

# Shoulder Injury in Rowers and Yachtsmen

STEPHEN PAINE, OMD, ACUPUNCTURIST



## A summary of the stages of injury and reconditioning

**S**evere muscle injuries require evaluation and treatment by an orthopedic surgeon or similarly trained professional, with referral to a physiotherapist, chiropractor, acupuncturist or rehabilitation specialist. However, most muscle injuries, including shoulder injuries are never seen by a physician. Provided pain and restriction of movement are at minimal levels, there is much that injured athletes can do for themselves.

Let's look at muscle injury in general and then examine an injury which often occurs in rowers and yachts.

Muscle injuries can occur in many different parts of the muscle structure. About 40 per cent of muscle injuries tear within its body or fleshy part. Another 40 per cent of tears occur at the junction of the muscle and tendon. Muscle may also tear away from either its bone origin or insertion.

Muscle tears or pulls, medically termed strains, are categorised as Grades I, II and III. In a Grade I strain, less than 10 per cent of the muscle fibres are torn and an experienced medical practitioner can not feel a defect. Grade II strains involve 10-50 per cent of the muscle fibres and can usually be felt by a practitioner. Grade III strains are extensive tears or complete ruptures with a large palpable depression in the muscle; contraction of the muscle is difficult or impossible. Grade III and many Grade II strains require expert evaluation and treatment.

Several factors increase the chance of strain. Previous injuries that haven't been properly or completely rehabilitated are a major factor. Another, is a previously injured muscle which healed with contracted scar tissue which limits normal muscle excursion, or its ability to extend

of power that place added stress on muscles. These factors as well predispose one to muscle strains.

## Rowing injury and rehabilitation

We can illustrate the stages of rehabilitation with the example of a rower with a mild strain of the shoulder.

Three primary ranges of motion are involved in rowing, shoulder extension, horizontal shoulder extension and scapular adduction. Shoulder extension involves the lower pectoralis major, the lower latissimus dorsi and the teres major muscles with help from the posterior deltoid. In this motion, your elbows move from in front of your body down and back until they are behind your trunk.

When your palms are facing downward as in rowing sculls, at the beginning of your rowing motion, the posterior deltoid, the teres minor and the infraspinatus muscles are involved in horizontal shoulder joint extension. Your arms travel on a horizontal plane from in front of your body, to the sides and behind your trunk.

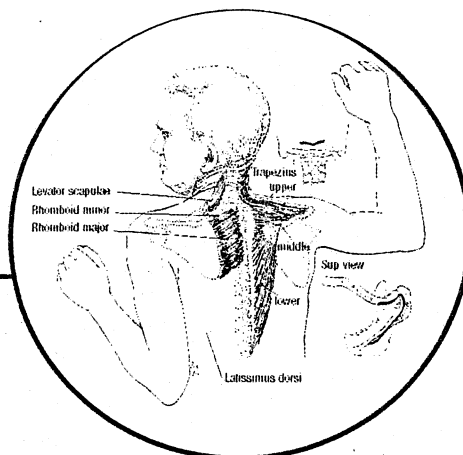
In the shoulder girdle, the middle trapezius and rhomboid muscles are involved in scapular adduction or retraction in which your shoulder blades slide toward one another.

These three ranges of motions are important not only in rowing, but in gymnastics, tennis, racquetball and badminton.

After a strain in any of these muscles, the first stage of treatment is rest and ice.



and contract. In addition, unusual tightness in the muscle which limits motion increases the likelihood of strain. Failure to warm up or stretch properly is another common reason. Finally, muscle fatigue from over-exertion or over-exposure to cold temperatures can reduce the capacity of muscles to bear the sudden bursts



Depending upon the soreness, this can be done for 1 to 3 days. Be sure to protect the skin by covering the area with a towel before applying ice. At this stage it is often helpful to apply topical Arnica Montana lotion or ointment to the affected area. Studies have demonstrated that Arnica relieves pain and reduces the inflammation of strains and bruises. Minor skin irritation in some individuals is reported, otherwise Arnica is perfectly safe to use externally.

The second phase of treatment is to make sure that you gently stretch to assure maximum, normal lengthening and contracting (excursion) of the muscle-tendon unit. How fast you progress depends upon the degree of injury. Begin with limited range of motion exercises and monitor the response of the muscles carefully. Yoga asanas, which involve slow, highly focused stretches are excellent at this stage. Consult an experienced teacher for instruction for the particular asanas applicable for your rowing injury.

The third phase begins when full contraction and extension of the muscle is possible. In this phase, progressive resistance exercises are started. Begin with light weights and gradually increase resistance.

The fourth stage of rehabilitation is the integration of the injured muscles with the adjacent muscles. Start with simple patterns and then proceed with more complex patterns. With rowing, for example, you may begin with using a seated rowing machine, such as a Nautilus machine, and mimic the exact rowing motions you perform in the water.

The fifth and last rehabilitation stage is ensuring your preparedness for returning to rowing. Your agility and

responsiveness should be normal. Your total conditioning should be up to par. At this stage, it is best if you keep a close consultative relationship with your physician, trainer and coach to determine that you are ready for unrestricted activity.

Remember that there is much you can do on your own for minor strains, but that if you have severe or chronic pain or restriction, it is essential that you seek the direction of a qualified professional. A careful and conservative approach is always wisest.

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*Stephen Paine, OMD, is an acupuncturist licensed in Hawaii and a diplomate of the (US) National Commission for the Certification of Acupuncturists and Doctor of Oriental Medicine. He practises from Optimum Health Centre, Causeway Bay.*

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