

Spina Bifida

What is Spina Bifida?

Spina bifida is a neural tube defect where the spine and spinal cord do not form properly. It is categorized into three main types, ranging from mild and hidden to severe.

1. Spina Bifida Occulta

The Defect: The mildest and most common type. There is a small gap in one or more of the vertebrae (spinal bones), but the spinal cord and nerves remain normal and hidden beneath the skin.

Symptoms: Usually none. It rarely causes disabilities, and many people are unaware they have it until an X-ray reveals it. A small dimple, tuft of hair, or birthmark may appear on the skin above the gap.

2. Meningocele

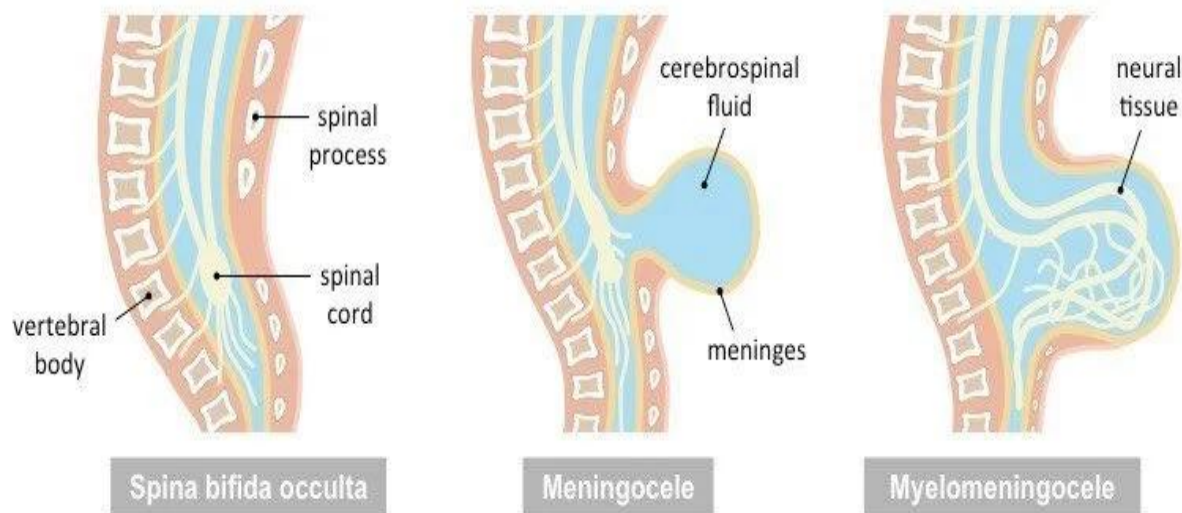
The Defect: A rare form where the protective membranes around the spinal cord (meninges) push out through the opening in the vertebrae, creating a fluid-filled sac. The spinal cord itself is not in the sac.

Symptoms: Generally involves little or no nerve damage. It can cause minor disabilities, and the sac may or may not be covered by skin.

3. Myelomeningocele

The Defect: The most severe and common form of the condition. The spinal canal remains open along several vertebrae, allowing the meninges, spinal fluid, and parts of the spinal cord or nerves to protrude through the opening in a sac.

Symptoms: Moderate to severe disabilities. This often includes partial or complete paralysis of the legs, loss of sensation, and bowel/bladder control issues. It is also frequently accompanied by hydrocephalus (fluid buildup in the brain).



Spina Bifida is commonly caused by a lack of folate during pregnancy and there is no cure for the condition. In Australia this condition occurs in one in every thousand pregnancies in both male and female fetuses and can be detected 18 weeks into the pregnancy.

People with Spina Bifida may also have damage to the spinal cord that can cause:

- Weakness or paralysis of lower limbs;
- Poor or no bowel and bladder control;
- Curvature (scoliosis) of the spine;
- Deformities of lower limbs;
- Poor circulation;
- Impaired balance and sensation
- Osteoporotic (brittle) bones

Benefits from working with RDA

- **Weakness, paralysis or lack of muscle control;** Muscles are strengthened by increase use involved in riding. Even though riding is exercise, it is perceived as enjoyment, therefore the rider has increased tolerance and motivation to lengthen the period of exercise.
- **Poor Balance;** As the horse moves, the rider is constantly thrown off balance, requiring the rider's muscles to contract and relax in an attempt to re-balance. This exercising is similar to physiotherapy, reaching the deep muscles, but making the therapy more enjoyable. The three-dimensional rhythmic movement of the horse is similar to the motion of walking, teaching rhythmical patterns to the muscles of the legs and trunk. Placing the client in different positions on the horse works different sets of muscles. Stopping and starting the horse, changing the speed and direction increases the benefits.

- **Poor Fitness;** Trotting and cantering increase both respiration and circulation. Riding is a physical activity and over time riders increase their stamina and endurance.
- **Poor Confidence and Self-Esteem;** Confidence is gained in mastering new skills normally performed by able-bodied people. The ability to control an animal much larger and stronger than oneself is a great confidence builder.
- **Difficulty with Fine Motor Coordination;** Riding a horse requires a great deal of coordination in order to get the desired response from the horse. Since the horse provides instant feedback to every action from the rider, it is easy for the rider to know when they have given a correct cue. Repetition of patterned movements required in controlling a horse quickens reflexes and aids in motor planning.