



Summary of research on the effect of vibration massage on post exercise soreness and recovery.

Summary

In this article we will briefly review some research findings in relation to the affects of vibration massage on Delayed Onset Muscle Soreness (DOMS), residual Lactic Acid, and the recovery of muscles post exercise. The research clearly and consistently shows that the use of localised vibration massage on muscle either before or after exercise reduces post exercise soreness and speeds recovery. This is a very simple therapy that, subject to a few simple precautions, can easily be applied on oneself for practically no on-going cost. It should be seriously should considered by everyone who exercises or plays sport seriously.

The research

In each of these trials participants underwent strenuous exercise to induce post exercise soreness and fatigue. To investigate the effects of vibration massage some were given the vibration massage, while others (controls) had no treatment and were used as a comparison.

The clinical trials

First trial (1)

In this trial one third of participants had no treatment. One third were given conventional massage. The third group had their muscle massaged before exercise using a vibrating massager set at 50Hz (cycles per second). The results showed that both the conventional massage and the vibration massage resulted in significantly lower DOMS, with the vibration group recovering faster than the conventional massage group. They also showed that the group receiving the vibration massage had significantly less residual Lactic Acid.

Second trial (2)

In this trial the treatment group received a vibration massage of 50Hz to the centre of the muscle. There was a significant decrease in the soreness of the vibration massage group compared with the control. Muscles showed a decrease in maximum contraction strength post exercise, but this decrease was less in the vibration massage group.

Third trial (3)

In this trial the treatment group received a vibration massage of 30-50Hz, with the vibration massage group showing a significantly lower level of pain.

Fourth trial (4)

This trial used the combined intervention of having the exercise performed on a vibrating platform, and applying vibration massage to the muscles. They found significantly reduced pain 24-120 hours after exercise for the treatment group, plus blood chemistry tests showed that an immune response was produced.

Fifth trial (5)

This trial Used a vibration pad giving 30-65Hz, with 30 minute massages being given 30 minutes post exercise plus on days 1,2 3 and 4. From days 2-5 soreness was 18-30% less, with soreness disappearing altogether earlier.

Literature review articles

Review One (7)

“Vibration is an effective modality in the field of rehabilitation. Vibration therapy improves muscular strength, power development and kinesthetic awareness [27], increased flexibility, motor unit synchronisation. Various researches which shows effectiveness of vibration therapy in management of DOMS”

Review Two (8)

“Vibration therapy before eccentric exercise may prevent and control DOMS”

Discussion

Vibration massage has been clearly shown to reduce post exercise pain and speed recovery. The researches used local application to the muscles, which is simply applying a source of vibration directly to the muscles. The frequency used ranged from 30-50hz. This therapy is easily applied to oneself DrGraeme General Purpose Massager, which delivers vibration from approximately 10-60hz, which covers the frequency range used in the trials. . Professional athletes and sports people commonly use professional masseurs to help reduce soreness and speed recovery. This would be prohibitively expensive. However, using self massage practically unlimited vibration massage can be had easily and inexpensively.

References

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