

As I’m sure you’re all quite aware, shoulder dislocation is one of the most feared - and unfortunately one of the most common – injuries faced by kayakers. I recognise that there has been a dislocation recently in the club, which was dealt with promptly, but for those of you who are interested in knowing more about recognising and managing shoulder dislocation, read on.

Disclaimer: The following applies to situations where you are far from medical services. If you can get to a nearby hospital (i.e. you’re up the Hurunui), do so. Clearly having a medical professional relocate a shoulder is preferable, but if you have little choice, it is likely worth trying the following techniques.

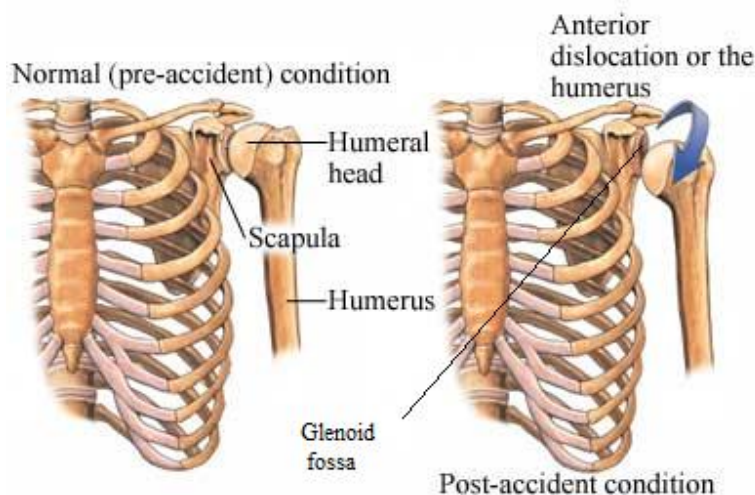


Figure 1

Medically, we talk about ‘**reducing**’ a dislocation. This involves attempting to pop the **humeral head** back into the **glenoid fossa**. (Figure 1). There has been significant talk over the years as to whether so-called “blind” reduction (without prior X-ray to ascertain fracture status etc) is safe to perform, and whether long-term outcomes are as satisfactory. A recent study (the details of which I am currently chasing up) suggests that it may be appropriate for kayakers to be shown how to reduce dislocated shoulders. Perhaps we should have an interactive session at some point soon, but for now let’s discuss the theory:

It’s important to note that the only scenario in which it is of benefit to attempt reduction is when one can be confident a dislocation is present. In certain groups, fracture is a more likely outcome than dislocation, and management should be changed in these situations. The **main benefit in reducing shoulders is pain reduction**. Trust me: your mate will breathe a sigh of relief once that joint pops back in. Let’s take a look at how to assess whether we should attempt reduction:

- Patient/Paddler:
 - o At the two extremes of **age** (the young and the old), fracture is a more likely outcome than dislocation in the context of a shoulder injury. In children this is due to unfused growth plates present in their long bones (creating a weak area for the bone to fracture through), and osteoporotic change to bones in the elderly. Obviously the majority of us in the UCCC aren’t at either of these extremes, but it’s worth noting **not to attempt in reduction in children or the elderly**.

- Mechanism/history
 - o It is important to ensure that the **mechanism of injury** is consistent with a suspected dislocation. If you see a paddler perform a bad high brace (See Figure 2), and suddenly scream in pain, you can be pretty confident that he will have dislocated his shoulder. If he has had **previous dislocations** of the previous shoulder, this would add to your clinical suspicion.



Figure 2

- Examination
 - o A normal shoulder should look nicely **rounded**. Take a look at your deltoid in the mirror now. Now compare this to the following photos:



- o The right shoulder is dislocated in both examples. Note how the shoulder now has a **shelf-like or step-down appearance**. This is typical of an **anterior dislocation**, which makes up 85% of dislocations (the humeral head pops out the front of the joint). Posterior dislocations tend to occur in electrical shock patients, and those who have experienced a seizure.
- o Lastly, to ensure that the problem is the joint and not the bone, externally rotate (Figure 3) the shoulder. If the patient complains of pain in the joint itself, this would support your diagnosis of shoulder dislocation. The paddler also shouldn't be able to move the shoulder as freely as normal. If any **crepitus** (grating of bone fragments) is heard or felt when moving the shoulder, **do not attempt** reduction.

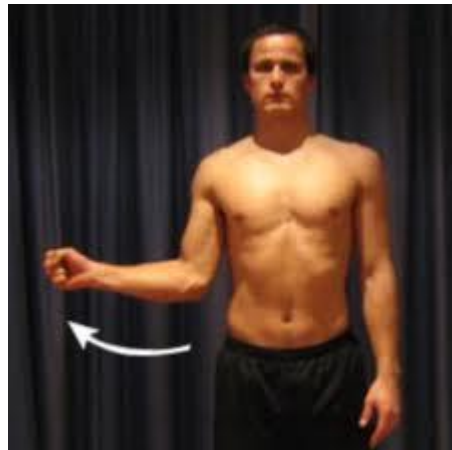


Figure 3

Now that you’re confident the paddler has a dislocated shoulder, it’s time for you to attempt reduction. Don’t attempt it if you’re not confident, so have someone who has experience with this show you before you do it yourself. Important, though, is to always **apply as little force as is possible**, and to **perform the reduction slowly and smoothly**. If you apply a great deal of force, you run the risk of doing permanent damage to the shoulder. Performing the reduction slowly not only lowers this risk, but also helps quieten the muscle spasms around the dislocated joint. If the patient’s deltoid is spasming, there’s no way you’ll be able to fight this and reduce the shoulder. Take it slow. Don’t jerk the arm. While the paddler will be in pain, it’s worth taking your time. Often, **painkillers prior to attempted reduction** are a good idea.

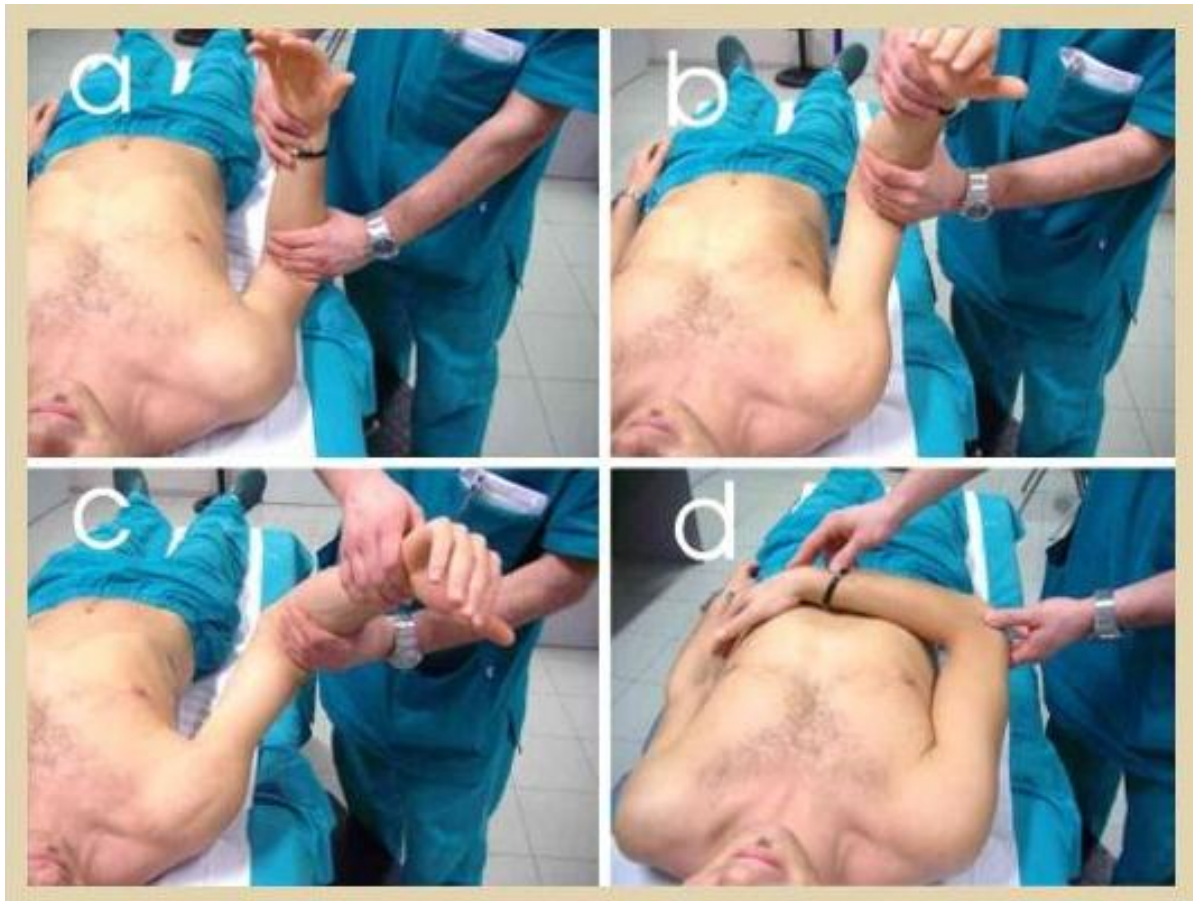
Various techniques exist for reduction, and it’s a matter of picking one that works for you. If you see me on a trip sometime soon, I’ll be more than happy to demonstrate. Personally, I am a fan of the FARES method. It’s highly effective, and is the least painful of all the procedures if performed correctly. The FARES method is the first one demonstrated in the following video. Note how they perform all reductions slowly and with a small amount of traction:

<https://vimeo.com/8605660>

Here’s a description of the method:

1. While holding the patient’s wrist, apply traction to the affected limb in a neutral position beside the supine patient (can also be performed in the prone position).
2. Move the limb anteriorly and posteriorly in small oscillating movements while continuing to apply traction and start slowly abducting the limb.
3. Once the limb is abducted to 90 degrees, externally rotate the limb at the shoulder, with ongoing traction and oscillating anterior/ posterior movements. Continue to slowly abduct the limb past this position.
4. Clunk! Reduction is usually achieved once the limb is abducted to 120 degrees.

If you’re after something simpler, try the **External Rotation method**. This, if performed slowly over the space of 4-5mins, is also very effective and relatively pain-free. Essentially this involves bring the arm in to the paddler’s side, flexing it to 90 degrees as show in A below, then externally rotating the arm gradually until reduction is achieved:



- A. Hold the paddler’s arm at his side, the elbow flexed at 90 degrees.
- B. Ensure that the paddler’s elbow is tucked into their side, and begin externally rotating the shoulder outward (see how the patient’s forearm is moved outward while the elbow is kept tucked in beside them).
- C. The arm can be lifted 20 degrees or so to make this technique more effective, but this is not always necessary.
- D. Once you hear or feel the clunk as the shoulder pops back in, lay their arm flat across their chest.

Once you’ve (hopefully) successfully reduced the shoulder, place the arm in a sling with the arm across the front of the body as shown (Figure 4). High fives at this point are suggested.



Figure 4

Just a final note: while shoulder dislocation is often merely painful and annoying (putting you out of paddling for awhile) one of the more serious complications is that of an **avascular limb**. Essentially, this looks like a cold pale arm on the dislocated side, due to the dislocation blocking off blood vessels to the arm. The best way to manage this with the shoulder is reducing the joint asap if you know how, but alternatively the arm can simply be placed in a neutral position (**flat across the chest**), which is often enough to restore blood flow to the limb. You will see this as the arm/hand pinking up pretty quickly. If you’re still worried they may have an avascular limb and you can’t reduce the dislocation, get them to a hospital mighty quick.

If you all have any pressing questions with regards to management of kayaking injuries, do let me know. I hope you all find this helpful!

Ben McLaughlin

Safety Officer