

# Orthopaedic Connection

## Anatomy of the Neck and Spine

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### *Transforming patient information into patient understanding.*

Think about this for a minute. Where would you be if you didn't have a neck and a spine? You would be like a jellyfish or something!

The neck functions to support the heavy structure of the head and the spine functions to have us stand upright and walk around on two legs, not four. The Almighty really knew what He was doing when He put us together, but why does it (our body) need to be so darn complex!

When something goes wrong it can make it really hard to figure out.

### **The Spine**

The spine is a hugely complex structure of bones and soft tissues with several vital functions.

- It supports the upper body
- Protects the spinal cord
- Is a shock absorber
- Allows us to bend

### **Vertebrae**

Our spine is actually a line of bones called vertebrae that stretch from the base of the skull to the buttocks.

The vertebrae are connected to each other by tough bands of tissue called ligaments.

- No two vertebrae are shaped alike
- The top seven are cervical vertebrae (neck)
- There are twelve thoracic vertebrae
- Thoracic vertebrae join with the twelve pairs of ribs
- Lumbar vertebrae are five. They form the lower back structure.
- There are five vertebrae that make up the sacrum
- The sacrum is part of the pelvic ring
- The lowest part is the tailbone or coccyx

### **Spinal Canal**

The large spaces in each vertebrae form a protective vertical tunnel that protects the spinal cord. The brain and spinal cord make up the central nervous system.

The brain of course is the general or leader. The spinal cord carries the messages to all parts of the body telling all parts of the body what to do. It is the superhighway path through which pass signals to all body parts.

### **Spinal Nerves**

The vertebrae have holes on their sides to accommodate spinal nerves which run from the spinal cord to all other parts of the body. Near the

lower end of the spine several spinal nerves combine to form two sciatic nerves which go the hips and legs. Sciatic nerves are the largest in the body.

### **Muscles, Ligaments**

Ligaments are the tough fibrous deep structures that hold all the vertebrae together. On top of this are a large number of muscle groups you have never heard of. They provide support and flexibility to the spine and make movement possible. Strong and flexible muscles through exercise make it a lot less likely you will suffer from back pain.

### **Discs**

Between each vertebra is a disc which is a cylindrical pad that cushions the bone and acts as a shock absorber when you move.

Well, there you have Dr. Haverbush's brief course in the neck and spine. Hopefully you will begin to appreciate how impossibly complex these bony and nerve structures are. The complexity and the enormous number of things that can go wrong with the neck and spine make diagnosis and treatment very difficult. But, I'm not complaining, that is my job.

### **Gratiot County Herald Archive and Office Website**

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- The Office Website and library
- Your Orthopaedic Connection
- Gratiot County Herald Archive of every article I have written (complete text).

It contains tons of useful information you or someone in your family can use.

All of the information available concerns what I am treating daily in the office and hospital. Log on and check it out.

Our goal is simple - To help people return to more pain free, functional lives. I specialize in you.

Good health. Good life. All the best to you.

Be well.

Dr. Haverbush