ELECTROMEDICAL

CRYOULTRASOUND

COLD ULTRASOUND THERAPY TO HELP FIGHT INFLAMMATION

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WHAT IS IT?

What is cryoultrasound therapy?

CRYOULTRASOUND THERAPY COMBINES THE ADVANTAGES OF ULTRASOUND WITH THE POSSIBILITIES OF CRYOTHERAPY

Cryoultrasound therapy uses ultrasound combined with another technique, cryotherapy: what can be defined as cold ultrasound. This combined use helps reduce any kind of contraindication of the effect of ultrasound in trauma care.

It is especially effective for treating inflammation thanks to the anti-inflammatory effect that ultrasound has, combined with the analgesic action of *cryotherapy*. *Cryoultrasound therapy* began to be successful in the sports field precisely because of the rapid rehabilitation it offered for every sportsperson, and then made its way into more traditional therapies.

How does cryoultrasound therapy work?

ULTRASOUND AND COLD ARE THE BASIS OF CRYOULTRASOUND THERAPY

This type of therapy makes use of two features: cold and ultrasound. Cold inhibits pain receptors and reduces blood flow, thus controlling the formation of oedema in the affected area. Ultrasound, on the other hand, emits **sound vibrations at very high frequencies that are inaudible to the human ear** and, in contact with the tissues, produce mechanical, thermal, chemical and cavitation effects. The benefits are anti-inflammatory, anti-oedema and pain-relieving. In fact, thanks to the increase in temperature caused by ultrasound, vascularisation is increased and the molecules that caused the inflammation are eliminated. The cold, meanwhile, has analgesic effect that help alleviate contractures. The ultrasound also make the cells of the injured tissue vibrate which causes a micronised massage that penetrates deeply and helps ensure a soothing effect.

The advantage of *cryoultrasound therapy* lies precisely in the use of two different techniques, which eliminate the contraindications of ultrasound. The part of the cryoultrasound therapy machine that comes into contact with the lesion is the head of the ultrasound; as soon as it is activated, dermal vasoconstriction takes place, which is followed by a strong surface vasodilation.

When to use cryoultrasound therapy

CRYOULTRASOUND THERAPY IS RECOMMENDED IN THE TREATMENT OF NUMEROUS PROBLEMS.

Degenerative soft tissue diseases	Bursitis	Tendinitis
Epicondylitis	Tendon ruptures	Recent trauma

This therapy is offered to athletes as well as those suffering from acute inflammatory states. It not only helps reduce pain and oedema formation, but also shortens recovery time.

What are the contraindications of cryoultrasound therapy?

THE CRYOULTRASOUND THERAPY MACHINE IS WIDELY USED IN PHYSIOTHERAPY AND DERMATOLOGY, AS WELL AS IN THE TREATMENT OF TRAUMA

Although very useful for treating contractures, inflammation or injuries, the use of this machine is not recommended for patients suffering from osteoporosis or severe bleeding. The presence of any prostheses or metal material inside the body may invalidate the use of cryoultrasound therapy. In older patients it is contraindicated because cases of varicose veins, thrombophlebitis or arteriopathy obliterans increase.

Even cancer patients should be excluded from using this therapy, as should pregnant women or patients suffering from Raynaud's disease.

A doctor's opinion is important in determining whether it is possible to start cryoultrasound therapy.