

# Ageing with a Spinal Cord Injury

Today people are living much longer with a Spinal Cord Injury (SCI) but this does present some physical and physiologic decline for the musculoskeletal, cardiovascular gastrointestinal, pulmonary and integumentary systems for people living with a SCI. However there has been improvement in the ability to recognise and treat secondary complications and more emphasis on prevention of these complications. Like the general population, the goal for people with SCI is to minimize the impact of ageing, and to maintain overall health, independence and life satisfaction.

## Understanding and Managing the Physical Aspect of Ageing

### Cardiovascular Health - Your Heart

Metabolic Syndrome, a condition associated with high risk of heart attack, stroke and other complications is especially common in the SCI population and consists of 4 major characteristics:

1. Obesity
2. Insulin resistance and Diabetes
3. Poor cholesterol profile
4. High blood pressure.

All these symptoms tend to increase with age in the general population but may appear in a slightly younger age in persons with a SCI. As we age the cardiovascular system loses its capacity to pump blood, through decreasing stroke volume as well as through decreased ability to maintain vessel tone. Ageing is associated with a gradual increase in blood pressure due to arterial elasticity. So what can you do to slow or improve these processes?

- Keep your weight down.
- Change your diet- decrease sugars and carbohydrates and reduce fat and cholesterol intake.
- Keep moving as much as possible.
- Talk with your Doctor as you may need medication to assist your cardiac health.
- Have regular monitoring of your blood pressure, cholesterol profile, blood sugar levels and weight.

## **Gastrointestinal Health - Your Gut**

**Bladder-** Urinary infections are more common in people with SCI as they age; this may be because of decreased fluid intake or weakened immune system, less storage capacity of the bladder and increased residual volumes in the bladder after voiding. There may also be an increased risk of kidney stones leading to infection. These issues again are noted in the general population, but with impaired neurology early symptoms may go undetected in the SCI population.

Have annual medical checkups that include renal ultrasound, urinalysis and blood tests as early detection and treatment of complications is vital.

**Bowel-** Bowel care is a very significant quality of life issue for most people with a SCI and as with the general population, ageing may result in the slowing down of the gut leading to constipation, bloating and haemorrhoids.

It is important to

- Have an established bowel routine.
- Ensure diet and fluid intake are adequate.
- Keep busy and as active as possible.
- Have haemorrhoids treated.
- Seek alternative bowel management routines i.e. Bowel irrigation, colostomy or changes to aperients regimes.
- Maintain a healthy weight.

Fortunately people with SCI do not have a higher rate of colon cancer than the general population, but some of the early warning symptoms may go undetected due to lack of sensation. It is therefore advisable to have regular screening examinations.

## **Pulmonary Health - Your Lungs**

There is a higher risk of pneumonia in the SCI population as the lung capacity and the ability to breathe and cough deeply generally decreases, and there is a higher risk of sleep apnoea especially in the high level Paraplegic and Tetraplegic group.

Managing the respiratory system:

- Learn different strategies to manage your secretions, may include equipment or cough assist techniques.
- Have yearly influenza and pneumococcal vaccines.
- Do not smoke.
- Seek early intervention for chest colds and infections.
- Seek investigations and treatment for sleep apnoea.
- Exercise and keep weight within a healthy range.

## **Integumentary System – Your Skin**

As part of the normal ageing process several things happen to the skin, with SCI population this presents a high risk for pressure injuries.

- Skin becomes thinner and loses elasticity, making it more vulnerable to shearing, blisters and breakdown.
- Decreased circulation reduces blood flow to the skin that will impact on healing.
- Decreased mobility reduces the opportunity to redistribute blood flow to the weight bearing areas of the body.
- Muscle mass is lost leaving the bony prominences prone to injury.

Prevention is paramount and this can be achieved by:

- Thorough and regular skin checks and early intervention.
- Good nutrition.
- Prevent excessive dryness or excessive moisture of the skin and practice good skin hygiene.
- Do Not Smoke- smoking reduces blood flow.
- Keep weight down.

And like the general population, protect your skin from the sun and have regular mole checks.

## **Musculoskeletal Health – Your bones and muscles**

SCI increases your risk for shoulder dysfunction, early degenerative arthritis and osteoporosis. Years of pushing a wheel chair will take a toll on your shoulders causing pain in the shoulders, arms, elbows, wrists and hands. Unfortunately when it gets to this stage the process is not reversible. Surgical intervention maybe required but will mean significant changes to your daily routine. The best course of action is prevention and preservation.

- Keep your shoulders strong using good technique for wheelchair propulsion and transfers.
- Manage your shoulder pain; do not ignore it.
- Keep weight down.
- Avoid excessive over head reaching.
- Avoid sleeping on your shoulder.
- Regular stretching front shoulder muscles, and back muscle strengthening exercises.
- Good posture.
- Transition to wheel assist or power mobility early, but keep up exercises to stay strong.

## Bone loss and Osteoporosis

Bone loss starts immediately after the onset of SCI. This bone loss increases the risk of fractures and the risk will increase over time.

Women with SCI and post menopause need to be carefully monitored due to hormonal level changes and high risk of osteoporosis.

Modifiable risk factors include limiting caffeine intake, tobacco use, alcohol use and nutritional factors. This can be assisted with Vitamin D and Calcium supplements. It is important to have regular blood tests to check your levels and occasionally bone scans are required.

If you suspect you may have suffered a bone injury it is very important to have the limb assessed and treated. As you may not experience pain, other indicators of injury are swelling, bruising and warmth of the affected limb.



## Psychological Adjustment & Emotional Well-Being

Ageing with a SCI can be a difficult time; not only are there the physical issues already discussed but it also creates a need for more adaptation. A person may have spent the last 30 years or so “getting on with life” and has adjusted well to life with a SCI, and then the ageing process starts to change things, like shoulders, the need for a power chair, the need for workers to assist with daily personal care and sometimes a new environment. An insecure financial state and just feeling tired of working so hard to have a good life may also be affected by the length of time living with a SCI. These things may send a person into a state of feeling lost, angry or out of control and they may feel depressed and sad about all these changes. It is important to seek help and advice if these feelings become overwhelming.

There are things that can be done on your life journey to prepare you for this ageing phase such as;

- Stay socially connected, keep in touch with family and friends and try to be involved in community activities and groups.
- Stay as physically active as possible.
- Keep doing the things you enjoy for as long as possible.
- Know when and who to ask for help as this will help you stay empowered.
- Be open to new technologies and resources that may assist and enhance your daily living.
- Maintain your medical health checks as good health is paramount to ageing well.

## References and Resources

SCI FourmReport: Healthy Aging After Spinal Cord Injury; Washington.May 2006

Winkler,T MD Spinal Cord Injury and Aging. Medscape Jan 2012

Trieschmann,R.B 1987 Aging with a Disability

Reys,R Understanding and Managing Physical Changes