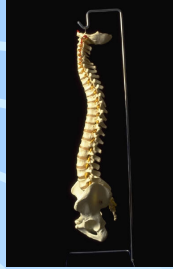


Spinal Cord Injury Basics

- **What is a Spinal Cord Injury?**
- **Recovery Timeline**
- **Medical Emergencies**



What is a Spinal Cord Injury?

- **Damage to the Spinal Cord**
- **Your Level of Injury**
- **Complete or Incomplete?**
- **Recovery / Return Timeline**

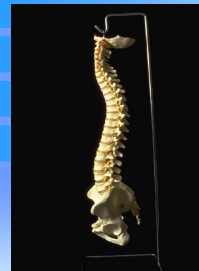


Spinal Cord Recovery

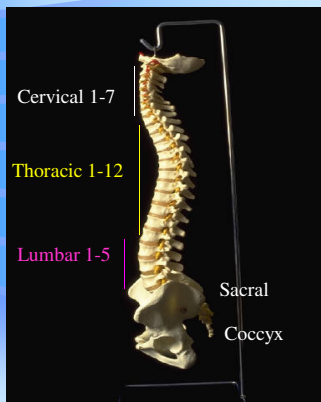


- 2-3 years average
- Muscle movement & sensation levels
- Get to a level of good health
- Stay in good health

Level of SCI



- **Quadriplegia**
 - Injury to the cervical area of spinal cord
 - Paralysis of arms and legs
- **Paraplegia**
 - Injury to the thoracic or lumbar level of spinal cord
 - Paralysis of the lower body



Spinal Shock

- Occurs immediately after a spinal cord injury (SCI)
- Total loss of all reflex functions and movement below level of injury
- May last 3-10 weeks



Complete or Incomplete Injury



- **Complete Injury**
 - No measurable function at or below the level of SCI
- **Incomplete Injury**
 - Some sensation or movement below the level of SCI

Unique Problems of SCI

- Acute & Chronic Pain
- Blood Pressure Changes
- Muscle Spasms
- Blood Clots (DVT)
- Heterotropic Ossification (HO)
- Temperature Regulation
- Spinal Cysts or Tethering

Heterotropic Ossification (HO)

- **Signs of H.O.**
 - Swelling around the joints
 - Increased temperature or fever
 - Pain in joints, muscles
 - Redness
 - Stiffness
 - Loss of range of motion

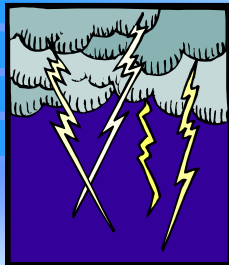
Blood Clots (DVT)

- **Signs of a Blood Clot**
 - Swelling
 - Area warm to touch
 - Redness over clot
 - Fever
 - Increase in spasms
 - Pain is possible

Spinal Cysts or Tethering

- **Signs of Spinal Cysts or Tethering**
 - Loss of sensation
 - Loss of movement
 - New or increased pain
 - Abnormal sweating
 - Increased spasms
 - Autonomic Dysreflexia

Spasticity



- Involuntary muscle jerking and movement
- Due to SCI and the break in communication between brain and muscles
- It is a reaction to stimulus below level of injury

Spasticity



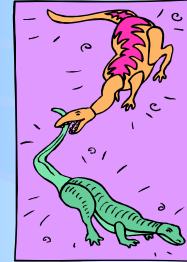
When Spasms Can be Your Friend

- Works your muscles
- Improves blood flow
- Maintains muscle bulk
- Lets you know there is trouble
- Can be useful for transfers

Spasticity

When Spasms are Not Your Friend:

- Skin breakdown
- Joint/ muscle tightness
- Disturbs sleep
- Changes your position
- Causes safety problems



Treatment for Spasticity

- Range of motion or Stretching
- Positioning in bed and/or wheelchair
- Standing or weight-bearing exercise
- Medications:
 - Lioresal (Baclofen)
 - Zanaflex
 - Klonopin

Pain Management



- Rights & Responsibilities
- Types of Pain
- Ways to Help Pain
- Concerns about Medications

Pain Management Rights & Responsibilities

Your Rights.....

- Your reports of pain are taken seriously
- Access to information about how to help pain
- Concerned staff members who will respond to reports of pain

Pain Management Rights & Responsibilities

Your Responsibilities.....

- Ask about expectations & pain management
- Discuss pain relief options with your team
- Tell us about pain levels, pain relief or when pain is not relieved
- Talk with your doctor, nurse or pharmacist about pain medication concerns

Types of Pain

- **Acute Pain**
 - Comes on suddenly
 - Results from physical damage
 - Danger signal
 - Usually gets better
 - Related to:
 - Injury
 - Surgery
 - Muscle strain
- **Chronic Pain**
 - Longer lasting than acute pain
 - May be related to SCI or TBI
 - Some common types:
 - Referred pain
 - Deafferent pain
 - Root pain
 - Cyst pain

Ways to Help Pain

- Medications
- Activity Adjustment
- Stretching or Exercise
- Therapeutic Massage
- Acupuncture
- Psychological Support
- Nerve blocks & Surgery



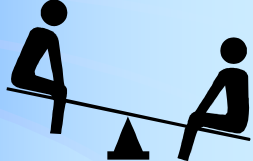
Concerns about Pain Medications

- *I'm afraid of becoming addicted.*
 - Pain relief is a medical reason for taking narcotics.
- *I don't want to be a complainer.*
 - The sooner you speak up, the better.
- *I don't want to lose control.*
 - You won't lose control if taking medications properly.


Autonomic Dysfunction

Most problems for people with SCI levels T6 and above

- Blood Pressure: Too High or Too Low
- Temperature Regulation
- Sweating



Blood Pressure Ups & Downs

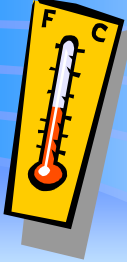


- **Too Low**
 - Drop of BP when sitting or standing--DIZZY
 - Body not able to adjust
- **Too High**
 - Rise in BP with pain or stimulus--HEADACHE
 - Autonomic dysreflexia

Blood Pressure Problems What to do.....


- Low BP- Hypotension
 - Lay back, lay forward
 - Sit up slowly, gradually
 - Wear abdominal binder and TED hose
 - Take your BP medication if prescribed
 - Drink plenty of fluids
- High BP- Autonomic Dysreflexia
 - Sit up
 - Check bladder drainage
 - Loosen clothing
 - Stop bowel program
 - Check for skin sores
 - Check BP
 - Call 911 for help

Temperature Regulation



- Body's thermostat is located in the brain
- Nerves from body send info to brain via the spinal cord about outside temperature
- Brain sends messages to the body to make necessary adjustments


Temperature Regulation When It's Hot Outside



- Are you sweating?
- If not, spray yourself with water
- Drink cool liquids
- Take breaks from sunshine and heat
- Wear sunscreen
- Watch for ♦ urine output


Temperature Regulation When It's Cold Outside

- Pay attention to areas of paralysis
- Wear extra clothing, socks, hats
- Drink warm liquids
- Check areas for cold and freezing
- DO NOT use electric blankets, heating pads on areas of no sensation



When to Call Your Doctor...

Swelling of joints or limbs
Decreased range of motion
Loss of sensation or movement
Increase in spasticity
Blood pressure: Low // High



What You Can Do: Know Your Body

- **Know your Level of SCI**
- **Know your Sensation and Muscle Patterns**
- **Monitor Pain and Manage It!**
- **Be Aware of Inside & Outside Temperatures**
- **Know All of Your Care Routines**
- **Talk with Your Health Care Team with Any Concerns**

What You Can Do: Practice Healthy Living

- Eat Healthy Foods
- Drink Water
- Be as Active as YOU Can
- Take Medications as Prescribed
- Practice Self-Care Routines
- Have an Annual Medical Check-up