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# Spinal Cord Injury (SCI): Upper Limb Care

For people with a spinal cord injury (SCI) who have some ability to use the shoulders, arms, or hands (upper limb mobility), there is a risk for overuse. This can lead to upper limb problems or injury. During your rehabilitation, your healthcare team helped you learn the best ways to care for your upper limbs and the rest of your body. Once at home, you need to practice what you learned to stay healthy and avoid injury.

## Understanding upper limb problems

Upper limb problems often develop slowly due to repetitive actions. These include pushing a wheelchair, reaching for objects overhead, or lifting the body for transfers and pressure relief. Over time, these actions can strain the upper limbs. Muscles, bones, and joints can be injured. This can lead to pain, loss of function, and loss of movement. The hands, wrists, elbows, and shoulders can all be affected.

- **Hands.** The hands (and fingers) are prone to injuries. These include blisters, cuts, and abrasions. These are often caused by rubbing, scraping, or pinching the hands against wheelchair parts and other surfaces.
- **Wrists.** Carpal tunnel syndrome is the most common problem that affects the wrists. It occurs when the median nerve that runs through the wrist becomes compressed because of overgrowth of the carpal ligament. This can happen after repeated use of the wrists. Carpal tunnel syndrome can cause numbness, tingling, or shooting pain in the hands and wrists.
- **Elbows.** Elbow problems often involve too much pressure on the ulnar nerve. This nerve is in the elbow where the "funny bone" is found. Over time, constant use of the elbow can cause the nerve to be inflamed and pinched. This can lead to pain or numbness. Leaning on the elbow, such as on the arms of a wheelchair, can also damage the ulnar nerve.
- **Shoulders.** Impingement syndrome (pinching in the shoulder) and tears in the rotator cuff (group of muscles and tendons that support the shoulder) are the most common problems that affect the shoulder. They can cause shoulder pain and swelling. They can also cause weakness when elevating your arm or loss of ability to lift objects.

## When to get treatment

Limb problems can restrict your function. And they may require long periods for treatment and healing. If you have pain, swelling, or weakness in your upper limbs, be sure to let your healthcare provider know right away. The earlier an injury is found, the sooner treatment can start.

## Protecting and maintaining upper limb function

A physical therapist (PT) or occupational therapist (OT) can work with you to help treat and prevent upper limb problems. This may include:

- Doing daily stretches and range-of-motion and resistance exercises to strengthen muscles and improve limb flexibility

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- Improving body movements to conserve limb strength and energy
  - Learning better techniques for transfers to reduce pressure on the skin and also offer upper limb joint protection
  - Adjusting equipment to improve posture and provide proper support for limbs
  - Padding arm rests and other support can reduce pressure on the ulnar nerve

If needed, a family member or caregiver can learn how to help you with your limb care needs. Talk with your healthcare provider, PT, or OT for more information.

During your rehabilitation, you were likely provided care by a physiatrist. This is a doctor who specializes in restoring and maintaining function. It's important to maintain care with a physiatrist. This is because your condition may change with time. You may need to change your treatment and assistive devices. For instance, if your weight, abilities, or other health conditions change, you may need a change in your wheelchair or other assistive devices. Adding padding on the arms of your wheelchair can help protect your nerves or ease the strain on your upper extremity joints.