormalities and neural tube defects.

#### Quad Screen

[4 Screen display](#)

The Quad screen measures maternal serum alpha-fetoprotein (AFP), human chorionic gonadotropin (hCG), unconjugated estriol, and inhibin A. The Quad screen helps diagnose trisomies 21 and 18, as well as neural tube defects. In Down syndrome (trisomy 21), hCG and inhibin A levels are elevated, while estriol and AFP are low. In Edwards syndrome (trisomy 18), AFP, estriol, and hCG are low, while inhibin A is normal. In neural tube defects, AFP is classically high. The Quad screen can also help diagnose abdominal wall defects, molar pregnancy, and ectopic pregnancy. The Triple screen includes the four components of the Quad screen except inhibin A.

#### 18-20 Weeks

[18-20 on Weekly-newspaper](#)

During gestational weeks 18-20, an ultrasound is performed to assess for anatomic abnormalities in the fetus. The scan looks at development of the fetal brain, face, spine, heart, and other internal organs, as well as the development and location of the placenta.

#### Ultrasound

[Ultrasound-machine](#)

Ultrasound screening for assessment of gross fetal abnormalities occurs between 18 and 20 weeks gestation.

#### Anatomic Screening

[Anatomical-body and Screen-door](#)

Sensitivity for congenital and anatomic abnormalities detected on ultrasound is higher during weeks 18 to 20 than the first trimester.

## 24-28 Weeks

[24-28 on Weekly-newspaper](#)

During gestational weeks 24 to 28, a glucose challenge test (GCT) is administered to screen for gestational diabetes.

### One-Hour Glucose Challenge Test

(1) Wand Hour-glass with Glue-bottle and Test-tubes

During weeks 24 to 28, it is standard to screen every pregnant woman for gestational diabetes. In the one-hour GCT, patients are given a 50 gram oral glucose load (without regard to their last meal) and blood glucose levels are measured one hour later. If her blood sugar is  $\leq 140$  mg/dL one hour later, this is normal and no further glucose testing is necessary. A blood sugar  $> 140$  mg/dL is abnormal and may indicate gestational diabetes. An abnormal GCT necessitates a three-hour oral glucose tolerance test (OGTT), in which the woman is given a 100 gram oral glucose load, and her blood is drawn one, two and three hours after consumption. If her blood sugar is above the cut off ranges during any two of the hour intervals, or is  $\geq 140$  mg/dL after three hours, then this is diagnostic of gestational diabetes, and treatment options will be discussed with the patient.

## 35-37 Weeks

[35-37 on Weekly-newspaper](#)

During gestational weeks 35 to 37, patients are screened for group B strep (GBS) colonization.

### Streptococcus Agalactiae

Stripper Agalactic

Patients are screened for group B beta-hemolytic streptococcus (GBS) colonization in the lower vagina and rectum at 35 to 37 weeks gestation. GBS is an encapsulated gram-positive coccus that can be part of the normal rectovaginal flora in some women. If a woman is colonized with the organism, the infant can become infected during passage through the birth canal and can develop pneumonia, meningitis and sepsis. Women with positive cultures can receive intrapartum prophylactic treatment with IV penicillin.