

Johnson Center for Pregnancy and Newborn Services

Perinatal Diagnostic Centers

Diagnostics, Therapy and Genetic Counseling



World-Class Care & Support

Lucile Packard Children's Hospital's Perinatal Diagnostic Centers provide highly trained, specialized maternal-fetal medicine specialists (perinatologists), genetic counselors and high-risk obstetric sonographers, who together provide the highest quality care to women and their families with a unique, personalized approach.

Packard Children's recognizes that each woman makes the decision to use perinatal diagnostic services for very unique reasons. Because of this, our experts are committed to providing every patient with the information and support she needs to make the choices that are right for her.



Ultrasound

Ultrasound imaging has many uses and can be performed as early as the fourth week after conception to document fetal cardiac activity. Abnormalities of the fetus can be detected and growth can be evaluated in the second and third trimesters. Diagnostic procedures during the first and second trimesters are offered for any maternal or fetal condition that may subject the fetus to increased genetic risk.

Non-invasive Prenatal Testing (NIPT)

Non-invasive prenatal testing (NIPT) is a blood test that can be done after the 10th week of pregnancy. The results calculate a risk for Down syndrome, trisomy 18, and trisomy 13. There is an option to add screening for the X and Y chromosomes which will predict if you are having a boy or girl and also calculates a risk for differences in the number of X and Y chromosomes such as Turner syndrome and Klinefelter syndrome. Just like nuchal translucency, NIPT can only estimate the risk of your baby having one of these conditions. If the results of NIPT show a high risk for one of these conditions, then diagnostic testing through CVS or amniocentesis is recommended to confirm the results.

Nuchal Translucency (NT)

Nuchal Translucency is a screening test that assesses whether your baby is likely to have Down syndrome, other chromosomal abnormalities, major cardiac and structural anomalies. In this test, ultrasound is used to measure a collection of fluid under the skin at the back of the baby's neck at 11 ½ – 14 weeks. All babies have some fluid, but in many babies with Down syndrome, the nuchal translucency (NT) is increased.

A screening test can only estimate the risk of your baby having Down syndrome, as opposed to a diagnostic test, such as CVS or amniocentesis. The NT scan won't tell for certain whether your baby is affected. However, it can help you decide whether or not to have a diagnostic test.

Doppler Blood Flow

Doppler Blood Flow is a non-invasive technique to evaluate fetal and placental blood flow. It can help detect abnormal placental implantation and function, fetal anemia and other disorders of blood flow.

Nonstress Testing (NST)

NST looks for changes in fetal heart rate to assess fetal well-being. NST is only available at Packard Children's Hospital in Palo Alto.

Biophysical Profile (BPP)

BPP is an ultrasound assessment of fetal heart rate, fetal movement, fetal breathing movements, fetal tone and amniotic fluid volume.

Amniocentesis

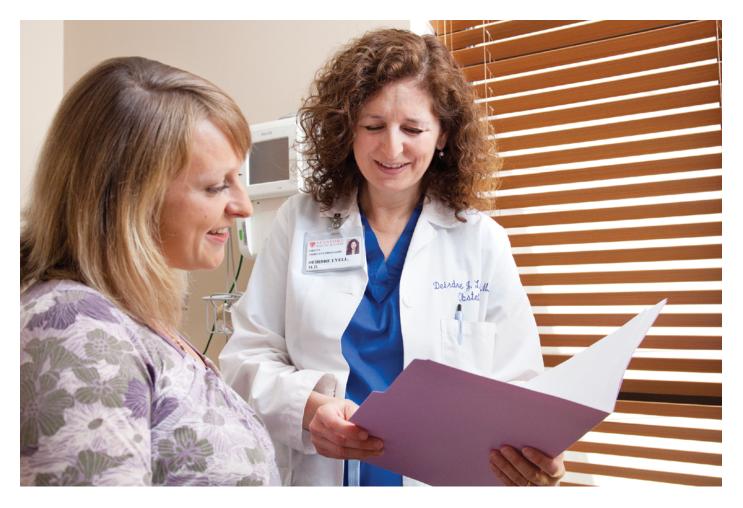
Amniocentesis is a specialized diagnostic test, usually performed between 16 and 18 weeks, that involves taking a sample of amniotic fluid from your womb and examining it in a laboratory to detect chromosomal and genetic abnormities in the fetus. This test can identify a variety of genetic disorders, including chromosomal disorders such as Down syndrome and neural tube defects such as spina bifida. Amniocentesis does not detect every kind of abnormality.

Chorionic Villus Sampling (CVS)

CVS is a prenatal test that involves taking a sample of placental tissue so it can be tested for chromosomal abnormalities and some genetic problems. It is usually performed between 10 and 12 ½ weeks. In our experienced hands, the risk with CVS similar to that of an amniocentesis, and results are available 4 to 6 weeks earlier than with amniocentesis. CVS does not provide information on neural tube defects such as spina bifida. For this reason, women who undergo CVS also need a follow-up blood test and an ultrasound in the second trimester to screen for neural tube defects.

Percutaneous Umbilical Blood Sampling (PUBS)

This procedure allows the direct sampling of fetal blood for rapid genetic analysis. Access to the fetal blood supply also permits blood transfusion in cases of fetal anemia or delivery of other therapeutic medications if needed. PUBS is only available at Packard Children's Hospital in Palo Alto.



The Perinatal Diagnostic Center Team

Using state-of-the-art technology, this team provides the highest quality care with a unique, personalized approach.

Open communication is emphasized between each woman and our staff in an effort to meet both her medical and emotional needs. Each of Packard Children's Perinatal Diagnostic Centers is staffed by:

- Maternal-fetal medicine specialists (high-risk obstetricians)
- Sonographers who perform specialized perinatal ultrasounds
- Fetal imaging and pediatric radiology specialists
- Genetic Counselors

Perinatal Diagnostic Services Near You

Packard Children's now operates seven state-approved Perinatal Diagnostic Centers in Northern California. Each offers a full range of prenatal diagnostic and therapeutic procedures and services, from preconception through delivery, including:

- Ultrasound
- Non-invasive Prenatal Testing (NIPT)
- Nuchal Translucency (NT)
- Amniocentesis
- Chorionic Villus Sampling (CVS)
- Percutaneous Umbilical Blood Sampling (PUBS)
- Evaluation and Management of Birth Defects
- Doppler Blood Flow Studies
- Nonstress Testing (NST)
- Biophysical Profile (BPP)
- · Genetic Counseling
- Perinatal Consultation

A woman may be referred to a Perinatal Diagnostic Center for a perinatal consultation or genetic counseling due to:

- Advanced maternal age
- · First and second trimester screening
- · Metabolic, chromosomal or physical abnormality
- Multiple miscarriages
- Consanguinity (marriage of relatives)
- Ultrasound diagnosed anomaly
- DNA or biochemical diagnosis
- Fetal death or stillborn examination
- Teratogen exposure including chemotherapy, toxins, infections, alcohol, drugs or medications



Getting the Answers You Need

Results of any prenatal testing are communicated without delay to the patient and her referring physician. In addition, perinatal consultation is available to discuss the management of individual medical or obstetrical complications or pregnancy. When necessary, additional counseling or evaluation can be scheduled.



Johnson Center for Pregnancy and Newborn Services

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Perinatal Diagnostic Centers

For more information about the specialized care we offer, visit pdc.stanfordchildrens.org or call (650) 497-8000.



