Spinal Cord Injury (SCI)

What is Spinal Cord Injury (SCI)?

In Australia someone sustains a Spinal Cord Injury (SCI) every day. It can be caused by a traumatic (motor vehicle, fall, motor cycle, cyclist) or non-traumatic (infection, degeneration) event which results in damage to the spinal cord, and as a result a varied loss of function below the site of injury. This damage can cause a complete loss of all motor or sensory function or an incomplete loss, where people may have some sensation or movement.

People with a SCI may have reduced bowel and bladder control, digestive function, circulation, temperature control and autonomic and sympathetic control below their level of injury.

How does exercise help with Spinal Cord Injury (SCI)?

Exercise for persons with a SCI is very important in the prevention of developing secondary complications. These include a reduced risk of cardiovascular disease, hypertension, stroke, anxiety, pain, depression, obesity, diabetes, urinary tract infections, osteoporosis, respiratory infections, illness and hospitalisation.

It has been shown that regular exercise can assist in the improvement of:

- Cardiovascular function
- Muscular endurance
- Muscle and bone mass
- Lung capacity and function
- Lipoprotein metabolism
- Psychological well-being
- Quality of life
- Activities of daily living

Things to remember

- SCI is characterised by incomplete or complete loss of somatic, sensory and autonomic functions below the lesion level.
- Spinal injury effects the cardiopulmonary and metabolic response to exercise.
- Exercise under supervision or with a partner in case of autonomic dysreflexia in spinal cord injuries

What type of exercise is best for Spinal Cord Injury (SCI)?

Exercise Right recommends exercises that focus on improving activities of daily living and maintaining shoulder integrity to prevent shoulder injury which significantly decreases a person's ability to push their wheelchair.

Previously exercise has focused on compensatory methods, where strategies for accomplishing mobility tasks and strengthening occurs above the level of SCI. However with an increase in research on the plasticity of the central nervous system, these days there are specific programs that promote activity based rehabilitation involving the whole body to maximise a person's functional ability and lead a more independent life.

This whole body intervention can help a person with a spinal cord injury in maintaining circulation, range of motion and muscle mass below their level of injury.

Always seek professional advice from an Accredited Exercise Physiologist. Find one here: www.essa.org.au/find-aep