

What Is Diagnostic Ultrasonography?

Diagnostic ultrasonography is a technique that allows non-invasive visualization of tissues within the body. The ultrasound machine consists of a box approximately one foot square with a screen. A 3/4 inch diameter cord leads from the box to a specialized probe. The probe emits sound waves of specific lengths that are not detectable by the human ear, in a beam the length of the probe and 1/25th of an inch wide. When the probe is placed on the skin, or within the rectum of an animal, the sound waves penetrate the tissues and are reflected back to the probe. The density of the tissues determines the number of waves that are reflected. The probe detects these waves and a computer within the ultrasound box converts the waves into a picture displayed on the ultrasound screen. The black and white picture depicts a cross-section of the tissues directly beneath the probe. Various probes are available, depending on the intended use. Probes used for most reproductive work in large animals are easily held in the palm of the hand and inserted into the rectum. Mike Holland, PhD, CSU.