



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

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. It is provided as general information only. While we hope you put it to great use, such use should be consistent with your training and your patient's needs. Any feedback will be most appreciated.

The research

Each of these trials had participants undergo strenuous exercise to induce post exercise soreness and fatigue.

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.

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. Compared with the control, from days 2-5 soreness was 18-30% less, with soreness disappearing altogether earlier.

Literature review articles

Review One (6)

“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 (7)

“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. This therapy is readily available for self applications using our DrGraeme General Purpose Massager. It is relatively inexpensive, easy to use, and is capable of delivering vibration massage from 10-60Hz, which covers the frequency ranges used in the trials. The use of a vibration massage in moderation on normal muscles is relatively safe. However, if a client had a musculoskeletal condition such as an injury or pain syndrome we would strongly discourage self diagnosis and management. A suitably qualified practitioner should be consulted. Also, there are a hand full of medical conditions that should raise caution. There are listed in instructions that come with the massagers. When in doubt a suitably qualified practitioner should be consulted. Apart from that there should be no significant barrier to all sports people and exercise participants taking advantage of this therapy.

References

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