

## PATIENT EDUCATION

### Cervical Fracture

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# Cervical Fracture

You have seven bones in your neck. These are the cervical vertebrae, which support your head and connect it to the shoulders and body. A fracture, or break, in one of the cervical vertebrae is commonly called a broken neck.

Cervical fractures usually result from high-energy trauma, such as automobile crashes or falls. Athletes are also at risk. A cervical fracture can occur if:

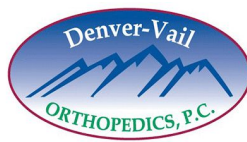
- A football player "spears" an opponent with his head.
- An ice hockey player is struck from behind and rams into the boards.
- A gymnast misses the high bar during a release move and falls.
- A diver strikes the bottom of a shallow pool.

Any injury to the vertebrae can have serious consequences because the spinal cord, the central nervous connection between the brain and the body, runs through the center of the vertebrae. Damage to the spinal cord could result in paralysis or death. Injury to the spinal cord at the level of the cervical spine can lead to temporary or permanent quadriplegia, paralyzing the entire body from the neck down.

### **Emergency response**

In a trauma situation, the neck should be immobilized until X-rays are taken and reviewed by a physician. Emergency medical personnel will assume that an unconscious individual has a neck injury and respond accordingly. The victim may experience shock and either temporary or permanent paralysis.

Conscious patients with an acute neck injury will usually have well-localized severe pain. They may also have pain spreading from the neck to the shoulders or arms, resulting from the vertebra compressing a nerve. There may be some bruising and swelling at the back of the neck. The physician will perform a complete neurological examination to assess nerve function and may request additional radiographic studies, such as an MRI or computed tomography (CT) scan, to determine the extent of the injuries.



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#### **Treatment**

Treatment will depend on which of the seven cervical vertebrae was damaged and the kind of fracture sustained. A minor compression fracture can be treated with a cervical brace worn for six to eight weeks until the bone heals. A more complex or extensive fracture may require traction, surgery and internal fixation, two to three months in a rigid cast, or a combination of these treatments.

Improvements in athletic equipment and rule changes have reduced the number of cervical fractures over the past 20 years. You can help protect yourself and your family if you:

1. Always wear a seat belt when you are driving or a passenger in a car.
2. Never dive in a shallow pool area, and be sure that young people are properly supervised when swimming and diving.
3. Wear the proper protective equipment for your sport and follow all safety regulations, such as having a spotter and appropriate cushioning mats.