Therapeutic Uses. (Indications)

Acute or chronic musculoskeletal condition.

Ultrasound often used after soft injury.
As the mechanical effect help to remove traumatic exudate and reduces changes of adhesion formation.

Analgesia produces by ultrasound allow early use of part and makes the condition more favourable.

Protein synthesis stimulate the rate of rapid damage of tissue.

- Myositis, • Fibrocytes, • Capsulitis; Bursaitis

- Tendonitis
- Tenosynovitis
- Sprain and strain

Scar tissue :- is made more pliable by the application of ultrasound which allows for more stretching of contracted scar (collagen is not present in scar)
If the scar tissue is bound down on the underline structure, ultrasound may help in gaining its release.

Chronic oedema :- The mechanical effects of ultrasound has an effect on chronic oedema.

Var Ultrasound treatment promotes the healing of varicose ulcer.

Pain relief :- Relief of both neurogenic and chronic pain like trigeminal neuralgia.

Helps in breaking the adhesion formation.

Myofascial trigger point

Muscle spasm
Carpel tunnel syndrome
Neuralgia
Calcific deposit
Osteoarthritis [tenderness]
Joint contracture
Bone injury ultrasound therapy first two week

after injury can increase bony union but if unstable fracture during the phase of cartilage formation and proliferation, it decreases the bony union.

Diagnostically it may be use to identify stress fracture.

Couplant or coupling media :- Ultrasound waves not transmitted by air.

Thus, some couplant which does transmit them may be used between the treatment head and patient skin.

Couplant	Percentage of transmission
Aquasonic	72.6 %
Glycerol	67 %
Distilled water	59 %
Liquid paraffin	19 %
Petroleum jelly	0 %
Air	0 %

- Air will infact reflect the ultrasound waves back into the treatment head and this could set up standing waves which might damage

the crystals.

Continuous movement of treatment head:

With all the methods it is important to move the treatment head continuously over the skin for the following reasons:

- standing waves can be formed that it might lead to temporary stasis of blood.
- At high intensities unstable cavitation or excess heating could occur causing tissue damage.
- The ultrasound beam very irregular in near zone.
- The pattern of energy absorption in the tissue is very irregular due to reflection and refraction.