



Congenital Cervical Stenosis

DESCRIPTION

A cervical (neck) stenosis that is congenital, meaning a person is born with it, is diagnosed after an x-ray reveals a narrowing (stenosis) of the space within the spine for the spinal cord. There is much controversy about this radiographic finding. Some experts suggest that athletes with cervical stenosis are at a higher risk of spinal cord injury than those without stenosis and that athletes with cervical stenosis are likely to experience temporary or permanent numbness, weakness, or paralysis if injured. Other experts suggest that such athletes are not at higher risk for injury, although if injured, they are at higher risk for permanent neurologic injury, including paralysis and death.

Cervical stenosis has been shown to exist in a large number of professional and collegiate football players without any history or symptoms of neurologic injury or neck problems. Cervical stenosis has been associated with temporary shoulder pain and numbness or weakness of the shoulder, arm, elbow, and hand and even temporary and permanent paralysis of the upper or lower extremities. Recommendations made to athletes about returning to play after they have experienced temporary paralysis are controversial, as are the recommendations made to athletes who have the condition but have never experienced any symptoms.

COMMON SIGNS AND SYMPTOMS

Cervical stenosis may be asymptomatic.

CAUSES

A congenital narrowing of the spine in the neck is problematic when combined with an injury resulting from using the head as the initial point of contact when tackling; such an injury may result in a loss of the normal curve of the neck.

FACTORS THAT INCREASE RISK

Congenital cervical stenosis is a narrowing of the spine at the neck that a person is born with.

PREVENTIVE MEASURES

You cannot prevent congenital narrowing of the spine; however, several factors can help reduce injury to the cervical spine, with or without stenosis:

- Use proper techniques (avoid spearing, head butting, and tackling with the head; use proper falling techniques to avoid landing on the head).

- Maintain appropriate conditioning, including neck strength and flexibility.
- Appropriately warm up and stretch before practice or competition.
- Wear protective equipment, such as padded soft collars, for participation in contact sports.

EXPECTED OUTCOME

The internal diameter of the spine cannot be changed; however, many athletes will suffer no adverse consequences from this condition.

POSSIBLE COMPLICATIONS

- Permanent or temporary numbness, weakness, or paralysis in the upper or lower extremities
- Death

GENERAL TREATMENT CONSIDERATIONS

Stopping contact sports is controversial. If symptoms occur, the initial treatment consists of medications and ice to relieve pain, stretching and strengthening exercises, and the modification of the activity that initially caused the problem. These can all be carried out at home for acute cases; for acute or chronic cases, physical therapy may also be beneficial. If symptoms are severe, a soft, padded fabric or hard plastic cervical collar may be recommended until the pain subsides. Surgery is rarely necessary.

There is no way to increase space for the spinal cord at the neck without surgery; however, surgery affects the stability of the spine and thus usually prevents the athlete from being able to compete in contact sports.

Participation in contact sports and diving is controversial with this condition. An athlete with spinal stenosis may be allowed to participate in contact sports, although it is not clear whether the risk of death or a permanent injury, specifically quadriplegia, may be higher for athletes with cervical stenosis than for those without a congenital narrowing of the cervical spine.

MEDICATION

There are no medications available to alleviate this condition.

WHEN TO CALL YOUR DOCTOR

Call your doctor if you want to discuss this problem.

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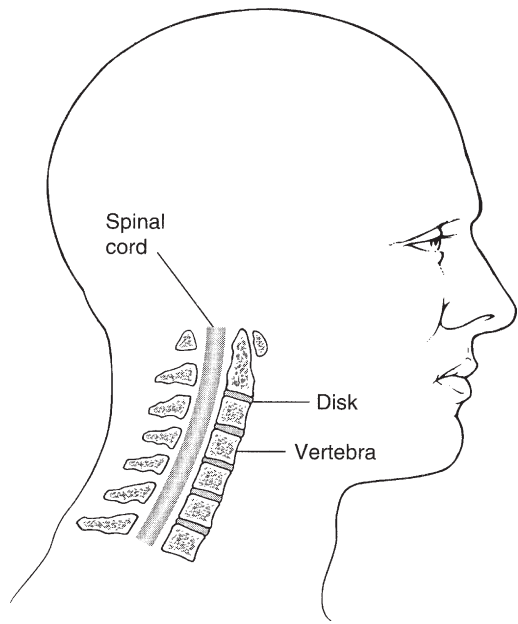


FIGURE 1

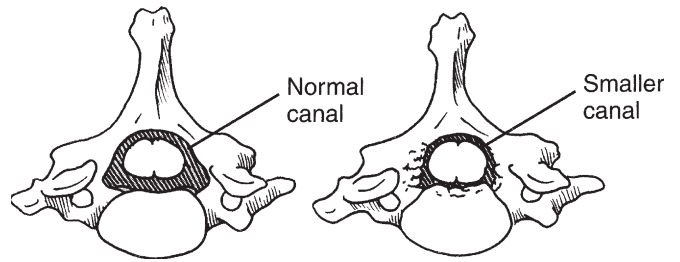


FIGURE 2 From Shankman GA: *Fundamental orthopedic management for the physical therapy assistant*, St Louis, 1997, Mosby Year Book, p 227.