

What Can Ultrasound Testing Tell You About Your Baby?

An expectant mother has many choices when it comes to medical tests which will provide her with information about her developing baby. One of them is amniocentesis, which requires testing of extracted amniotic fluid. Amniocentesis was developed more than a hundred years ago.

Another important test is the ultrasound, which was first introduced in the sixties, but became popular much later as a form of fetal testing and diagnosis. Today, ultrasound tests also enable the expectant mother to watch three dimensional movements of her fetus.

Ultrasounds today are quite simple and reasonably priced, and are mostly part of the insurance plans that encompass pregnancy. Another name for the ultrasound process is sonography. In this process, a clear gel is placed on the abdomen, and a transmitter sends ultra-high frequency (UHF) sound waves to the uterus which are reflected back, giving many images per second thus forming a moving image. This process is similar to the Doppler Shift used in submarines, speeding devices and so on.

Ultrasound is a non-invasive technique, since unlike X-Rays, no ionizing radiation is produced which can harm the fetus. Apart from being completely safe and painless, sonography has two major advantages compared to X-Raying: the visibility of soft tissue and the viewing of the images in real time! Also, being non-invasive, the ultrasound can be done as many times as possible over the course of the pregnancy.

The ultrasound technician will start off by applying the clear gel that will prevent the sound waves from distortion at the transmitter-tissue interface due to the refractive index of air, which can lead to distorted images. The wand used by the physician generally contains both transmitter as well as receiver of the UHF sound waves.

An ultrasound test will give you results in about half an hour, whilst an amniocentesis can take up to two weeks!

If you wish, you can get the results of the ultrasound analyzed by a specialist in the field. Your physician is trained to study the images in more detail, and will be able to tell you if any sort of physical shortcomings exist in the fetus or even if there has been a problem with implantation which could lead to major concerns later.

Apart from showing the likely concerns, the ultrasound is also meant to detect the age, sex and development rate of the fetus. Showing the physical position of the baby helps the doctor determine whether the birth will be breech or normal. Knowing this helps the mother determine whether she wants to go for a vaginal delivery or a Caesarean section.

The disadvantages of sonography are that UHF sound waves get distorted in air, which is why they do not give a clear picture of what is happening in regions such as the stomach, which has quite a few air pockets. Also, ultrasounds are only clear closer to the surface of

the abdomen, since they get distorted when sent through fatty tissue and bone. Thus, ultrasound testing is not very ideal for women who are obese.

Other tests such as amniocentesis can be used to verify the results of the ultrasound in case of the above limitations. These tests will amalgamate to provide much needed information about the health of the baby, which will, in turn, lead to peace of mind for the mother!