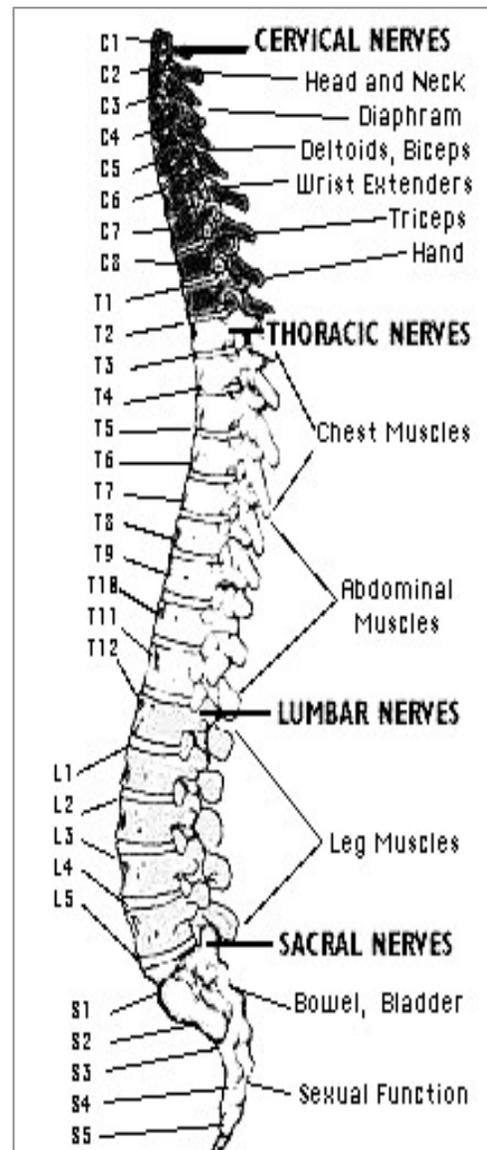


## *~Chapter 2 The Relationship of the Spine~*

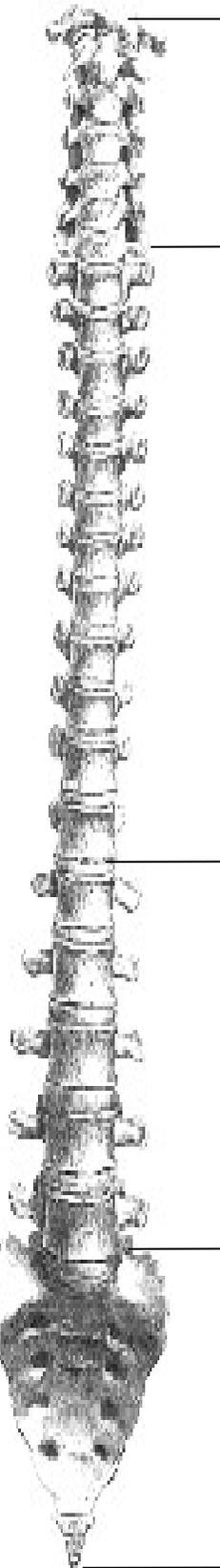
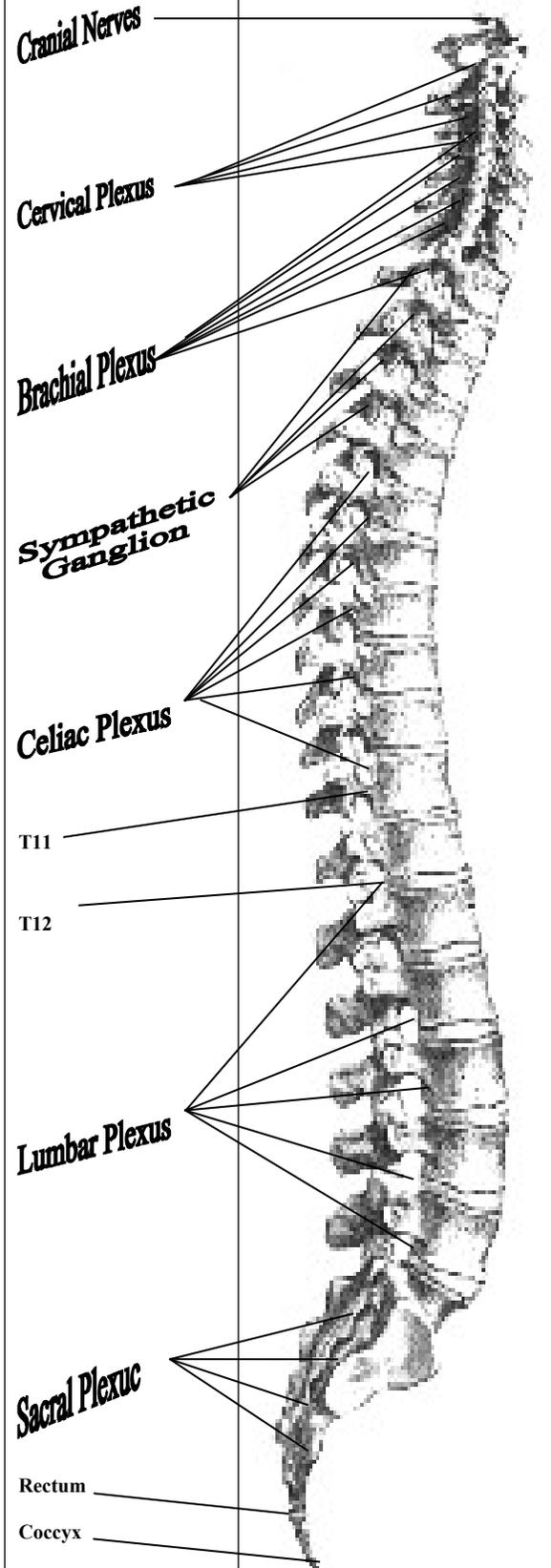
We now turn our attention towards the spine, the shape of the spine and the relation it has to various bodily functions. We will devote more time to the spinal nervous system. But before we do we need to formulate an idea of the spinal column so that we may better develop our understanding. The common and accepted understanding is that the shape of the head will determine the positioning of the spine and its related vertebrae needed to support the shape and weight of the head. This positioning determines the relation of the spinal and pelvic posture in the body. A good way to think of the spine is as a linked set of bones/segments that are flexible and shift or move/bend with the natural flow of the body. The spine is connected on both ends. In the lower regions it has a series of nerves and muscular tissue that connects it to the pelvic bones. In the upper region the spine flows through the Foramen Magnum in the Occipital cranial plate and is surrounded by the brain and connected with a series of muscles and nerve endings. The spine itself is supported on either side by various muscles within the back that parallel the spine and spinal column. Without these back muscles the spine would twist and turn much like a coil or a snake. The muscles in the back help keep the spine in alignment with the head and the pelvis and also help keep the nervous system that runs along the spine in a free flowing functional state. The main function of the spine is to assist in holding the body upright. This is an essential function and critical in the neck and upper back, between the shoulder blades. The reason why this area is so critical is due to the fact that most all aspects of the nervous system is located and housed inside of the skull. An unstable skull, shifted cranial plates, and misaligned vertebra put's excess pressure upon the nervous system. This manifests itself in the form of pinched nerves and decreased the flow of cerebrospinal fluid needed to lubricate the entire nervous system and resulting in abnormal body function. The overall positioning of the spine and the muscles supporting it are determined by the nervous systems need to structuralize and maintain the skulls/cranial plates stability. When the cranial plates are shifted or locked it dramatically shifts the balancing capabilities of the head. This shifting and the ability to balance the head directly effects and causes alterations in spinal postural capabilities. To better understand which sections of the spine the nervous system effects, in relation to the whole body lets take a look at the illustration to the right. The Cervical section of the spine is located in the upper portion of the spine and contains vertebrae C1 through C8. The Cervical section is broken into three sections. The first consisting of and connecting to the cranial nerves located just above

the C1 vertebra, connected to the brainstem and are surrounded and protected by the Occipital and the left and right Temporal Bones. These cranial nerves supply cerebrospinal fluid and add supportive function to the blood supply. This effects the development and function of the head, the scalp, bones of the face, brain, base of the skull, eyes, ears, eustachian tubes, nose, sinuses/forehead, mouth/tongue, vocal chords, tonsils, neck muscles, shoulders, esophagus, heart/coronary arteries, bronchial tubes/lungs, liver, stomach, pancreas, spleen, small intestines and to the colon.

The second part of the cervical section is referred to as the *cervical plexus* and is made up of C1 through C4. The cervical plexus supplies nerve function to the scalp, base of the skull, neck muscles, and to the diaphragm. The third part of the cervical section is referred to as the *brachial plexus* and is made up of C4 through C8. The *brachial plexus* provides function to the neck muscles, shoulders, elbows, arms/forearms, wrists, hands/fingers, esophagus, heart/coronary arteries, bronchial tubes/lungs and the chest/breast.



The Thoracic section of the spine is located from the shoulders down to the small of the back. It consists of T1 through T12 vertebrae. The thoracic is divided into two sections. The first section is referred to as the *sympathetic ganglion*; this section consists of T1 through T4. The sympathetic ganglion provides nerve function and stimulates the blood supply in the head, the brain, eyes, ears/Eustachian tubes, nose sinuses/forehead, mouth/tongue, esophagus, heart/coronary arteries, and bronchial tubes/lungs and to the chest/breast. The second section of the thoracic is referred to as the *celica plexus* and it consists of T5-T10. The celiac plexus provides nerve function to the chest/breasts, gall bladder, liver, diaphragm, stomach, pancreas, spleen, kidneys, small intestines, and to the appendix. T11 and T12 are in a category of their own.

	<p><b>Cervical</b></p> <p><b>Thoracic</b></p> <p><b>Lumbar</b></p> <p><b>Sacral</b></p>	<p>T11 provides nerve function to the small intestines, uterus, and to the colon. T12 nerve provides function to the uterus, buttocks, and to the colon. The small of the back/spinal cord is referred to as the <i>lumbar region</i>. The lumbar region consists of L1 through L5. This section is referred to as <i>the lumbar plexus</i>. The lumbar plexus provides nerve functions to the uterus, large intestines, buttocks, groin, reproductive organs, colon, to the upper legs/thighs, knees, and to the sciatic nerve.</p>	
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The last section of the spinal column is referred to as the sacral section and is made up of the S1 through S5 tailbone segments of the spinal cord. The sacral is made up and referred to as the *sacral plexus*. The sacral plexus provides nerve function to the buttocks, to the reproductive organs, the bladder, prostate gland, sciatic nerve, lower legs, ankles, feet, arches, and toes. The tail end of the sacral provides function to the coccyx, which provides function to the rectum. [24]