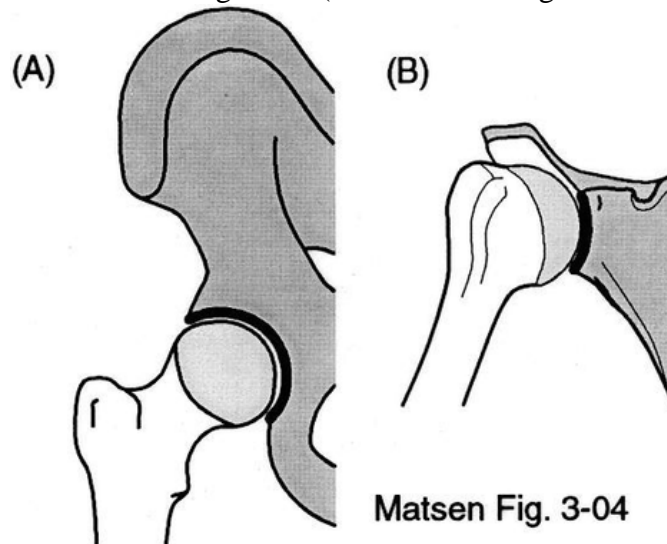


Shoulder Dislocation

The most common major injury experienced by paddlers is, without a doubt, a dislocated shoulder. Several club members have 'tweaked' their shoulder recently and it's important that everyone knows how to avoid damaging their shoulder.

Mechanics

The shoulder joint (or, more accurately, the glenohumeral joint) is designed to allow an extremely wide range of movement. Unfortunately, this has been achieved at the expense of the strength of the joint. The joint is not a true ball and socket joint, like the hip (A below), but instead consists of the billiard ball sized head of the humerus resting on a teaspoon sized structure called the glenoid (illustrated in diagram B below).



Given that the joint is not stabilised by tight ligaments, and that the glenoid provides support to the humeral head through an angle of only around 30 degrees, it's quite amazing that the joint stays together at all. The reason that the shoulder joint is normally stable is that muscles around the joint keep the head in place. These muscles are, however, not ideally positioned for strength, as they support the humerus very close to the joint. The problem becomes worse at extremes of joint movement.

Avoidance

There are therefore two ways to avoid damage to the shoulder:

1. Avoid moving the arm to a position that places the joint in an awkward position. This is achieved in practise by executing strokes properly and by using torso rotation to avoid having to rotate the shoulder so far.
2. Avoid placing large forces on the joint. This is achieved by keeping the arm bent. This reduces the leverage that any force will apply at the joint and also allows the arm to flex and absorb shocks, preventing large forces being transmitted to the shoulder.

Unfortunately, efficient paddling technique sometimes demands that the arm be placed in some awkward positions and also that the arm be kept straight. The answer is to avoid awkward positions as far as possible, and where they are essential keep the arm as bent as you can.

So what's a safe position and what isn't? As a general rule, the arm should never pass behind the shoulders, as this is the position that most dislocations occur in. The safest place for the arm is in front of the shoulders and below shoulder level. If the arm is raised higher than this (e.g. bow rudder), the arm should be kept bent to absorb shocks.

Strokes to be careful of are:

- **High Brace.** Never raise the paddle above head height – this should keep the forearm below the shoulders. Also, always keep the arm bent. Be sure to keep the arm in front of the body – this is particularly important when performing the high brace on the move.
- **Bow Rudder.** Never even think about taking the top arm behind your head in the style of certain slalomists. Keep the top arm bent and in front of your forehead. If you need to move the blade round and back to perform that perfect slalom turn, achieve this by body rotation.
- **Sweep Stroke.** The problem comes at the end of the stroke. Use body rotation to go as far as can to get the blade towards the back of the boat, then stop before the arm goes behind the body. With good flexibility this will be enough for a full sweep.
- **Stern rudder.** Putting a bend in the rear elbow results in a safer stroke. Good body rotation is required here.
- **Rolling,** Don't sweep right to the back of the boat. Instead learn to roll up leaning forwards – it's better technique anyway.

First Aid

The symptoms of a dislocation are fairly obvious – the shoulder won't work properly and will appear deformed. The victim will generally hold their arm across their body as if supported by a sling. The pain will set about 5 minutes after the dislocation and get progressively worse as the muscles contract to splint the shoulder into position. The symptoms are similar to those of a broken collarbone, but observing the nature of the deformity should indicate the nature of the problem.

Immobilise the arm to the chest using a sling, or by attaching the spraydeck release handle to the buoyancy aid shoulder strap. Get the victim to medical care as soon as possible, as the dislocation will become harder to reduce as the muscles progressively tighten.