It's not clear why most spinal tumors develop. Experts suspect that defective genes play a role, although it's usually not known whether such genetic defects are inherited, occur spontaneously or are caused by something in the environment, such as exposure to certain chemicals. In some cases, however, spinal tumors are linked to known inherited syndromes, such as neurofibromatosis 2 and von Hippel-Lindau disease.

The parts of your spine that are likely to be affected by a spinal tumor include the:

- **Vertebrae.** Your spine is made up of small bones (vertebrae) stacked on top of one another that enclose and protect the spinal cord and its nerve roots.

- **Spinal cord.** Your spinal cord is a double-layered, long column of nerve fibers that carries messages to and from your brain. Wrapped around the entire spinal cord are three protective membranes (meninges).

### Types of spinal tumors

Spinal tumors are classified according to their location in the spine.

- **Extradural (vertebral) tumors.** Most tumors that affect the vertebrae have spread (metastasized) to the spine from another site in the body — often the prostate, breast, lung or kidney. Although the original (primary) cancer is usually diagnosed before back problems develop, back pain may be the first symptom of disease in people with metastatic spinal tumors.

  Cancerous tumors that begin in the bones of the spine are far less common. Among these are osteosarcomas (osteogenic sarcomas) and Ewing's sarcoma, a particularly aggressive tumor that affects young adults. Multiple myeloma is a cancerous disease of the bone marrow — the spongy inner part of the bone that makes blood cells. Noncancerous tumors, such as osteoid osteomas, osteoblastomas and hemangiomas, also can develop in the bones of the spine.
Intradural-extramedullary tumors. These tumors develop in the spinal cord's arachnoid membrane (meningiomas) and in the nerve roots that extend out from the spinal cord (schwannomas and neurofibromas). These tumors may be cancerous or noncancerous.

Intramedullary tumors. These tumors begin in the supporting cells within the spinal cord. Most are either astrocytomas or ependymomas. Intramedullary tumors can be either noncancerous or cancerous. In rare cases, tumors from other parts of the body can metastasize to the spinal cord itself.

Symptoms

Risk factors

Mayo Clinic products and services

Spinal cord tumor treatment at Mayo Clinic

Book: Mayo Clinic Family Health Book, 4th Edition

Newsletter: Mayo Clinic Health Letter

Mayo Clinic Cancer Center

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See Also

Neurofibromatosis

References

Oct. 21, 2011

DS00594

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