

Treating Dislocations in a Remote Setting

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A dislocation is a joint injury in which the bones are partly or completely pulled out of position by a strong force wrenching the bone into an abnormal position or by a violent muscular contraction. It can be a very painful injury mostly affecting the shoulder, jaw or joints in the fingers and thumbs. Fractures, torn ligaments, nerve and blood vessel injuries may be present with a dislocation. A partial dislocation without loss of contact between joint surfaces is a subluxation.

The correction of dislocations can be technically difficult and the advice in first-aid courses and manuals is not to try to reposition a dislocated bone into its socket because this may cause further injury. First-aiders are advised to support the injured part in a position of maximum comfort before immobilising it with padding, bandages and slings, and to arrange to transport the casualty to hospital. Treat for shock, if necessary, and check the circulation beyond the bandages every 10 minutes. If the circulation is impaired, loosen the bandages.

First-aid training is designed to provide the skills to preserve life and promote recovery until medical help is available, but it assumes that help will arrive quickly. To equip the individual to deal with someone having a dislocation in a remote setting, where medical help is likely to be unavailable for some time, the following knowledge may be required.

Clinical signs

Pain aggravated by movement, tenderness, swelling, discoloration, limitation of movement and deformity. It usually prevents use of the extremity. Compare the injured limb with the other side. Although the correction of dislocations can be difficult, attempts to correct the deformity are justified in certain circumstances, particularly in

remote areas. If the blood supply to the distal part of the limb is obstructed by a dislocation, reduction must be attempted. Steady firm traction along the limb's long axis may correct the deformity or at least relieve the obstruction temporarily.

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Reduction should be attempted as soon as possible because of increasing muscle spasm and after, splint the limb as for a fracture. Distract the patient while you do the reduction by asking them to concentrate on breathing slowly and deeply.

All treatments have potential dangers and should only be employed when the risks are outweighed by the potential benefits. To prevent doing harm, it is sometimes better to do nothing

Specific Dislocations

Fingers: Dislocation is easily reduced with longitudinal traction. Splint with strapping afterwards.

Thumb: Often associated with a fracture; best management is immobilisation.

Jaw: If the jaw is locked open, it is dislocated. Sit the patient upright against a wall with padding behind the head. Stand in front of the patient. Wear gloves and pad the thumbs to avoid injury. Place the thumbs over the victim's lower molars and move the mandible down, then posteriorly, and then up. The jaw should then pop back into its socket.

References

Field Guide to Wilderness Medicine: Paul Auerbach
Mosby - good illustrations

Advanced Medicine for Remote Foreign Travel
www.wildernessmedicaltraining.co.uk

Elbow: As with all fractures and dislocations, check the pulse and sensation before and after reduction. With counter-traction on the upper arm, apply linear traction with the elbow slightly flexed and the forearm in the original degree of pronation or supination. This can be a very painful manoeuvre. Splint the elbow at 90 degrees.

Shoulder: Diagnosis is suggested by squaring of the shoulder joint because of anterior, medial and inferior displacement of the humeral head. The patient bends forward at the waist while you support the chest with one hand. With your other hand, grasp the patient's wrist and apply steady downward traction and external rotation. Whilst maintaining traction, slowly flex the patient's shoulder by moving it in a cephalad direction until the reduction is obtained. If skilled individuals are present or if definitive medical care is distant, early reduction of the dislocation can greatly improve the patient's discomfort. The key element is rapid action because the longer a shoulder remains dislocated, the more difficult the eventual reduction.

Knee: Knee dislocation is obvious because of the amount of deformity involved. Check the distal pulses and sensation. Apply linear traction to the lower limb. This is generally successful regardless of the direction of dislocation. Immobilise as for a fracture and, if possible, arrange for emergency evacuation.

Hip: Do not attempt to reduce a dislocated hip as it is very likely that a general anaesthetic will be required.

