

# To rice or not to rice

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In the sport community we have come accustomed with the term RICE when we deal with acute soft tissue injuries. The term (R)est, (I)ce, (C)ompression, (E)levation has always been the golden standard for the acute treatment of muscle and other soft tissue injuries during the first 48-72 hours after an injury. Is this treatment regime still the optimal way to treat these injuries?

An article published in The Journal of Athletic Training in 2012 on the effects of RICE treatment in the management of ankle sprains in adults came to the following conclusion:

Insufficient evidence is available from randomized control trials to determine the relative effectiveness of RICE therapy for acute ankle sprains in adults. Evidence that some type of immediate posttraumatic mobilization is beneficial in the treatment of acute ankle sprains is moderate. Evidence that ice provides no effect in the treatment of acute ankle sprains is limited. Evidence supporting the use of compression in the treatment of acute ankle sprains is limited.

No evidence exists to support or reject the use of elevation in the treatment of acute ankle sprains. Treatment decisions must be made on an individual basis, carefully weighing the relative benefits and risks of each option, and must be based on expert opinions and national guidelines.

A recent column appearing on the internet stated that ice or any form of cold therapy is no longer the treatment of choice in acute soft tissue injuries, the main reason being the delaying of the inflammatory response which we do need for tissue healing and that vaso constriction causes tissue damage and even dead tissue resulting in further delaying of the healing process. Although this article mentioned studies done and published in a few journals, it had no proper referencing, which can make the content controversial. The column also mentioned the tendency of the focus of treatment moving towards early mobilization to restore range of motion and prevent muscle atrophy. This might be relevant and needs further investigation. In 2010, a study was published that found that some

inflammation is needed for tissue healing. A team of experts at the Neuro inflammation Research Centre at the Cleveland Clinic in Ohio found that inflamed cells produce IGF-1, (insulin-like growth factor-1), a hormone which increases the rate of muscle regeneration and helps heal damaged tissues.

The study has started discussion in the medical community about the benefits and limitations of managing inflammation as a method of encouraging healing. Gerald Weissmann, the editor of the journal that published the study was quoted in the Telegraph saying "For wounds to heal we need controlled inflammation, not too much, and not too little. It's been known for a long time that excess anti-inflammatory medication, such as cortisone, slows wound healing. This study goes a long way to telling us why – insulin-like growth factor and other materials released by inflammatory cells help wounds to heal." At present, the RICE treatment approach is still being recommended by most experts, although many are waiting for further research to help sort out the controversy.

From the studied literature it is clear that we need to individualize the treatment of each soft tissue injury. Grade one injuries for example can all differ in the amount of swelling and bleeding that might be caused depending on the mechanism of injury and the injury location. There is still a definite place for RICE in the treatment protocol, the tendency is to move more towards the term POLICE, where the P(Protect) and OL(Optimal loading) provides the opportunity to individualize each case. With this approach you will still limit excessive swelling that can be harmful to recovery during the first 24 hours but also limit the loss of joint range of motion and muscle atrophy that will speed up recovery and return to sport later on. For me the golden rule is to find the balance between the different acute treatment modalities namely P(Protect), OL(Optimal Loading), I(Ice), C(Compression), E(Elevation) in the first 48-72 hours after a soft tissue injury.

