Breaking The Silence:
Everything You Wanted To Know But Couldn't Ask About Spinal Cord Injury

TTUHSC MOT

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BLADDER PROGRAM

What does a typical bladder program procedure look like?

Assemble Equipment:

- Gloves
- Sterile catheter
- Lubricant
- Mirror (for women to locate opening of urethra)
- Soap, water, and washcloth
- Plastic bag to throw away waste
- Preferably a firm surface to sit on

General Instructions:

- Gather necessary equipment.
- Arrange clothing, so it is not in the way.
- Attempt to urinate on your own.
- Wash your hands with soap and water. Wash your perineal area (from front to back). If away from home, antiseptic wipes may be used. Refrain from using these wipes for daily perineal care.
- Open catheter packaging.
- Open lubricant tube, and apply a generous amount of lubricant to the first few inches of the catheter. Lubricant must be water soluble.
  Note: Some catheters come with lubrication already on them.
- Sit on toilet, or firm surface, and lean back.

Intermittent Catheterization For Women:

- Slightly spread legs apart. Using the hand you won't be using to hold the catheter, spread your vaginal lips (labia apart), both outer and inner parts.
- Identify your clitoris, urinary opening, and vaginal opening using a mirror or simply by feeling the area.
- Pick up the lubricated catheter with the other hand. Hold it like a pencil about 2-3" from its tip and insert tip straight (or upward) into urinary opening. Allow the other end to hang down between your legs into a basin or toilet, unless a drainage bag is attached to the catheter.
- Gently thread the catheter up into your urethra until urine starts to flow. Do not force the catheter.

(Intermittent Catheterization For Women Continued)

- If the catheter enters the vagina instead of the urinary opening, remove the catheter, wash it with soap and water, vigorously rinse the catheter lumen (tube) with tap water, dry it, and start again.
- When the urine stops flowing, remove the catheter. Pinch the end closed to avoid getting wet.
- Note color and amount of urine output.
- Clean yourself with antiseptic wipes or wash cloth.

Intermittent Catheterization For Men:

- Move back the foreskin of your penis, if uncircumcised.
- Wash the tip of your penis with “Betadine” (antiseptic cleaner), an antiseptic wipe, or soap and water.
- In a seated position, hold your penis horizontally from your body with one hand.
- With the other hand, gently thread the catheter through the urethral opening, until urine starts to flow. Do not force it. After the urine begins to flow, thread it an additional 1-2” until a good steady flow is obtained.
- Allow the other end of the catheter to hang down between your legs into a basin or toilet, unless a drainage bag is attached to the catheter.
- When the urine flow stops, gently remove the catheter, and pinch the end closed to avoid getting wet.
- Note color and amount of urine output.
- Clean yourself with antiseptic wipes or wash cloth.

<u>External Catheter:</u>

***Some men utilize a <u>condom catheter</u> to manage a “leaking” bladder. These catheters are ordered based on the circumference of the penis and are ordered by health care professionals. They are available in circumcised or uncircumcised designs. Care must be taken to prevent skin breakdown of the penile shaft. Use of a skin barrier is important, should skin become irritated.

<u>Indwelling Catheter:</u>

***A physician must write the order for the placement of an indwelling foley catheter. A health professional trained and competent in indwelling catheters is responsible for placing the indwelling foley urinary catheter.

<u>Suprapubic Catheter:</u>

***This is a catheter surgically implanted into the bladder. Consult your physician for more information and to see if this is right for you.

Tricks Of The Trade

Establish a routine: Daily or every other day.

- Vitamins, cranberry capsule, and no carbonation or alcohol will decrease risk of UTI.
- Wash your hands! Wash your hands! Wash your hands! Many UTI's can be prevented!
- Purchase cushion for toilet/commode seat to prevent skin breakdown.
- Utilize positioning techniques for comfortable transfers to toilet.
- Have all supplies available and within easy reach.
- Use a bungee cord to hold pants out of the way to free up both hands to self-catheterize.
- Providine/Benadine can be applied to a female to help locate the urethral meatus. A little puddle will form at the base of the urethral meatus to help identify where to cath. Leave the Providine/Benadine on to catheterize.
- Slightly loosen the cap on the collection tube. If it is not slightly loosened, it may create a vacuum and will not drain by gravity.
- Wheelchair Jeans (www.wheelchairjeans.com)

VERY IMPORTANT INFORMATION TO RELAY TO YOUR CLIENTS

- Every client must be educated on the signs and symptoms of autonomic dysreflexia. Patients can experience these symptoms when their catheter bags are too full and when they haven't had a regular bowel movement.
  - Patients with spinal cord injuries at T6 and above are at the highest risk for experiencing complications with autonomic dysreflexia.
- Common causes of autonomic dysreflexia related to the bladder:
  - Kink in the catheter tubing
  - Urinary tract infection
  - Anything that would be painful if sensation were present
- What do you watch for?
  - Headache
  - Increased blood pressure
  - Sweating above level of injury
  - Nausea
  - Blotchy skin
- What do you do if you are experiencing any of these symptoms?
  - Sit up, if not already doing so.
  - Check for a kink in the tubing.

  ***If dysreflexia goes away, the patient can continue their bladder program as planned, but if it persists or gets worse, contact healthcare provider immediately.

Intervention Ideas

- EDUCATION, EDUCATION, EDUCATION:
  - Patient
  - Family
  - Caregivers

    ***The more everyone knows, who will be involved with the patient's bladder program, the more likely they are going to be compliant with the program.

  - Don't assume that they have been told anything.
  - Gather and open supplies needed for bladder program.
  - Transfers to toilet:
    - Bed to w/c
    - W/c to toilet
    - W/c to floor to toilet
    - W/c to bedside commode
    - W/c to raised toilet seat
  - Practice FM tasks, such as playing game "Kerplunk", lacing beads, etc.
  - Cath a banana.
  - Show how to use a mirror.
  - Practice correct positioning and dynamic sitting balance.
  - Actually perform the bladder program, so that the client becomes more comfortable with the procedure.

BOWEL PROGRAM

What does a typical bowel program procedure look like?

Assemble Equipment:

- Gloves
- Dil Stick (if preferred)
- Lubricant
- Soap, water, and washcloth
- Toilet paper (under pads, if done in bed)
- Plastic bag to throw away waste
- Raised toilet seat, commode chair, or shower chair (depending on location)

General Instructions:

STARTING IN BED:

- Position on side of the bed with right leg crossed over the left for easier access to rectum. It is best to place the person on their left side, due to the anatomy of the intestines.
- Place 2 blue pads behind buttocks.
- Put on gloves, lubricate your index finger or Dil stick, and begin digital stimulation to remove any stool in rectum.
- When ALL the stool in the rectum is removed, insert 2 suppositories as far into the rectum as you can, along the bowel wall.
- Wait in bed on your left side 15-45 minutes. Time varies for each individual.
- Transfer to bedside commode or toilet (via w/c).
- Sit for 15-20 minutes doing digital stimulation 2 or 3 times, if necessary. Be careful not to be too aggressive with digital stimulation because the rectal tissues are very sensitive.
- Note size, consistency, and color of stool.
- Clean yourself with baby wipes or wash cloth.

STARTING IN BATHROOM:

- It is easiest to use a raised toilet seat with a cut-out (like the Activaid).
- Make sure that the Activaid seat is positioned to where the opening is to the side, to ease access for stimulation. This will also decrease the risk of losing balance when laterally bending to the side.
- Massage the abdomen in a clock-wise motion to help stimulate peristalsis of the intestines.
- Put on gloves, lubricate your index finger or Dil stick, and begin digital stimulation to remove any stool in rectum.

- When ALL the stool in the rectum is removed, insert 2 suppositories as far into the rectum as you can, along the bowel wall.
- Wait in bed on your left side 15-45 minutes. Time varies for each individual.
- Sit for 15-20 minutes doing digital stimulation 2 or 3 times, if necessary.
  Be careful not to be too aggressive with digital stimulation because the rectal tissues are very sensitive.
- Note size, consistency, and color of stool.
- Clean yourself with baby wipes or wash cloth.

How do you help someone perform digital stimulation?

Purpose: To stimulate peristalsis and aid in defecation for the individual with a neurogenic bowel.

1. First start by massaging the abdomen for several minutes, and as often as the client deems necessary, to help prepare the individual for a bowel movement.
2. Instruct the client to laterally bend to side and feel for anus with finger or Dil stick.
3. Patient can use mirror to assist them in locating the correct placement.

Tricks Of The Trade

Establish a routine: Daily or every other day.

- Use a suppository every other day (morning or evening), but most importantly at the same time. It is best 1-2 hours after eating.
- Choose foods high in fiber (roughage), such as fresh fruits, vegetables, and whole grain foods.
- Drink enough liquids to keep the stool a soft-formed consistency, and/or use a stool softener. Prune juice is a great natural laxative.
- Eat yogurt and probiotics (acidophilus) to promote healthy intestinal flora.
- Avoid foods which cause constipation or very hard stools, such as meats and dairy products, which are low in fiber or roughage.
- Avoid foods which cause diarrhea or very loose stools, such as spicy foods, greasy foods, onions, etc.
- Be as active as you can. The lack of activity can cause constipation.
- Drink a cup of hot fluid (tea, coffee, etc.) to help initiate bowel movement.
- Use a commode chair or toilet, but be aware of potential skin breakdown.
- Purchase a cushion for toilet/commode seat to prevent skin breakdown.
- Practice positioning techniques for comfortable transfers to toilet.
- Have all supplies available and within easy reach.

VERY IMPORTANT INFORMATION TO RELAY TO YOUR CLIENT

- Every client must be educated on the signs and symptoms of autonomic dysreflexia. Patients can experience these symptoms when their catheter bags are too full, when they haven’t had a regular bowel movement, and also when they are too aggressive with their bowel program.
    - Particularly when using a Dil stick, clients are too aggressive for the sensitive tissues of the anus and the rectum.
    - Patients with spinal cord injuries at T6 and above are at the highest risk for experiencing complications with autonomic dysreflexia.
- Common causes of autonomic dysreflexia related to the bowels:
    - Constipation / impaction
    - Distention during bowel program (digital stimulation)
    - Hemorrhoids or anal fissures
    - Infection or irritation (appendicitis, colitis, etc.)
    - Anything that would be painful, if sensation was present
- What do you watch for?
    - Headache
    - Increased blood pressure
    - Sweating above level of injury
    - Nausea
    - Blotchy skin
- What do you do if you are experiencing any of these symptoms?
    - Stop stimulation immediately!!
    - Sit up, if not already doing so.
    - Insert a local numbing agent like Nupercainal Ointment into rectum.

      ***If dysreflexia goes away, the patient can continue their bowel program as planned, but if it persists or gets worse, contact your healthcare provider immediately.

Intervention Ideas:

- EDUCATION, EDUCATION, EDUCATION:
    - Patient
    - Family
    - Caregivers

      ***The more everyone knows, who will be involved with the patient’s bowel program, the more likely they are going to be compliant with the program.

    - Gather and open supplies needed for bowel program.

- Transfers to toilet:
    - Bed to w/c
    - W/c to toilet
    - W/c to floor to toilet
    - W/c to bedside commode
    - W/c to raised toilet seat
- Perform Shaving Cream Exercise to help practice toileting steps for dynamic balance and digital stimulation.
- Use a mirror and Dil Stick to locate proper placement of stick.
- Perform the bowel program so that the client becomes more comfortable with the procedure.

***According to many online blogs, bowel programs for SCI patients are the worst part of their day. If we as OT's can make this process easier on them, especially initially, and help them figure out strategies that work, they will be more likely to follow their bowel program and accept it as a new routine they must perform on a regular basis.

ADAPTIVE EQUIPMENT: BOWEL/BLADDER MANAGEMENT

Catheter Inserter

Catheter Inserter with U-Cuff-$50.50

*Pressure is applied to both handles to open spring clip. Pressure is released to securely pinch catheterization tubing for easy insertion. Handle bends to adjust to various hand sizes.

Knee Spreader with Mirror

Knee Spreader with Mirror-$92.90

* Designed to assist with self-catheterization. Rigid 6"x4" knee separator provides 9" of abduction.

Lumex Open Padded Raised Toilet Seat

Raised Toilet Seat-$89.00

*Side cut out allows for improved access for bowel programs and perennial cleaning. Can be front, side, or rear-mounted.

Flexible Para Inspection Mirror

Flexible Mirror-$30.30

*10" aluminum shaft. Hand loop adjusts and shaft maintains desired angle. Mirror measures 5-1/2" square. Handle is 5-1/2" long.

Royal Grip™ Suppository Inserter/Digital Bowel Stimulator

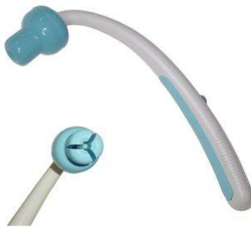
Suppository Inserter-$101.00

*Spring-loaded tip on inserter prevents suppository from being expelled prematurely. Adjusts for left or right-hand use.

Digital Bowel Stimulator-$88.90

* Provides stimulation to improve independence with bowel program. Adjusts for left or right-hand use.

Our Popular Bottom Buddy



Bottom Buddy-$80.80

*Flexible head grips tissue or moistened wipe and releases the paper with a push of a button.

Sure-Grip™ Suppository Inserter/Digital Bowel Stimulator

Suppository Inserter-$77.80

*Used to insert suppository. Inserter rotates 360˚. Plastic u-cuff that can loop over either hand.

Digital Bowel Stimulator-$70.70

*Provides stimulation to improve independence with bowel program and plastic u-cuff that can loop over either hand.

Rehab Shower Commode Chair-24" Wheels

Shower Commode Chair-$1,299.00

*Rolling shower chair/commode with special features includes side cut out for improved access for bowel program and perennial hygiene. Swing back and removable arm and leg rests. Can choose between rigid or folding frame.

*****Recommend further research with medical equipment companies for competitive pricing.**

RESOURCES: BLADDER

About Sacral Neuromodulation. *Medtronic for Healthcare Professionals*. Retrieved from http://professional.medtronic.com/pt/uro/snm/edu/about/index.htm#.USF7XKV8zFJ

Bladder and Bowel. *Wheelchair LIFE*. Retrieved from http://www.wheelchairlife.net/Bladder_Maintenance_Bowel_Maintenance_For_Parapleg ics_Quadriplegics_In_Wheelchairs.html

Bladder Care. *Shepherd Center Learning Connections*. Retrieved from http://www.myvitalconnections.org/webmanuals.nsf/3478d43e5c5c8dcb85256ae60061f8 97/CF2B89D36786EF1F852571C50063D00F

Sample Policy and Procedure. *Insertion, Removal and Care of an Indwelling Foley Catheter.* Retrieved from http://www.ucdenver.edu/academics/colleges/medicalschool/departments/medicine/hcpr/ cauti/documents/Sample%20Policy%20and%20Procedures.pdf

Suprapubic Catheter. *Catheterout.org*. Retrieved from http://www.catheterout.org/?q=content/suprapubic-catheter

Urinary Catheters. *Medline Plus*. Retrieved from http://www.nlm.nih.gov/medlineplus/ency/article/003981.htm

USA JEANS-The Leader in Sitting Pants. Retrieved from http://www.wheelchairjeans.com

What happens to the bladder, bowel, and sexual function? *Spinal Cord Injury Zone*. Retrieved from http://www.spinalcordinjuryzone.com/answers/1552/what-happens-to-the-bladder-bowel-and-sexual-function

Woodward, S. The Men's Liberty Blog. *Men's Liberty*. Retrieved from http://blog.mensliberty.com/blog/?BBP

RESOURCES: BOWEL

Bowel Management Program after Spinal Cord Injury - Care Guide. *Drugs.com.* Retrieved from http://www.drugs.com/cg/bowel-management-program-after-spinal-cord-injury.html

Bowel Program in SCI. *Rehab Team Site*. Retrieved from http://calder.med.miami.edu/pointis/bowel.html

Christopher Reeve Spinal Cord Injury and Paralysis Foundation. Retrieved from http://www.christopherreeve.org/site/c.ddJFKRNoFiG/b.4048063/k.C5D5/Christopher_Reeve_Spinal_Cord_Injury_and_Paralysis_Foundation.htm

Digital Stimulation. *Shepherd Center Learning Connections*. Retrieved from http://www.myvitalconnections.org/webmanuals.nsf/ae05066a27d4960485256afb0069d063/fca24e0693d98e948525716b0071b215!OpenDocument

Helpful Stuff. *Wheelchair LIFE Home*. Retrieved from http://www.wheelchairlife.net/index.html

When Spinal Cord Injury Affects the Bowel. *Spinal Cord Injury Zone*. Retrieved from http://www.spinalcordinjuryzone.com/info/7471/when-spinal-cord-injury-affects-the-bowel

RESOURCES: ADAPTIVE EQUIPMENT

Experts in Motion. *Spinlife*. Retrieved from http://www.spinlife.com

Patterson Medical. Retrieved from http://www.pattersonmedical.com

Wheelchairs for Sports and Everyday. *Sportaid*. Retrieved from http://www.sportaid.com

Interesting Information

Spinal Cord Injury Grants & Research. *Travis Roy Foundation*. Retrieved from http://www.travisroyfoundation.org

*Provides grants to SCI survivors for modifications/adaptations.

FEMALE PUBERTY

After injury your body may react in different ways**:**

- Amenorrhea-- Loss of menstrual cycle lasting usually only around 3-6 months.
  - If periods have not resumed after 4-6 months post-injury, consult a physician about possible hormone therapy to stimulate ovulation.

- Autonomic Dysreflexia-- Over-activity of the Autonomic Nervous System (ANS), which controls the unconscious functions of the body. An irritating stimulus sends nerve impulses up the spinal cord until blocked by the lesion at level of injury, which due to this disconnect of messages to the brain, involves spasms, increased blood pressure, and narrowing of blood vessels.

- Decreased dysmenorrhea-- Less menstrual cramping than before injury.
  - However, it is shown that there could also be increased pain at separate portions of menstrual cycle due to spasticity exacerbations and bladder spasms.

- Increased PMS symptoms—Extreme irritability and emotional lability.

- Exacerbations of autonomic symptoms—Sweating, headaches, flushing, or goose flush.

- UTI/yeast infections—Chronic antibiotic use and wheelchair users who remain in seated position have increased incidents of these vaginal infections.

- Immediate cessation/menopause after injury—Menstrual cycle/bleeding stops immediately after injury, which allows for menopause and menopausal symptoms to begin.
  - Menopausal symptoms can include spasticity, bladder spasms, increased bone fractures, and dysautonomia (malfunction of ANS that controls all unconscious functions of body).

- Longer menstrual cycles

- Increased bloating and lower extremity swelling

Tampon Use: (*Many prefer over pads as there is no skin irritation and better protection during transfers*)

- Be cautious of lack of sensation, as you may not be able to feel where tampon is positioned.
- Familiarize yourself with your vaginal shape because everyone is different.
- Use mirror to look at vagina, lying on bed, like when learning to self-catheterize.
- You can use a lubricated tampon with gel, especially if you have limited hand function or trouble inserting it.
- Change 3-4x/day or every 4 hours to avoid **Toxic Shock Syndrome** (which can include fever, low blood pressure, blanching, vomiting, diarrhea, or can be potentially fatal).
- Remove before catheterizing and use gel on catheter, as well as tampon if necessary, due to dryness after tampon use.

Sanitary Napkin Use:

- Position pad more posteriorly toward anus (flat and even) as to not cause pressure and to lessen chance of leakage.
- Wear firm fitting underpants to lessen movement of pad.
- Check regularly for signs of skin irritation and pressure between legs.
- For wear with self-catheters:
    - Make sure pad sticks well to underpants and is positioned correctly.
    - Wipe away blood in downward fashion to avoid any fecal contamination.
    - Add gel if experience dryness.
    - Be as clean as possible. Wash hands before and after.
    - Cut down middle of pad to fit catheter tube.

MALE PUBERTY

Adhere to parental permission regulations. Adolescents will learn about puberty through school or parents, and timing of puberty varies between individuals.

- Use appropriate developmental education for children or adolescents with SCI.
- Explain normal body changes, such as body hair, voice changing, growth spurts, body odor, acne, erections, and ejaculations.
- Address sexual activity issues as some adolescents become worried after their first ejaculation.
- Prepare parents and patients as there is a possibility of an early onset of puberty.
- As evidenced by female puberty, as well, high levels of prolactin released in body from shock of injury can cause impotence and decreased sexuality in males in first 6 months.

SEXUALITY

MALE CONCERNS

- Masculinity & gender roles are heavily linked to sexual function.
- Difficulties & concerns:
  - Erectile difficulties
  - Loss of sensation
  - Change in social roles
  - Altered body image

ERECTION AND EJACULATION AS AFFECTED BY SPINAL CORD LEVEL:

- Erection: The severity and level of an injury can give an indication of how likely a man is able to have erections.

Erection: BEFORE SCI	Erection: AFTER SCI
• Psychogenic: This type of erection means imagining something you find sexy or attractive. The erection may come from sights, sounds, or thoughts that are arousing. Not likely possible for men with complete upper motor neuron (T11 & above) injuries. • Reflexogenic: This type of erection is a direct result of physical touch or stimulation to the penis. The ability to get a reflexogenic erection or spontaneous erection is controlled by nerves found in the lowest part of the spinal cord segments (S2-4). Reflexogenic erections are possible for men with complete upper motor neuron (T11 & above) injuries. • Spontaneous: If you have ever awakened with an erection because your bladder is full, you've had a spontaneous erection. This is from internal stimulation.	• Psychogenic: For many men after SCI, having an erection by just thinking about something sexual may not work so well. This is because the area of the spinal cord responsible for erections is located between T11 and L2. Therefore, if your level of SCI is above this, the message from your brain cannot get through the damaged part of the spinal cord. • Reflexogenic: Some men with SCI may still get an erection when the catheter is being changed, when penis is being cleaned or wiped, or even by just pulling clothing or blankets over the body. This stimulation to the penis may actually produce an erection, even if you really didn't want that to happen. *e.g.: Reflex erections can be controlled by more apparent stimulation, such as pulling the pubic hairs.* • Spontaneous: Some men after SCI may still get an erection when their bladder is full.

- Ejaculation: This is an even more complex process than erection.

Men with complete upper motor neuron (T11 & above)	Men with complete lower motor neuron (T12 & lower)
The ability to ejaculate is rare, and less than 10% are able to have normal ejaculations.	The ability to ejaculate is usually not possible, especially if the sacral nerves are involved.

- Sometimes the spinal cord injury prevents the bladder neck from closing, and seminal fluid (semen) will be ejaculated into the bladder instead of out the penis. This is called retrograde ejaculation.

FEMALE CONCERNS

- Loss of bowel and bladder function.
- Inability to maintain optimal feminine hygiene.
- Vaginal lubrication can be an issue.
    - After a spinal cord injury, your vagina may lubricate less and some women find it takes longer for lubrication to occur.
- Orgasm IS possible if there is some residual pelvic innervations.
- More predominant is a "phantom orgasm", which is a pleasurable, fantasized orgasm that mentally intensifies an existing sensation.
- Female's ability to engage in sexual activity is less likely affected by SCI compared to males, due to the way the female body is constructed.

SEX ADAPTATIONS AND STRATEGIES

Males

- Vacuum-Induced Erections:
  - This device allows males to achieve an erection by placing a tube over the penis, where the air is sucked out, and the blood can inflate the penis.
  - Price ranges from $200 to $500.
  - For more information visit: http://www.edguidance.com/treatment/mechanical-treatment.html

- Injected Vaso-Active Drug:
  - A prescribed amount of dosage injected by a very fine needle at the base of the tip. The needle is extra fine to prevent discomfort or pain as much as possible. The drug enlarges the blood vessels in the penis, causing an erection that can last from 15 minutes to an hour, depending on the dosage level.
  - Price ranges from $10 to $20 (per injection, depending on medications used).
  - For more information visit: http://www.urologicalcare.com/other-ed-treatments/penile-injection-therapy/ http://www.sexhealthmatters.org/erectile-dysfunction/self-injection-erectile-dysfunction

- Penile Implants or Penile Prostheses:
  - A rod or an inflatable tube is surgically inserted into the penis. Inflatable tubes, consisting of several chambers, are filled with fluid to produce an erection. The fluid is emptied after intercourse. Penile implants are found to typically last 8-15 years on average.
  - Price ranges from $10,000 to $20,000.
  - For more information visit: http://www.urologicalcare.com/advanced-ed-treatments/types-penile-implants/

- Intimate Rider:
  - A small swing chair device that is designed to offer a natural gliding motion that will improve sexual mobility. The movement of the upper torso is enough momentum to use this product.
  - Price is $365.00.
  - For more information visit: http://www.intimaterider.com/

Females

- Sex Wedges:
  - This device allows you to achieve an optimal position in a comfortable manner to allow more energy to be expended during sex. It comes in all shapes, sizes, and colors (designs are available).

  - Price ranges from $70 to $300 (depending on style).
  - For more information visit: http://www.liberator.com/wedge-ramp-combo.html

- Sex Swings:
  - This device allows couples to achieve difficult positions more easily, therefore, enhancing sexual performance. Many styles are available that have customizable options.

  - Price ranges from $ 90 to $600.
  - For more information visit: http://sexswings.com/

- Sex Stool:
  - This device allows a person to enjoy sex in a seated, comfortable position without having to put weight or strain on the lower extremities. This device comes in different dimensions, styles and materials.

  - Price ranges from $ 50 to $200.
  - For more information visit: http://www.adameve.com/sexy-extras/sex-furniture-props/sp-sex-stool-12963.aspx

MALE ASSISTED REPRODUCTIVE TECHNOLOGY

Penile Vibratory Stimulation (PVS):

- Most effective for those with an injury at level T10 or above (88% success rate).
- Cost is low, and it can be utilized at home, once evaluated in a clinic.
- Devices available over the counter, such as Ferti Care for $850. http://medicalvibrator.com/products-page/

Electroejaculation (EEJ):

- Performed by specially trained physician and is 95% effective.
- Recommended for those who do not respond to PVS.
- This was the most common method used but, due to its evasive procedure, is not preferred by men.

Prostate Massage:

- Physician assisted, and no indications are required for this method.
- Usually recommended by physicians if there is no PVS or EEJ equipment available.

Surgical Sperm Retrieval:

- Physician assisted.
- Controversial method because, due to a low yield of total motile sperm, couples may have to use IVH insemination procedures. IVH is the most expensive insemination procedure.

MALE RESOURCES

BOOKS:

Amador, M. J., Charles M. L., & Nancy L. B. A Guide and Resource Directory to Male Fertility Following Spinal Cord Injury/Dysfunction. Miami, FL: *Miami Project to Cure Paralysis*: 2000.
(To order call the Miami Project at 1-305-243-7108).

Baer, R.W. Is Fred Dead?: A Manual on Sexuality for Men with Spinal Cord Injuries. Pittsburgh, PA: Dorrance Publishing: 2003. Retrieved from www.dorrancepublishing.com.

Blackburn, M. Sexuality & Disability. Oxford, UK: Butterworth Heinemann: 2002.
(This book is specific to those with spina bifida and hydrocephalus.)

Karp, Gary. Disability & The Art of Kissing: Questions and Answers on the True Nature of Disability. *Life on Wheels Press*: 2006 (2).

Sexuality and Reproductive Health in Adults with Spinal Cord Injury: A Clinical Practice Guideline for Health Care Professionals. Washington, DC: *Paralyzed Veterans of America:* 2010.

VIDEOS:

http://www.spinalcord.uab.edu/show.asp?durki=97417

- University of Alabama at Birmingham's streaming video on Sexuality and Sexual Function (59 minutes).

Portraits in Human Sexuality: Medical Issues. Princeton, NJ: *Films for the Humanities and Sciences*: 2006. DVD.

- Includes a segment on a man with a spinal cord injury (36 minutes).

Untold Desires. New York: *Filmmakers Library*: 1995.

- Both men and women with disabilities discuss their quest to be recognized as sexual beings and their right to become parents.

FEMALE RESOURCES

BOOKS:

Karp, G. Disability & the Art of Kissing: Questions and Answers on the True Nature of Disability. *Life on Wheels Press*: 2006 (2).

Kuttai, H. Maternity Rolls: Pregnancy, Childbirth and Disability. Halifax, Canada: *Fernwood Publishing*: 2010.

Rogers, J. The Disabled Woman's Guide to Pregnancy and Birth. New York, NY: *Demos Medical Publishing*: 2006.

Sexuality and Reproductive Health in Adults with Spinal Cord Injury: A Clinical Practice Guideline for Health Care Professionals. Washington, DC: *Paralyzed Veterans of America*: 2010

VIDEOS:

Disability and Motherhood. Princeton, NJ: *Films for the Humanities & Sciences*: 1995. (25 minutes)

Doin' It: Sex, Disability, and Videotape. Chicago, IL.: *Beyondmedia Education*. (35 minutes)

Molly and Jeramy: Relationships, Sexuality and Spinal Cord Injury. Sherborn, MA: *Aquarius Healthcare Videos*: 2004. (25 minutes) DVD and VHS.

Reproductive Health for Women with Spinal Cord Injury Part 1 – The Gynecological Examination. Birmingham, AL: *RRRTC on Secondary Conditions of SCI*: 1997. (30 minutes)

Reproductive Health for Women with Spinal Cord Injury Part 2 –Pregnancy & Delivery. Birmingham, AL: *RRRTC on Secondary Conditions of SCI:* 1997. (32 minutes)

Toward Intimacy: Women with Disabilities. New York, NY: *Filmmakers Library*: 1992. (60 minutes)

University of Alabama at Birmingham's streaming video on Sexuality and Sexual Function (59 minutes)

Untold Desires. New York: *Filmmakers Library*, 1995.

Women's Sexuality after SCI. Miami, FL: *University of Miami School of Medicine*: 2003. (18 minutes)

PSYCHOSOCIAL ADJUSTMENTS

A spinal cord injury is among the most devastating injuries one can experience. There is no universal response to adjustment, but a lifelong process of adaptation. This involves transitioning from an independent life to a more dependent state and experiencing an overwhelming new reality.

There is **hope**! Most persons with SCI (75%) were found to have a high quality of life even with a severe disability. Therapeutic approach plays an important role in the recovery process.

"ALL interactions should be based on respect, equality, and support. Whether the patient grows from the experience or succumbs to the disability is directly influenced by the support received in rehabilitation."

Normal Reaction v. Major Depressive Disorder

Normal and expected reaction to SCI:

1. Denial and disbelief
2. Sadness, anger, and bargaining
3. Acceptance
4. Formulating a new identity

During these stages, patients may have considered **suicide**, though few attempt it. Many will go through periods of self-neglect.

Depressive reactions and **posttraumatic distress** may commonly occur after spinal injuries but will usually improve over time. The key is follow-up contacts post-discharge to identify patients who are at risk of developing chronic psychopathology

Major Depressive Disorder:

According to the *DSM-IV*, a person who suffers from major depressive disorder must have depression symptoms (depressed mood or a loss of interest/pleasure in daily activities) consistently for at least a two week period. This mood must represent a change from the person's normal mood. Social, occupational, educational, or other important functioning must also be negatively impaired by the change in mood.

2012 Study of 102 SCI Patients	1 Year Post-Injury	4 Years Post-Injury
Depressive Symptoms	46%	12%
PTSD Symptoms	9%	2%

Screen for Comorbidity

Population at risk for comorbid conditions:

- Individuals who became injured as a result of substance related activities (DWI, drug-related violence, etc.)
- Increased problems with pressure sores, ruined internal catheterization programs, distended bladder, etc.
- Chronic pain; burning/stinging pain is more common than pulling, pressing, cramping stabbing, and tingling numbness
- PTSD symptoms

MARITAL STATUS: RELATIONSHIP ROLE CHANGES

- Couples who separate within the 1st year post-injury are very likely to divorce.
- New marriages occurring post-injury have a very high success rate.
- The key is intervention within the 1st year, including spouses and loved ones.

It is a misconception that SCI patients cannot marry, continue a successful marriage, or find love again.

WORK AND EDUCATION

- Paraplegics have a higher rate of return to work than tetraplegics.
- SCI at younger age more likely to become reemployed.
- More education prior to injury correlates to a higher employment rate post-injury.
- Completion of vocational rehabilitation program makes employment more likely.
- Research shows that most who were in school prior to injury will return.
- Online programs and political push for inclusion of disabilities has helped with accessibility and equal opportunities for individuals with SCI.

FINANCIAL RESPONSIBILITIES TO EXPECT

- Re-hospitalization: Initially following injury, SCI patients are re-hospitalized on average once every 2 years. These re-hospitalizations become less frequent post-injury. Average length of stay during re-hospitalization is 17 days. Costs associated with these stays can add to the stressors leading to depression.
- Outpatient Services & Physician Fees: Average cost of outpatient services during the first year post injury averaged 3000 in 1995. Costs have increased since then.
- Durable Equipment: Hospital equipment, mattresses, cushion covers, crutches, braces, splints, orthoses, ventilators, etc.

- Environmental Modifications: New car/van, modifications to vehicle, home modifications
- Medications and Supplies: Prescription or non-prescription, typically involve muscle relaxers, urine acidifiers, antacids, laxatives, analgesics, and antibiotics. Supplies include catheters, tubing, leg and bed bags, bed pans, bandages, diapers, etc.
- Attendant Care/Household Assistance: Payment to unskilled (cleaning, cooking, laundry, shopping, and yard work) and skilled services (nursing or home health rehabilitation services). This is the highest cost associated with injury.
- Vocational Rehabilitation: Self-pay or third party source when available

HOW TO COPE

- Empower the patient with knowledge.
- Take advantage of all therapeutic opportunities.
- Meet with other people and families for both old and new SCI.
- Be careful of random internet surfing on SCI topics.
- Rely on reputable organizations.
- Check out local and state support groups:
  - National Spinal Cord Injury Association, The American Trauma Society, Christopher & Dana Reeve Foundation.
- Seeking help from religious beliefs.
- Trying for Independence:
  - Trying for movement
  - Receiving education from professional healthcare providers and peers
  - Employment
  - Searching for information
  - Setting goals for self-care and independence
- Hope for:
  - Healing
  - Successful surgical operation
  - Divine Intervention
  - Progresses in medicine

Patient ID

SPINAL CORD INJURY CARE EDUCATION MONITORING TOOL

Clinician (initials)	Date	Patient	Family/Caregiver	EDUCATION	Discipline
				Overview SCI	OT/PT
				Cath Training	NSG
				Pain Management	NSG
				Medication	NSG
				Fluids	NSG
				Nutrition	NSG
				Bowel/Bladder Program	NSG
				Skin Inspection	OT/PT
				Autonomic Dysreflexia	OT/PT
				Pressure Relief	OT/PT
				Transfer Technique	OT/PT
				Abdominal Binder	OT/PT
				TLSO / Brace / Collar	OT/PT
				Depression	OT/PT
				Sexuality	OT/PT
				Swallow	SLP
				Home Mobility/Safety/Home Eval	OT/PT
				Driving/Academic/Vocational	OT/SLP
				Social Services	SW
				Funding sources	SW
				W/C mobility:	PT
				ramps	PT
				stairs	PT
				curbs	PT
				car transfers	PT
				ROM	OT/PT

Recommend	N/A	DME Durable Medical Equipment
		Wheelchair
		Drop Arm Bedside Commode
		Shower Chair / Extended Tub Bench
		Cushion ____________________
		Sliding Board
		Wheelchair ramp
		Cathing Supplies
		Hand held mirror
		Braces/Supports
		Home Modification
		Other:

	Follow up care recommended
	Secondary Facilites
	Out Patient
	Home Health
	Nursing
	Physical Therapy
	Occupational Therapy
	Speech and Language Pathology
	Therapeutic Recreation

	Home Program	
	OT (Occupational Therapy)	
	PT (Physical Therapy)	
	SLP (Speech Therapy)	
	TR (Recreation Therapy)	
	SW (Social Work)	
	RN/LVN (Nursing)	

	Attend a family/caregiver conference
	Date:_______ Location:__________
	Must attend training, as clinically needed

	Signatures (initial and discipline)		(Family/Caregiver)

RESOURCES & CREDIBLE ORGANIZATIONS

Christopher & Dana Reeve Paralysis Resource Center

- www.paralysis.org, 800-539-7309

Disabled Sports USA

- www.dsusa.org/chapter.html

Family Voices

- www.familyvoices.org/states, 888-835-5669

Help Hope Live (formally NTAF)

- www.helphopelive.org, 800-642-8399

National Spinal Cord Injury Association

- www.spinalcord.org, 800-962-9629

Office of Disability Employment Policy

- www.dol.gov/odep, 866-487-2365

Spinal Cord Injury Information Network

- www.spinalcord.uab.edu, 205-934-3450

The American Trauma Society

- www.amtrauma.org, 800-556-7890