COLMAR
IMAGING CENTER

P R E S E N T S

Ultrasound

MULTIMEDIA HEALTH EDUCATION

DISCLAIMER

This movie is an educational resource only and should not be used to make a decision on **Ultrasound** All decisions about surgery must be made in conjunction with your surgeon or a licensed healthcare provider.

FOR APPOINTMENT:

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MULTIMEDIA HEALTH EDUCATION MANUAL

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What is an Ultrasound?

Ultrasound is cyclic sound pressure with a frequency greater than the upper limit of human hearing. Ultrasound imaging is a common diagnostic medical procedure that uses high-frequency sound waves to produce dynamic images (sonograms) of organs, tissues, or blood flow inside the body.

(Refer fig. 1)

(Fig.1)

What is Ultrasonography?

Ultrasonography (Sonography) is widely used in medicine. It is possible to perform both diagnostic and therapeutic procedures, using ultrasound to guide interventional procedures.

Sonographers are medical professionals who perform scans for diagnostic purposes. Sonographers typically use a hand-held probe (called a transducer) that is placed directly on and moved over the patient. A water-based gel is used to couple the ultrasound between the transducer and patient.

(Refer fig. 2)

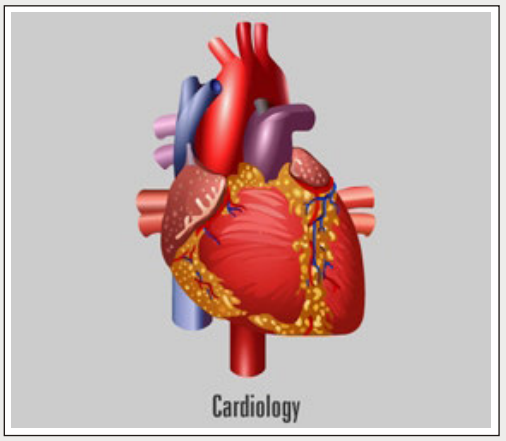
(Fig.2)

Ultrasonography in Medical Treatments

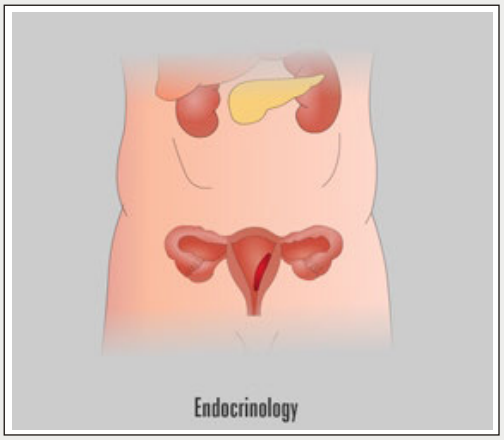
Medical sonography (Ultrasonography) is used in the treatments for:

Cardiology, Endocrinology, Gastroenterology, Gynecology, Obstetrics, Ophthalmology, Urology, Musculoskeletal, Tendons, Muscles, Nerves, and Bone surfaces.

(Refer fig. 3 to 6)



(Fig.3)



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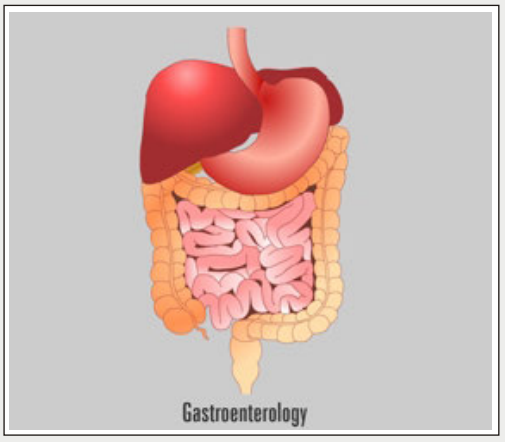
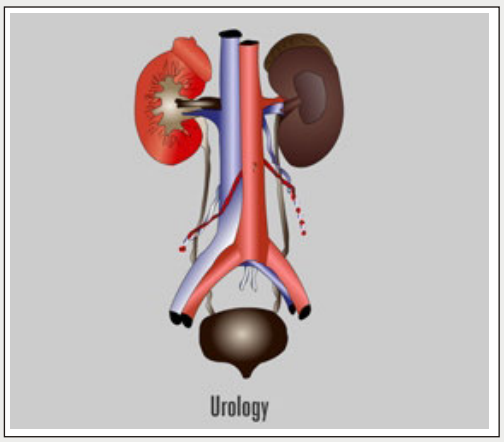


(Fig.5)



(Fig.6)

Diagnostic Uses

The Purpose of an Ultrasound is not limited to diagnosis, but can also be used in screening for disease and to aid in treatment of diseases or conditions.

(Refer fig. 7)

(Fig.7)

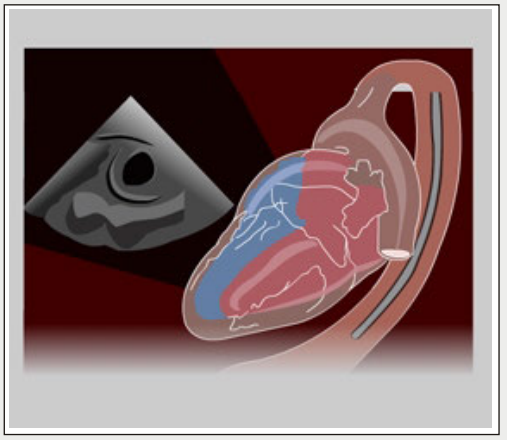
Obstetrics - for assessing the progression of pregnancy.

(Refer fig. 8)

(Fig.8)

Cardiology- Echocardiography evaluates the heart, the heart's valve function, and blood flow through them.

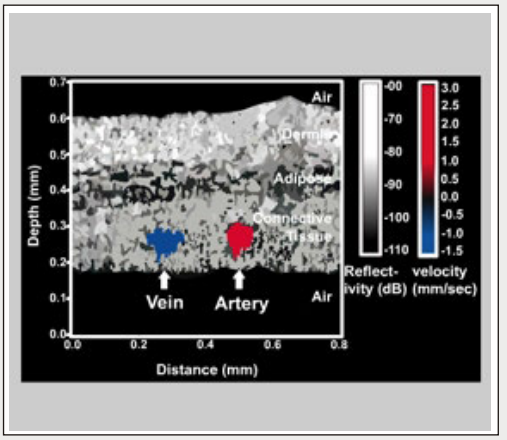
(Refer fig. 9)



(Fig.9)

Blood vessels - Ultrasound can detect blood clots in veins or artery blockage.

(Refer fig. 10)

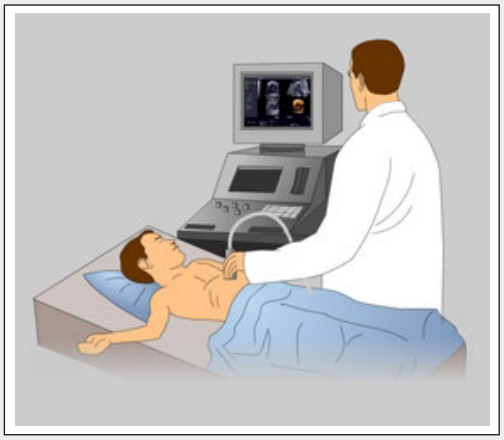


(Fig.10)

Diagnostic Uses

Abdominal Structures - Ultrasound can evaluate most of the solid structures in the abdominal cavity. This includes the liver, gallbladder, pancreas, kidneys, bladder, prostate, testicles, uterus, and ovaries.

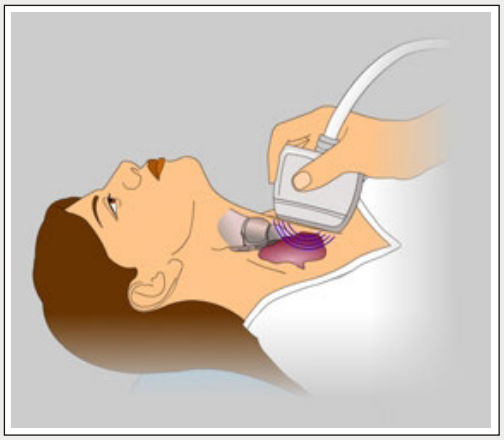
(Refer fig. 11)



(Fig.11)

The neck - The thyroid gland can be imaged using ultrasound looking for nodules, growths, or tumors.

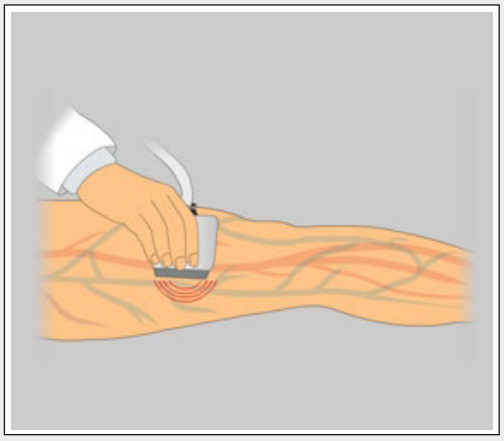
(Refer fig. 12)



(Fig.12)

Knee joint - Ultrasound can be used to detect bulging of fluid from a swollen knee joint.

(Refer fig. 13)



(Fig.13)

Screening Uses

Ultrasound may be used to screen blood vessel diseases.

By measuring the blood flow and blockage in the carotid arteries, the test can predict a potential risk for future stroke.

(Refer fig. 14)

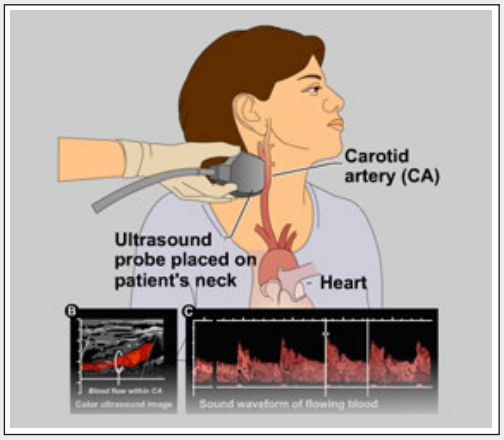
(Fig.14)

Therapeutic Use

Ultrasound may be used to help physicians guide needles into the body.

In situations where an intravenous line is required but it is difficult to find a vein, ultrasound guidance may be used to identify larger veins in the neck, chest wall, or groin.

(Refer fig. 15)



(Fig.15)

Preparing a Patient for an Ultrasound

Preparation for ultrasound is minimal. Generally, if internal organs such as the gallbladder are to be examined, patients are requested to avoid eating and drinking with the exception of water for six to eight hours prior to the examination. This is because food causes gallbladder contraction, minimizing the size, which would be visible during the ultrasound.

(Refer fig. 16)

(Fig.16)

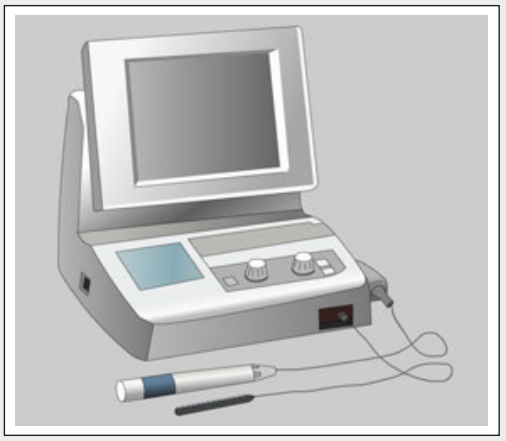
In preparation for examination of the baby and womb during pregnancy, it is recommended that mothers drink at least four to six glasses of water approximately one to two hours prior to the examination for the purpose of filling the bladder.

The extra fluid in the bladder moves air-filled bowel loops away from the womb so that the baby and womb are more visible during the ultrasound test.

What are the Risks of Ultrasound?

There are no known risks to ultrasound, and as technology has improved, the machines have become smaller, portable and available for use at the patient's bedside. Although the effects of ultrasound are still being studied, no harmful effects to either the mother or the baby have been found in over 20 years of use.

(Refer fig. 17)



(Fig.17)

Unit 3: Disclaimer

Although every effort is made to educate you on **ULTRASOUND** and take control, there will be specific information that will not be discussed. Talk to your doctor or health care provider about any concerns you have about **ULTRASOUND.**

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Ultrasound
Multimedia Health Education

☐ ☐ ☐ YOUR SURGERY D ATE

☐ READ YOUR BOOK AND MA TERIAL

☐ VIEW YOUR VIDEO /CD / D VD / WEBSITE

☐ PRE - HABILITATION

☐ ARRANGE FOR BL OOD

☐ MEDICAL CHECK UP

☐ ADVANCE MEDICAL DIRECTIVE

☐ PRE - ADMISSION TESTING

☐ FAMILY SUPPORT REVIEW

Physician's Name : _____

Physician's Signature: _____

Date : _____

Patient's Name : _____

Patient's Signature: _____

Date : _____