

## ULTRASOUND EVALUATION IN PREGNANCY

Ultrasound is a safe and noninvasive way to see internal structures of the body by sending high frequency sound waves through the skin. In an obstetrical examination, this means that the baby inside the mother's uterus can be seen and observed. Basically, the system works like this: A machine, the transducer, sends a brief pulse of sound (about a millionth of a second long) into the body. The sound travels into the abdomen and sends back an echo when it reaches the uterus and the baby. These echoes are seen as an image on the TV monitor of the machine. Either an abdominal or a vaginal transducer may be used; depending on how far along you are in your pregnancy and what information we are seeking.

Ultrasound will be used to evaluate the growth and development of your baby, and to monitor the progression of your pregnancy. You can expect an ultrasound typically during your first prenatal visit to confirm and date the pregnancy. A second ultrasound will be performed at approximately 20 weeks to take a closer look at your baby's anatomy and growth, including the heart, brain, kidneys, spine and other organs. Additional ultrasounds may also be indicated throughout your pregnancy if your baby's health requires closer monitoring or if you opt for certain genetic testing like the nuchal translucency.

Your healthcare provider might use a fetal ultrasound to:

- **Confirm the pregnancy and its location-** An ultrasound will confirm the presence of an embryo that has developed inside the uterus. Sometimes the embryo can develop inside the fallopian tube (ectopic pregnancy), and this would be important to diagnose.
- **Determine the baby's gestational age** – Knowing the baby's age can help your health care provider determine your due date and track various milestones throughout your pregnancy.
- **Confirm the number of babies-** If your healthcare provider suspects a multiple pregnancy, an ultrasound might be done to confirm the number of babies in the uterus.
- **Study the placenta and amniotic fluid levels-**The placenta supplies your baby with important nutrients and oxygen-rich blood. Any complications with your placenta will require monitoring. An ultrasound will also help measure the fluid that surrounds your baby and make sure there is not too much or too little fluid.
- **Identify fetal anomalies** - Ultrasound can help detect birth defects.
- **Monitor the growth of baby-** An ultrasound will track the rate your baby is growing and identify your baby's heart rate, movement and breathing.
- **Identify a possible loss-** Ultrasound may determine the cause of complications, bleeding, pain or a possible loss of the pregnancy.
- **Determine fetal position before delivery-** You may require a C-section or other intervention if your baby is not in the optimal position for a vaginal delivery.

While there are many benefits to having fetal ultrasound, it is important to realize that technology has limitations. The sensitivity of ultrasound evaluation for the identification of major abnormalities has been reported to be up to 84%. There are inherent limitations of this modality in finding some fetal birth defects or aneuploidy. A "normal" ultrasound does not guarantee a "normal" baby.