

Pop goes the elbow

Biceps muscle injuries in the workplace: Is surgery advised?

Biceps muscle injuries, even distal ones, are more common in the workplace than you might think. WorkSafeBC typically receives about one distal biceps rupture referral a month. An example of a worker who might experience this type of injury is a male paramedic who tries to lift a heavy patient on a stretcher.

About the biceps

The biceps muscle has two heads (see the **Figure**):

1. The long head that arises from the superior aspect of the glenoid and passes through the shoulder joint.
2. The short head that arises from the coracoid process and inserts into the radial tuberosity distal to the elbow joint.

The functions of the biceps muscle are to flex the elbow (in association with the brachialis muscle), to supinate the forearm, and to help stabilize the shoulder during activities such as throwing. Injuries can occur to either the long head of the biceps or the distal tendon close to its insertion.

Injuries to the long head of the biceps

These injuries are quite common in men over 40 years of age. Those who suffer from the injury often have a history of intermittent shoulder pain.

Signs and symptoms

- Sudden sharp pain in the upper arm—often associated with a “pop.”

A NOTE FROM DON GRAHAM

Season's Greetings... and, since this is my last WorkSafeBC page before my retirement, all the best to you—not only in 2008, but beyond as well!

- Bruising of the anterior upper arm and a Popeye-like deformity of the biceps muscle.
- Local pain and tenderness.

Treatment

- Usually conservative, with RICE and early mobilization of the shoulder joint to prevent stiffness.
- Occasionally, in younger patients, surgery is indicated to reattach the tendon to the bone.

Injuries to the distal biceps tendon

This less common biceps injury may occur when the elbow maintains flexion against resistance. Again, this injury is more likely to occur in males.

Signs and symptoms

- Sudden sharp pain over the anterior aspect of the elbow, sometimes accompanied by a “pop.”
- Some weakness of elbow flexion—can be masked by a functioning brachialis muscle, which is a powerful elbow flexor.
- Weakness of supination of the forearm.
- Bruising of the anterior elbow and sometimes a palpable defect in the biceps tendon.

Investigations

- X-rays to rule out any other pathology.
- Ultrasound or MRI to confirm the diagnosis.

Treatment for distal biceps injuries is usually surgical repair to restore forearm supination and some flexion strength to the elbow. To obtain the best results, surgery should be done as soon as possible after the diagnosis has been made. If a repair is not



Figure. Biceps brachii.

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performed, functional impairment of elbow flexion and supination of the forearm can be career-ending (and sports-ending) for those who need to use their upper extremity for heavy lifting.

For assistance

If you're unsure about the need for referral for a biceps injury, please contact your community orthopedic surgeon as you would for any patient. If the surgeon agrees to see an injured worker patient who has an accepted WorkSafeBC claim, you may refer directly for an expedited orthopedic consult without prior authorization from WorkSafeBC. For such patients, community orthopedic surgeons may use billing codes for expedited consults.

WorkSafeBC does not operate an urgent care centre/hospital. If an urgent surgical assessment is required, please contact your on-call community orthopedic surgeon. For nonurgent medical matters, please call your nearest WorkSafeBC office and speak with a medical advisor.

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