



Living with Spinal Cord Injury
Self-care and Preventive Health Checks

October 01, 2013

Dr Divya Parashar
Clinical Rehab Psychologist
Indian Spinal Injuries Centre

Nitin Goyal
Volunteer Peer Counselor
Indian Spinal Injuries Centre

Acknowledgements

We wish to convey our sincere gratitude to several people who provided us valuable guidance during course of this project and reviewed these slides at various stages.

Dr H S Chhabra	Medical Director, Indian Spinal Injuries Centre, New Delhi
Dr Ketna L Mehta, Dr Riten Pradhan	Nina Foundation, Mumbai and UK
Dr Gaurav Sachdeva	Physiatrist, Indian Spinal Injuries Centre
Ms Jane Horsewell	President, European Spinal Cord Injury Federation (ESCIF)
M/S Stephen and Maggie Muldoon	Asian Spinal Cord Network (ASCON)
Mr Tony Jose	Member, SCI-India group
M/S Vaidya Nathan, D G Bharathi	Spinal Care India, Chennai
Dr Anand Viswanathan	Physiatrist, CMC, Vellore
Associate Prof. Apichana Kovindha	Rehab Med, Chiang Mai University, Thailand
Ms Claire Guy	Rehabilitation Programme Lead, National Spinal Injuries Centre, Stoke Mandeville Hospital

Reference: Fact sheets of Spinal Injury Association (UK), www.elearnsoci.org

Disclaimer

This document draws heavily on experience of people living with Spinal Cord Injury and some of the tips may not have gone through the rigours of medical research studies

This document has been reviewed by several doctors and specialists with long experience in treatment and rehab of people with spinal cord injury

Different people have different physiologies and what works for one may not work for another. We ask you to discuss these tips with your doctors before using them

Under the WHO's *International Classification of Functioning, Disability and Health (ICF)*, self-care activities include "washing, toileting, dressing, eating, looking after one's health, caring for body parts." In this slide-set, we cover only *toileting, looking after one's health and caring for body parts*

Self-care Routines



Overview

People with Spinal Cord Injury (SCI) have today a nearly normal lifespan. Avoidance of medical complications is key to this end. We require lifelong self-care to stay in good health and avoid / reduce re-hospitalization

We are people first, so we need to keep watch for all medical ailments that may afflict people without spinal cord injuries (SCIs)

In addition, we are more prone to certain issues and so need to keep watch about:

- **Pressure sores**
- **Urinary system – bladder, kidneys**
- **Bowel system – constipation, fissures, hemorrhoids**
- **Spasticity**
- **Osteoporosis**

Plus, we also need to keep our aids and implements in good health!

Self-care

Skin care 1/10

Educate yourself about cause of pressure sores, vulnerable pressure points, and safety techniques

We need to use a seating and sleeping system that ensures optimum pressure distribution and relief on pressure points – specially for:

- Skin all around the hips, specially at tailbone, base of buttocks and sides
- Heels, soles and other bony areas of feet
- Elbows, shoulder blades

Use appropriate wheelchair, cushions, commode chair and bed mattress to provide adequate pressure distribution and relief. It's very important that the wheelchair cushion and bed mattress have the right type, softness, and quality to provide the right support and protection. Use pillows or rolled blankets while sleeping, if required

Protect your skin from getting hurt

- Identify and avoid activities that may hurt by rubbing, scratching or cutting
- Wear clothes and shoes that have right fit – neither too loose or too tight
- Ensure clothes don't have thick seams, buttons or zippers where they put pressure on your skin. Be careful while sleeping too
- Learn safe techniques for transfers

Self-care

Skin care 2/10

Self care routines

- Move often. Provide **very regular pressure relief** to get blood flowing to the skin through (i) pushups both on wheelchair and commode chair (raising up or moving side-to-side or front-to-back) (start with 20 second pushup every 20 minutes), (ii) turning while sleeping (start with turning every two hours) / sleeping in prone position
- **Daily inspection of skin over the high risk bony prominences (e.g. low back bone-sacral, sitting bones-ischial, lateral thigh bones-trochanteric):**
 - Learn using two mirrors to check hips visually to check for redness and scratches
 - Feel the skin lightly with fingers. Change in texture is easier to pick up than colour in some instances
 - Women (specially quads) should check their breasts (including undersides)
- Ensure skin remains clean (wash daily) and dry (=not damp or wet) at all times. Wet or damp skin (e.g. from sweating) is prone to damage
 - Some methods to keep skin dry: loose and absorbent clothing, ample ventilation in room, talcum powder
 - Wash, dry and change into dry clothes immediately after a bladder or bowel accident
- Daily moisturization of skin at pressure points with oil / Vaseline / creams. Coconut oil, almond oil and Vaseline have been shown to be particularly effective

Self-care

Skin care 3/10

- When drying yourself, prefer to pat-dry than rubbing
- Avoid localised temperature elevation (heat build up) due to external factors or lying still for long
- Your weight should remain within a healthy range. Being both under-weight and over-weight increase chances of pressure ulcers
- Drink 2-3 litres of fluids every day to keep the skin hydrated. Water, milk and juice are good fluids
- **Shearing pressure on the skin is very harmful and even a few seconds can cause lasting damage. Be very careful of this**
- Take extra care of skin during illness, as you age, during episodes of swelling and during episodes of allergic reactions to medicines
- Use correct equipment for your needs. Change/replace worn out equipment. Make sure that no part of equipment puts pressure on, or rub against your skin
- Eat a well-balanced healthy diet, including all food groups
 - High protein intake helps repair damaged skin
 - Dairy products provide calcium which is required for maintaining bone density
 - Fruits and vegetables provide fibre and various minerals and vitamins
 - Fibrous foods provide fibre needed for maintaining a healthy bowel program

Self-care

Skin care 4/10

- Reduce intake of caffeine and alcohol as they make you loose body fluids through increased urine output
- Smoking reduces flow of nutrients to skin
- **Any redness or roughness in the skin are the first signs of trouble! Relieve pressure (say, take bed rest) until skin returns to your normal. Identify cause of pressure incident**
- **If the skin goes towards blackish or breaks to show a lower layer, consult a doctor**

Self-care

Skin care 5/10

If the skin turns black, or looks bruised or a sore develops:

- See a specialist doctor immediately
- Try to identify the cause of the skin compromise, and release pressure
- You just HAVE TO relieve pressure from the sore, there is NO substitute for this
- While the ideal remedy is to proceed to bed-rest and lie in a way that the sore does not face any weight / pressure, it may not always be possible to take leave from your work for some weeks / months and lie down
 - Ask your doctor for advice about a self-care programme that you should follow (how long you may sit at one time, how often you should practise "push-ups" etc. to relieve the pressure)
 - If the condition of the sore allows and the doctor agrees, you may be able to sit in a chair for a few hours a day, but **IF AND ONLY IF** you practice regular pressure relief by pushups, or by leaning side-to-side or by leaning front or back (for some people, this will require the 20-20 strategy: pressure relief for 20 seconds after every 20 minutes. Others with fragile skin may require longer relief, of upto 3 minutes per relief session)
 - If the sore is on your backside, sleep prone at night (on your stomach)
 - Have your wheelchair seating, bed mattress and commode professionally re-assessed
- Maximum damage to repairing skin happens during transfers and during sitting on commode / commode chair for the bowel program . Be careful. You may want to add soft foam or gel padding on the commode / commode chair

Self-care

Skin care 6/10

Discuss the sore/wound-care method with your doctor

- As sores may take a long time to heal, you may need daily self-bandaging. Discuss the need and required method with your doctor
- Have the sore monitored regularly by your doctor. The doctor will check for and remove dead tissue/skin (fluff). He will also check if a deep sore is filling correctly from inside to outside. If a deep sore closes on the surface, while leaving a wound inside, it will open again later
- *Betadine* is the most commonly used anti-biotic ointment for sores. It is invaluable for healing deeper Grade 2-5 sores, but is also known to hurt tender newly-formed surface skin. Consider using gentler ointments for later days when the sore lessens to a Grade 1 sore – Soframycin, Neosporin, etc., specially if you find newly formed skin peeling off repeatedly
- Method of bandaging may need to change as sore heals. You may also consider rotating different ointments on a weekly / fortnightly basis
- Some silver imbibed antibiotic ointments help heal faster and promote skin regeneration, e.g. Silverex, Megaheal. Ask your doctor

Self-care

Skin care 7/10

You can take several steps to aid the healing process

- Apply some hypertonic saline with a cotton swab to the sore and surrounding area before dressing. It promotes granulation of skin, making it re-grow and strength faster
 - To make hypertonic saline, pour a 500ml bottle of saline in a pan and warm it on a stove. Add some white table salt and stir it till it dissolves. Keep adding salt till it doesn't dissolve anymore. Cool it to room temperature, and store in a clean bottle
 - Presence of salt in the saline may cause pain if you have sensation in the sore area
 - The medicine Oxoferin performs a similar function. Ask your doctor
- Massage the intact skin at periphery of a Grade 1 or 2 sore with feather-light touch, in tiny circles in clockwise motion. This helps in improving motility of the skin and prevents it from sticking to underlying muscles. Skin stuck to muscle has higher danger of peeling off
- The peripheral skin becomes weak (e.g. appears wrinkled) from repeated peeling of adhesive tape, and from prolonged exposure to glue of the tape. Use medical spirit to help remove Micropore tape gently, and to clean glue off the skin

Self-care

Skin care 8/10

- It is important to nourish the sore and surrounding area with moisturizing materials. Discuss the below tips with your doctor
 - Apply Vaseline / coconut oil or other moisturiser to peripheral skin, daily. Can be applied to Grade 1 or 2 sores too. You may make space from / remove the bandage during night and apply. Exposing mild sores to clean air has been known to benefit
 - You could try using medicated paraffin wax gauze for dressing
 - Apply your regular oil / moisturiser all over the body, specially in the larger area around the sore. E.g. if you have a sore at the hips, apply oil from knees to chest. This seems to direct more of the body nutrients towards the sore
 - You will need to find the right balance between keeping skin dry and nourishing skin with moisturisers; maybe both alternatively
- Normal pressure can be applied to skin only after the sore is completely healed, which means that the outer surface of skin is unbroken and near your normal color. Apply pressure only for short periods to begin with, say 15 minutes and keep observing for changes in colour or texture

Self-care

Skin care 9/10

Do not experiment with alternative treatments without talking to your doctor first.

Do not put anything on the sore without medical supervision

- Some people have reported that the natural formulation – *Miracle Mist* – has proved effective in repairing sores
 - It is available in both spray and ointment form, though the spray has been reported to be more effective. Use with care though, first for a day or two, to check if it suits your skin as some users reported deterioration in the sore from the ointment
 - Usage: Usage instructions are provided on the bottle. To be used with complete bed-rest. Spray it on the sore, let it dry, then clean it with a sterile gauze and then spray again. Let it dry and make a film over the sore. Keep the wound open. Repeat the process after every 5-6 hours. Some people use bandages if there is seepage from the sore. Users have also reported benefit even if they used it with sitting.
 - Do not apply any saline water/ ointment along with the spray
 - See <http://www.woundcarespray.com/> Seems there are more than one Miracle Mist

Self-care

Skin care 10/10

Do not experiment with alternative treatments without talking to your doctor first.

Do not put anything on the sore without medical supervision

- Usage of *Wasa Reinigungsschaum Mousse* (spray) for cleaning the wound has also been reported to help some users with sore repair. <http://www.lysoform.com/pro.htm>
 - Some users were asked to apply it over the wound with a cotton swab, after applying regular ointment, to form a film over the sore and then apply regular bandage
 - It may be effective in repairing peripheral skin weakened from repeated taping
- Some articles have reported use of white juice from papaya tree for removing dead tissue from a sore, and usage of (i) honey (ii) a specific mix of betadine and sugar to heal deep sores which are not healing with antibiotics. Consult your doctor if you want to try these. And be conscious that honey and sugar could attract ants and other insects

Self-care

Urinary Bladder 1/2

We need a robust system for regular and proper emptying of bladder

- Usage of catheters introduces bacteria into the bladder. By the time an SCI comes out of acute phase in hospital, bacteria would have entered. If urine remains accumulated and stagnant in bladder, bacterial colonies grow and result in *Urinary Tract Infection (UTI)*
- So we need to develop a system which ensures all of below points:
 1. Bladder gets completely voided regularly. Complete voiding removes most of bacterial colonies; while residual urine can promote infection (for fighting infection, most people need to completely void at least once in 24 hours)
 2. Bladder does not distend beyond safe limit (say 400 ml). Over-filling can damage the bladder and cause reflux of urine back into kidneys, damaging and infecting them. If bladder does not self-void on filling, we need to maintain low-pressure in bladder by regular voiding (say every 4-6 hours)
 3. Regular flushing of bladder through adequate intake of water
 4. Cleanliness of equipment and bladder emptying process (proper washing of hands and equipment, clean storage of equipment)

Self-care

Urinary Bladder 2/2

Various systems in popular use are:

- **Clean intermittent catheterisation (CIC).** CIC is considered the “gold standard” for bladder voiding by people with SCI as it empties bladder completely and avoids an indwelling cath which is prone to infections. People using only CIC usually need to set into a 4-hourly rhythm
 - CIC is not traumatic for the bladder or urethra
 - Catheters can be reused. Wash it in running water after use, hang dry it and replace it in its container or a clean cotton cloth bag. Change it after one week. Silicon catheters can be used for longer periods
- **Condom drainage (for men)**
- **Supra-pubic catheter**
- **In-dwelling catheter through urethra (Foley’s)**
- **Self-voiding using bladder tapping, massage, pressing, pulling pubic hair, etc.**

People can use combinations, e.g.

- **CIC once a day for complete voiding**
- **+ Condom drainage for rest of time**
- **+ Tapping for partial self-voiding every four hours**

Self-care

Urinary Tract Infection (UTI) 1/2

Every person with SCI suffers from UTI at some time or another, but we can develop strategies to reduce its incidence (some of these tips are based on user experience and may not have gone through the rigours of medical research)

- Develop an appropriate bladder voiding system for you and stick to it!
- Keep your surrounding skin clean and dry
- Regular cycle of filling and voiding is necessary to maintain elasticity of bladder. An inelastic bladder is more prone to UTI
- Drink plenty of fluids to ensure the urinary system is properly flushed out, ideally 2-3 litres a day. "The solution to pollution is dilution."
- Use natural methods to alkalisise your blood and change pH balance of bladder; this prevents bacteria from growing – e.g. drinking 1-2 glass per day of lime juice (diluted) / orange juice (or juice of other citrus fruits)
- Vitamin C also helps (*Amla* juice is rich in Vitamin-C)
- Some users have reported benefit from drinks like cranberry juice, decaf green tea, blueberry juice, and grapefruit juice. But their efficacy, if any, is limited to a few people and only for reducing chances of getting UTI. Formal studies on usage of cranberry juice did not reveal reduction in incidence of UTI

Self-care

Urinary Tract Infection (UTI) 2/2

- Indigestion may have a correlation with UTI, which may be the reason why the antacid – Alka Seltzer – has been reported to help with UTI
- Beneficial bacteria (probiotics - *Lactobacillus acidophilus* and *Lactobacillus rhamnosus*) may help to prevent UTI's and reduce the length and severity of them by stabilising digestion. Yoghurt (home made *dahi*) is a good source of good bacteria
- Foods such as coffee and carbonated beverages are known to irritate your bladder, making it more prone to get infection
- If you do get a UTI with symptoms (fever, shivering, heavy sediments of clouding in urine, etc.), you may need a course of anti-biotics. Consult a doctor. A urine culture test may be required
- Increase water intake to flush out infection and increase CIC frequency
- **Avoid taking antibiotics for asymptomatic UTI (no fever, shivering, etc.) as you will develop resistance to antibiotics with frequent medication**
- Some doctors have suggested reducing water intake slightly while taking antibiotics to increase flow of medicine to the bladder. Once the course is over, drink and flush out the meds

Self-care

Bowel care 1/2

People with SCI need to develop a robust system to ensure clearance of bowels regularly, to avoid constipation and accidental incontinence

Some systems in use are:

- Digital evacuation
- Usage of suppositories and laxatives
- Bowel irrigation (enema)

Do not use enema or strong laxative regularly

An SCI reduces motility of our digestive system increasing “transit time” to double or more, leading to frequent complaints of constipation. We need to aid motility by:

- Adequate intake of water and fluids
- Optimum intake of fibrous foods, neither too little nor too much
- Adequate exercise and movement of body

Regular constipation can lead to fissures and hemorrhoids (piles)

Self-care

Bowel care 2/2

Some methods that help improve motility and help clearance in morning:

- Drink 2 glasses of warm water early in the morning, just on waking up
- Drink a glass of warm milk with sugar at bedtime
- Gently massage your abdomen in clock-wise direction just before bowel program to get the colon moving - up the ascending colon, across the transverse colon, and down the descending colon
- Time your bowel program after breakfast to utilise peristalsis (wave-like muscle movement to push food through the food channel)
- Deep breathing has also been reported to help

To reduce chances of bowel accidents, be careful about what you eat and drink

- Eat regular meals spread through the day and have a well-balanced diet
- Don't eat anything that appears or smells stale / improperly cooked / spoilt / old
- Avoid over-eating and drinking too much liquor
- Take small quantities if you are taking oily, fried or heavy food
- Avoid foods and drinks that give you acidity and / or indigestion. Aerated drinks cause bloating and may cause gut motility disturbances

Self-care

Spasticity

Spasticity is a frequent complication for people with SCI, but it is also an opportunity. We need to develop an understanding of causes of spasticity in our body and generate a system to manage it

Regular passive exercise of paralysed limbs helps reduce spasticity. This could be in form of standing, home exercise, physiotherapy, etc.

Pay attention to changes in spasticity. Spasticity can be triggered by unfelt irritants like wet skin, excessive pressure on skin, distended bladder or bowel, etc. This can help us recognise problem spots even in areas without sensation

Treatment of spasticity is required only if it interferes in patient activities of daily living or causes any pain, contracture or sleep disturbance

Medication should be taken only under supervision of qualified doctors

Self-care

Osteoporosis 1/2

Bones have a need to bear weight to remain strong. As people with SCI do not stand, bones do not feel weight and calcium can leach out over time, leading to osteoporosis

Osteoporosis increases risk of bone fractures

Methods to reduce impact of osteoporosis are:

- Standing for an hour every day using standing frame or calipers. Many people say that daily standing for an hour becomes difficult to maintain after they move into community living and specially after they re-join their vocation / jobs. Do it as often as you can, ensure regular exercise for paralysed limbs and adequate intake of calcium and Vitamin D
- Regular exercise for paralysed limbs (home exercise or physiotherapy). Stretching muscles pull on the bones and help retain strength
 - Spasticity helps reduce impact of osteoporosis as it makes muscles pull on bones

Self-care

Osteoporosis 2/2

- Adequate intake of calcium, principally through milk, curds, cheese and other milk products. Calcium is important to maintain strength of bones
- Maintain adequate levels of Vitamin D. Vitamin D is required to help bones absorb calcium. The principle source of this Vitamin is exposure to sunlight. With our sedentary and indoors lifestyles, Vitamin D deficiency has become rather wide-spread. Take supplements if required
- Avoid falls! Falling is the most common cause of fractures. Develop safe practices of wheelchair usage and transfers. Also learn techniques of “safe-falling”
- There have also been cases of fracture from exercises like kneeling if improperly administered

Self-care

Burns

Lack of sensation in paralysed limbs makes us prone to getting badly burnt without realising it. Some instances :

- **Sitting in front of room heater / hot air blower. It can cause direct burns, or heat up the metal wheelchair which in turn can cause burns**
- **Sitting in front of a bon-fire**
- **Sitting in front seat of a cab without adequate heat-proofing for engine**
- **Sitting in a car standing in summerheat. The hot upholstery can cause burns**
- **Bathing with hot water**
- **Hot beverages (tea, milk, coffee) falling on you**

Self-care

Autonomic Dysreflexia (AD) 1/2

In people with high level injury (T-6 or above), an irritation or strong stimulus in the paralyzed areas (e.g. from bladder, bowel or skin) can trigger a rapid and sharp increase in blood pressure. Due to highness of the injury, the brain is not able to stabilize the blood pressure. This condition is called Autonomic Dysreflexia (AD)

Common causes include blocked catheter, fecal impaction, pressure ulcers, ingrown toe nail

AD can be potentially life-threatening. If not treated quickly, a person can suffer massive damage due to the high blood pressure, including retinal/cerebral haemorrhage or cardiac arrest

Usual signs are – pounding headache, heavy sweating and flushing above injury level, blurred vision, nasal congestion, anxiety, pallor (pale, cold extremities), dilated pupils, decreased or increased pulse rate

**Immediately identify the trigger (cause) of the AD episode and remove the trigger .
E.g. loosen clothing to remove constriction of skin; if the cause is an over-distended bladder, then the bladder needs to be emptied**

If the cause of the AD episode is not found and blood pressure remains elevated, the person should go to the nearest emergency department

Self-care

Autonomic Dysreflexia (AD) 2/2

To help diagnose AD, and also to keep tab on BP, you can buy a commercially available self measure BP instrument. Cross check its accuracy with a BP instrument used by doctors / hospitals, at some visits

Check your BP several times over a few weeks to determine your normal BP. Some SCIs may have a normal blood pressure of 90/60 mmHg, and then even BP of 120/80 mmHg may be considered as high in him/her

You can avoid AD by avoiding irritating stimuli, regular bladder and bowel care, pressure relief and nail care

Every person with a high level injury needs knowledge to recognise signs of AD, appreciate its seriousness, and know how to deal with it

Self-care

Pain

Many people with spinal cord injuries will continue to feel elevated pain in some parts of their bodies even after acute phase. The pain may occur in parts of bodies due to injuries or exertion, or may be neuropathic in nature

Some natural methods that help with pain are:

- Exercise
- Massage
- Acupuncture
- Heat or cold
- Recreational activity and work. Getting involved in an activity distracts us from the pain

If pain is unbearable and interfering with your life, please consult with your doctor to discuss possible medication, or therapies

Self-care

Chest Infections

A spinal cord injury at T12 or above affects the chest muscles responsible for breathing and reduces efficiency of breathing, more so for cervical injuries

Most people can breathe on their own almost normally after the acute phase is over, though may continue to face difficulty in forceful exhaling (e.g. deep coughing)

Due to reduction in breathing efficiency, people with SCI (especially quadriplegics) are more prone to chest infections, cough and cold, pneumonia

Smoking worsens the impact

Monitoring: A rise in breathing rate can indicate infection even before serious signs like excessive amounts of coloured sputum / secretions come up

- Record the normal respiratory rate per minute in normal times - taking in breath (and exhaling, of course). 14-20 breaths per minute is average, may rise after lunch and exercise
- Check the breathing rate if you suspect infection, i.e. you see phlegm, fever, abnormal chest/breathing sounds. If the rate is higher than usual, see doctor

Regular deep breathing exercises are highly recommended to strengthen the relevant muscles and reduce chances of infection. Maintain regular turning in bed, sit in wheelchair daily,, drink 2-3 litres of water daily to keep secretions thin

You may also consider immunisation for pneumonia

Self-care

Long travelling by car, rail or air flight

Care needs to be taken while undertaking a long drive or flight , particularly for managing bladder & bowel routine, pressure relief, swelling in legs

- Plan your bladder and bowel routine in advance to ensure adequate and timely voiding. If possible, keep margin for delays. Consider precautionary use of diapers or indwelling caths for additional safety
- Maintain adequate pressure relief during the journey. Do regular pushups, consider using your wheelchair cushion for seating
- Carry your routine medicines or equipment that you may need
- Consider using DVT stockings during the journey to reduce chances of swelling in legs
 - If you have mild and controllable spasticity, which you understand fully well and know how to manage it - trigger spasms in your legs. This gets the muscles moving, which in turn gets the accumulated fluids squeezed out
 - DO NOT attempt this if you have severe spasticity which can trigger problems or throw you around or hurt you

Self-care

Other self-care areas

- We should monitor our feet for swelling
- Monitoring our weight is very important, as obesity brings difficulty in daily activities and also is a harbinger of many diseases
- Be attentive to changes in pain in different parts of our body. E.g. shoulder pain due to repetitive stress injury from wheeling. Vertigo could be a sign of spondylitis
- Be conscious of changes in general energy levels. Chronic exhaustion may merit consultation with doctors, checking blood parameters, etc.
- Watch for developing contractures or muscle atrophy
- Regular headache or sweating could be signs of some problem developing in paralysed area
- Avoid taking too many medicines or supplements, take bare minimum
- A healthy, well-balanced diet is critical in keeping our body healthy. Drink adequate water

Self-care

Exercise

Digestion (oxidation) of food releases chemical garbage (oxidants) that cause damage to our body. It is these oxidants that are responsible for deterioration our bodies experience with ageing and from sedentary life

Exercising muscles release chemicals (endorphins) which clean up this chemical garbage (oxidants). This is why you need to exercise

To remain healthy, we need to move! We need to get out of bed, move around in and out of home and keep busy

- Ample general conditioning exercises help with osteoporosis and other SCI problems
- Range of Motion exercises keep joints healthy and prevent contractures

Getting engaged in a productive activity is also an important way for keeping our emotional state healthy, and our attitude positive. It does wonders to boost our positive self-esteem

Yoga, meditation and *pranayaam* can help bring calmness in our lives and reduce anger

Increase strengthening exercises to an hour a day to maintain and enhance strength as you age

Self-care

Aids and equipment

We need to ensure that our aids and equipment are maintained in good condition – wheelchair, standing frame, caliper, crutches, walker, tricycle, car, scooter, etc.

The aids and equipment need to be kept in good condition to ensure we have safe support at all times to lead a healthy productive life

Damaged equipment can also cause injury to us – pressure sores from protruding parts, fractures from falls, etc.

We need to monitor their condition and ensure regular servicing

Self-care

Emotional well-being 1/2

Emotional well-being is one of the most important aspect of healthy living with an SCI. A positive person will be concerned about staying healthy

We need to take charge of our self-care, of making sure each activity gets done and any problem is attended to. We may take help for carrying out the activities, but we should be the “program managers” ourselves

We need to learn to recognise the signs our bodies are giving. If a problem arises, think of what we did different in last 24 hours that could have caused the problem

Educate yourself about your physiology, about the impact an SCI has on your body functions , about the impact SCI had on YOUR body

This is also important because very few people will have ready access to super-specialist doctors for every ailment and problem we face

Self-care

Emotional well-being 2/2

If you see your thoughts leaning towards anger and frustration, make conscious effort to change your thoughts

- **Channel your thoughts to positive ones:**
 - **Consciously think about good events and successes of past**
 - **Create day dreams about fulfilling your ambitions – being a rock star, starting a business, being a hot-shot CEO. Create mental plans and strategies about reaching your goals, picturise yourself living your dreams. These will not only help your attitude, it will also provide you actual solutions to problems**
- **Stand in front of the mirror, look at yourself and force yourself to smile, tell yourself - this too shall pass**
- **Get busy in an activity to distract your self away from anger or sadness**

Preventive Health Checks

Periodic Medical Testing



Preventive health checks

We need to have periodic health checks to catch problems even before their symptoms appear, so that they can be treated well in time

In the next few slides, we talk about the various tests possible

People living with spinal cord injuries are people first, so they need to keep watch for all medical ailments that may afflict non-injured people

- **People with SCI are more prone to metabolic syndrome (digestive problems), and to diseases like diabetes, lipid problems (cholesterol)**

The standard Preventive Health Check packages offered by hospitals cover most tests needed by SCIs regularly. We present an analysis here

Annual health checks

Urinary system

- **Ultrasound - KUB (Kidney and Urinary Bladder). More often if something appears**
- **Urine test – routine. Culture and microscopy, if warranted**
- **Kidney function test (blood test)**
- **If a person suffers from frequent cases of UTI, then a Urodynamic test may be recommended**

Preventive Health Check For People Wanting Pre-Emptive Testing

Upto 40 – once in two years, After 40 – every year

Category	Test	Remarks
Blood tests	Haemogram	
	Kidney function test	Very important
	Liver function test	
	Lipids (Cholesterol)	Important
	Thyroid (T ₃ , T ₄ , TSH)	TSH important
	Sugar (Fasting and PP)	Important
Routine	Urine and stool	
Ultrasound	KUB (Kidney and Urinary Bladder)	Very important Preferably whole abdomen
Cardiac	ECG	
	Echocardiogram (above 40)	
X-ray	Chest	

Preventive Health Check For People Wanting Pre-Emptive Testing

Upto 40 – once in two years, After 40 – every year

Category	Test	Remarks
Skin health	General examination for pressure sores	
Others	BMI (Body-mass index)	To check for obesity
	Pulmonary function test (for lungs)	For high-level tetra (quadriplegic)

Preventive Health Check For People Wanting Pre-Emptive Testing

Upto 40 – once in two years, After 40 – every year

Category	Men	Women
Others		Screening for breast and cervical cancer (above 40)
Consultation	General physician	General physician
	Urologist	Urologist
	General surgery	General surgery
		Gynaecologist (fibroids, menstrual cycle, cysts, etc.)
	Dietician	Dietician
	Psychologist (if reqd)	Psychologist (if reqd)
	Cardiologist (if reqd)	Cardiologist (if reqd)

Other tests

Urinary system

- The efficiency of kidneys in clearing urea from blood will get tested by the Kidney Function (blood) Test. Stones in KUB and bladder reflux will get detected by the ultrasound
- If KUB ultrasound reveals anomalies, or a person suffers from frequent UTI, further testing can be recommended by doctors:
 - Urodynamic test - to evaluate bladder function
 - Renal scan - nuclear medicine scan to evaluate functioning of kidneys
- A scrotal ultrasound may be recommended if a male SCI has experienced an escalation of UTI into scrotum in the past (Epididymitis, Orchitis, etc. - swelling in the testicles is often the first sign of this)
- There is no consensus on the right method for monitoring incidence of bladder cancer. Some doctors recommend a Cystoscopy every 3-4 years, especially for people using indwelling catheter

Other tests

Osteoporosis

- A dexa-scan checks bone density and can help monitor incidence of osteoporosis. Most doctors recommend a dexa-scan only when necessary, as it is an expensive scan (Rs 2,500) and also exposes you to radiation. Some doctors suggest taking a scan every two years, and tracking the trend over time
- Along with dexa-scan, you can also take blood tests to test levels of Calcium and Phosphorus (important for bone density) and Vitamin-D (important for calcium absorption by bones) (total cost about Rs 2,000)
-
- For people with Cardiac issues or those who face dizziness from sitting up for long times, regular monitoring of Blood Pressure is recommended
- Indians (specially vegetarians with sedentary and indoor lifestyles) are prone to deficiency of Vitamin D and Vitamin B-12

General remarks

Tests like prostate cancer screening not recommended, because PSA test has a high level of “false-positive” results and chronic UTI is a known cause of false-positive results in PSA Test

DVT (Deep-Vein Thrombosis) is less prevalent in Asians but needs to be monitored. Watch for swelling or discolouration on feet, ankles and lower legs



For further information, you may contact the authors:

Dr Divya Parashar

Clinical Rehab Psychologist

Indian Spinal Injuries Centre, New Delhi

email: dnparashar@gmail.com

Nitin Goyal

Volunteer Peer Counselor

Indian Spinal Injuries Centre, New Delhi

email: ningoyal72@gmail.com

In 2002, we started the first online self-help group for people with SCI in India.

You can join at <http://health.groups.yahoo.com/group/SCI-India/>

Find further resources at http://www.scs-isic.com/consumer_committee.html