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## Activities of Daily Living-Spinal Cord Injury Manual

Thomas Jefferson University Hospital and Magee Rehabilitation  
*Regional Spinal Cord Injury Center of the Delaware Valley*, Susan.Sammartino@jefferson.edu

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Regional Spinal Cord Injury Center of the Delaware Valley  
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# *Spinal Cord Injury Manual*

A publication of the  
Regional Spinal Cord Injury Center  
of the Delaware Valley

The Regional Spinal Cord Injury Center of the Delaware Valley provides a comprehensive program of patient care, community education, and research. It is a federally designated program of Thomas Jefferson University and its affiliated institutions of Thomas Jefferson University Hospital and Magee Rehabilitation Hospital.



# Spinal Cord Injury Patient-Family Teaching Manual

**A Publication of the  
Regional Spinal Cord Injury Center  
of the Delaware Valley**

Researched and prepared by the clinical  
personnel of Thomas Jefferson University  
Hospital and Magee Rehabilitation Hospital

Available online at:

[www.spinalcordcenter.org](http://www.spinalcordcenter.org)

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## Dedication

The Handbook Committee of the RSCICDV gratefully acknowledges the assistance and dedication of all who contributed to this manual, and all the others who worked so hard to make this Handbook a reality.

Lori Bennington, RN  
Amy Bratta, PT, DPT, NCS  
Sharon Caine, PT  
Catharine M. Farnan, RN, MS, CRRN, ONC  
Dawn Frederickson, BSN  
Karen Fried, RN, MSN, CRRN, CCM  
Colleen Johnson, PT, NCS  
Nicole Krafchek, PT  
Cynthia Kraft-Fine, RN, MSN  
Marlene Kutys, MSW  
Linda Lantieri, PT, ATP  
Frank Lindgren  
Mary Grace Mangine, OTR/L  
Dina Mastrogiovanni, OTR/L, ATP  
Vilma Mazziol, LPC  
John Moffa, RT  
Mary Patrick, RN (**Editor**)  
Evelyn Phillips, MS, RD, LDN, CDE  
Marie Protesto, RN  
Julie Rece, RN, MSN, CRRN, CWOCN  
Katheleen Reidy, PhD  
Jessica Rickard, CTRS  
Margaret Roos, PT, DPT, MS  
Susan Sakers Sammartino, BS  
Mary Schmidt Read, PT, DPT, MS (**Editor**)  
Patricia Thieringer, CTRS  
John Uveges, PhD  
Cheryl West, PT, DPT

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# Activities of Daily Living

Introduction .....	1
Upper-Body Dressing Techniques for Persons with Paraplegia .....	1
Lower-Body Dressing for Persons with Paraplegia. ....	2
Pants .....	2
Introduction to Bathing Techniques for Individuals with Paraplegia ....	3
Introduction to Dressing Training .....	4
Types of Clothing Recommended. ....	4
Lower-Body Dressing Techniques for Persons with Tetraplegia. ....	5
Method One .....	5
Method Two .....	8
Introduction to Bathing Techniques for Persons with Tetraplegia. ....	8
Upper-Body Dressing Techniques for Persons with Tetraplegia .....	9
Method One .....	9
Method Two .....	10
Method Three .....	10
Glossary .....	11
References .....	12





# Activities of Daily Living

## Introduction

Activities of daily living (ADL) include eating, drinking, functional bathing, grooming, dressing and toileting. Also included are functional transfers, EADL (Electronic Aids for Daily Living) and home management.

As soon as it is appropriate, you will be encouraged to perform as many of your own ADLs as you can. You may need to learn new techniques, use assistive devices to compensate for decreased muscle strength and range of motion or to compensate for decreased endurance.

ADL training will begin when your therapist determines that you have enough strength, balance and skill to do these tasks. You may practice these skills with the therapist in the therapy gym or at your bedside. Your cooperation is necessary to obtain the highest level of independence possible.

The techniques described on the following pages have been helpful for many patients in achieving partial to total independence with ADLs. Some of the side benefits of ADL practice include increased range of motion and muscle strength, increased general endurance, improved balance and increased flexibility. Independence with ADLs can contribute to increased self esteem and confidence as well.

You may practice these techniques and decide with your therapist which activities are easiest to complete in bed, in a chair or in a wheelchair. Over time, the techniques you use for ADLs may change.

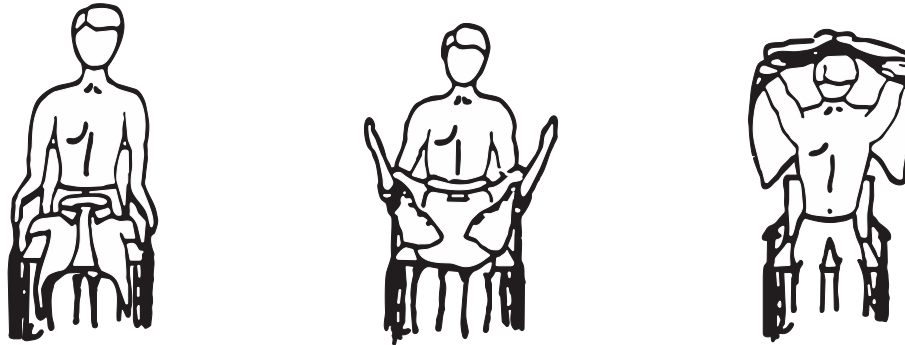
## Upper-Body Dressing Techniques for Persons with Paraplegia

Initially, if you are wearing a brace, you may want to wear an extra large T-shirt or sweatshirt to fit over the brace. After the brace is removed, upper-body dressing is not difficult usually. If difficulty is encountered, you may try the following method:

1. Place the shirt on your lap with the collar toward your hips and the label facing up.
2. Put your arms into the sleeves and pull the sleeves up over the elbows.
3. Holding onto the shirttail or back of the shirt, pull it over your head.

4. Adjust and button the shirt.

#### *Upper Body Dressing Technique*

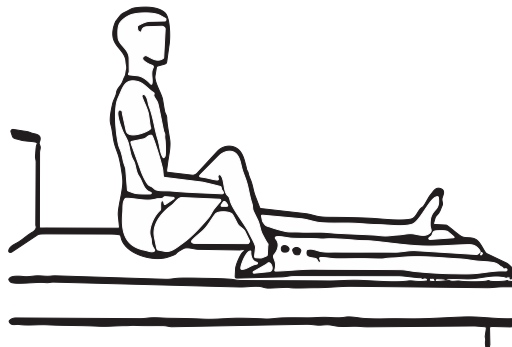


### **Lower-Body Dressing for Persons with Paraplegia**

#### **Pants**

1. Pants should be positioned with pant legs toward the end of the bed with the front side facing up. Positioning the pants can be achieved by holding the top of the pants and flipping the pants down to your feet or by using a dressing stick or reacher to put them in position.
2. Lift one knee at a time (from long-sitting position) by hooking your forearm under your thigh and insert your foot into a pant leg. Or, place your lower extremities into a “frog-leg” position, and one leg at a time, pull pants up over your foot and up your leg as you simultaneously straighten that leg out by pushing on your knee with the opposite hand.

#### *Lower-Body Dressing Technique*



3. Once both legs are started into the pants, pull the pants over your feet to mid-calf. (If you are wearing a brace, you may need to use a dressing stick or reacher to do

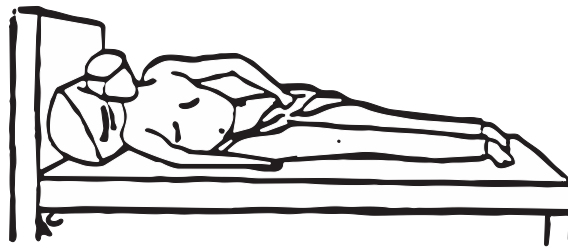
this). Continue to pull up the pants to the buttocks while in a sitting position.

*Lower-Body Dressing Technique*



4. Lie down (use hospital bed controls if you are unable to assume this position independently) and roll from side to side to pull the pants over the buttocks.

*Lower-Body Dressing Technique*



## Introduction to Bathing Techniques for Individuals with Paraplegia

Initially, you will probably sponge bathe in bed. You may be able to wash your face and arms. If you are wearing a brace or a halo, you may be able to wash off your chest with the brace off or the front of the halo-vest panned while laying flat in bed. You will require assistance to wash your back. A long-handled sponge may be helpful in reaching parts of your body that are difficult to reach with your hands. Due to difficulty drying off, bathing in a seated position with a brace on is not recommended.

Over time, the techniques you use to bathe may change. Many factors will influence this, such as your ability to transfer, your sitting balance and endurance. Other factors that may influence your ability include the set up of your bathroom at home and the type of equipment that you will be using.

Depending on your ability, you may either use a tub seat or you may sit on the bottom of the tub. A portable hand-held shower may be helpful. Safety grab bars and a rubber bath mat inside and outside of the shower are recommended also. You and your therapist will evaluate this.

Remember, your sensation may have changed and you must be aware of the temperature of the water. Before getting into the tub, you should test the water with your hand. Here, sensation is normal. Also, you may want to buy a plastic water thermometer or a temperature regulator from a plumbing supply store.

Remember to be extra careful in the bathroom as wet surfaces tend to be extra slippery. Keep in mind the rubber bath mat for both inside and outside of the shower or tub.

## **Introduction to Dressing Training**

There are many dressing techniques you may learn during your inpatient rehabilitation that will maximize your independence in preparation for discharge. You must remember that patience and practice are very important to become as independent as possible.

Some people completely dress their lower body in the bed before transferring to a wheelchair. This helps to conserve energy and time. Others have found that it is easier to dress their upper body after the transfer, in the wheelchair since this position provides better balance than does long-sitting on the bed. Your occupational therapist will discuss these techniques with you and practice whatever is best for you.

There are many pieces of adaptive equipment available that can make dressing easier. Long-handled reachers may provide you with the ability to reach your feet. Sock donners may help you to pull socks over your heels. Your occupational therapist will demonstrate and try this equipment with you as needed throughout your rehabilitation stay.

### **Types of Clothing Recommended**

- Sweatsuits or loose comfortable clothing may be most comfortable for daytime wear. If you have a brace or a halo and want to wear a shirt, you may need to purchase a larger size or cut slits into the neck area of the shirt.
- Shirts that open in the front may be easier to get on and off.
- Material should be lightweight and without large seams.

- Cotton fabrics allow air to circulate and can decrease perspiration. Nylon fabrics tend to hold in heat and moisture, which can affect skin. Rougher fabrics can rub or irritate your skin.
- Socks with tight elastic bands should be avoided. Stockings should fit smoothly since any wrinkles or constricting material can cause pressure areas and decrease circulation. This includes TED stockings as well.
- Avoid excessive fullness in the sleeves, trouser legs and skirts as they may catch on wheels or protruding objects while in the wheelchair. Avoid garments that fit tightly at the waist, crotch or under the arms as these may cause excessive rubbing or pressure sores.
- Capes and ponchos are easier to put on and take off than long coats when sitting in a wheelchair. There are clothing companies that provide specialized clothing designed for wheelchair users. Some of this clothing contains pant seams that lie flat, zippers that are longer, belt loops that are wider and pant legs that are extra long. Your occupational therapist can help you identify catalogs to purchase this clothing, if desired.
- The legs of trousers and the hems of skirts should be one inch longer than usual since they frequently ride up the leg when one is seated in the wheelchair. Shoes and sneakers should also be from one-half to one size larger than your normal size. Swelling can occur in the feet and produce pressure ulcers at bony areas when the shoe size is not adequate.

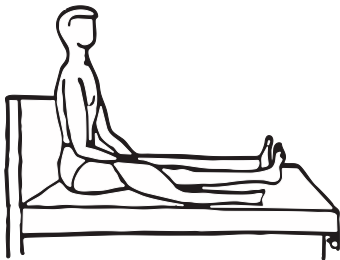
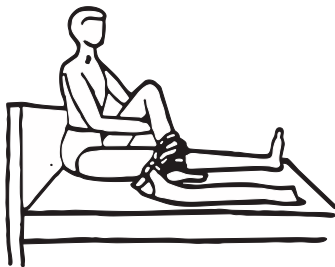
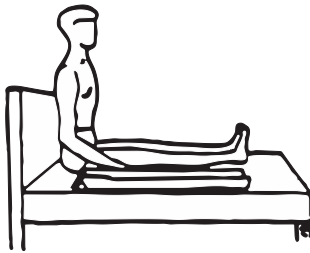
## **Lower-Body Dressing Techniques for Persons with Tetraplegia**

### **Method One**

#### *Pants*

1. Sit on your bed with your back against the fully elevated head of a hospital bed or against a wall. Place your pants so that they are in front of you,

### Lower-Body Dressing Technique



parallel to your legs. (You may need to throw your pants into place or use a dressing stick or reacher.)

2. Place your wrist under your opposite calf (right wrist under left calf), and pull your leg up over the opposite knee (crossed) or into a “frog-legged” position (bent knee out to the side).
3. Use the opposite free arm and hand to put your pants over the foot of the leg that is crossed. You may have to work the waistband or top of your pants under the heel of your foot.
4. Straighten your leg, and pull your pants up to your knee. (You need to keep them low for now in order to get the opposite leg in.)
5. Repeat the steps for the other leg.
6. When pants are pulled up close to your hip, lean back on one elbow and roll from side to side. Using your free arm, pull pants over your hip. You may need to roll to each side two or three times. You will need to lower the head of the bed to a flat position to perform this step.

### Socks and Shoes

Putting on socks and shoes may be difficult if you are wearing a brace. It is recommended that you wear shoes or sneakers that are one-half size to one size larger than you normally wear due to the potential for swelling and due to limited sensation. You may need to use adaptive equipment to help you until your brace is off, or you may be unable to do it at this time.

Your occupational therapist will evaluate this with you and show you how to use equipment. You may try the two methods suggested below to see which one works best for you:

- While sitting in bed, pull up one leg at a time by locking arm under knee or by pulling one leg into a “frog-leg” position. (Make sure not to move beyond 90 degrees hip flexion if you are wearing a brace.) While supporting your leg with one arm, slip on socks and shoes with the free hand.
- While in your wheelchair, cross one leg over the other so your ankle is resting on the opposite knee. (Make sure not to move beyond 90 degrees hip

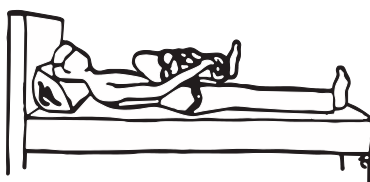
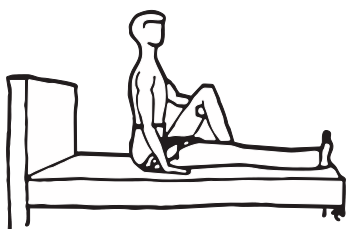
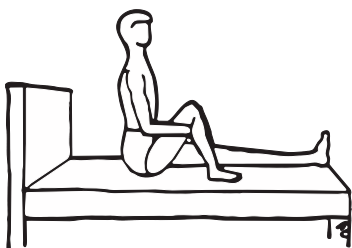
flexion if you are wearing a brace.) Slip on your socks and shoes. If trunk balance is a problem and you can not maintain a crossed-leg position in a wheelchair, you may try placing your foot on a stool, chair, open drawer or hooking your opposite arm around an upright wheelchair handle to help support yourself. Since sensation in your feet may be impaired or absent, you will have to be extra careful when placing your bare feet on any surface.

**Note:** Over time, the techniques you use to dress yourself may change. Many factors will influence this such as a brace, sitting balance and endurance.

## Method Two

### *Pants*

#### *Lower-Body Dressing Technique*



1. Sit length-wise on your bed.
2. Take your right wrist and place it under your right knee.
3. Rock back onto your bed (with the bed flat) and pull your knee toward your chest. Use your left arm to slip your pants over your right foot and work your pants up to your thigh.
4. Sit up and do the same with your opposite leg. (You can use hospital bed controls for sitting and lying flat.)
5. Roll from side to side to pull your pants up over your hips.

## Introduction to Bathing Techniques for Persons with Tetraplegia

Initially, you will receive sponge baths in bed. Depending on your ability, wash mitts or special sponges may be provided to help you wash yourself when grasp is weak or not functional. Your occupational therapist may schedule to see you in your room in the morning to help you increase your independence with bathing.

Over time, the techniques you use to bathe yourself may change. Many factors will influence this, such as your ability to transfer, your sitting balance, your endurance, the set up of



your bathroom at home and the type of equipment that will be used.

When you are able to shower, a shower chair will be needed for safe bathing. Your therapist will help you decide whether this needs to be a stationary bench-like seat or a wheeled shower chair. A transfer board for transfers from your wheelchair to the shower may be helpful. You will be practicing transfers onto this equipment both in the therapy gym and in the bathroom during your inpatient rehabilitation stay.

Remember, your sensation is impaired and you must be aware of the temperature of the water. You may test the temperature of the water with parts of your arm where sensation is normal, or you may want to ask someone to test it for you. You may want to buy a plastic water thermometer, or install a temperature regulator from a plumbing supply store also.

Depending on your ability, a portable hand-held shower may be helpful. The handle can be adapted to your specific needs.

It may be difficult to dry yourself, particularly when reach is limited or grasp is weak. A large terry cloth bathrobe or poncho made from a large beach towel may be helpful. You may be able to transfer back into your wheelchair directly onto this bathrobe or towel to dry your body off.

Remember to be extra careful in the bathroom as wet surfaces tend to be extra slippery. Keep in mind a rubber mat for both inside and outside of the shower or tub.

## **Upper-Body Dressing Techniques for Persons with Tetraplegia**

Several methods exist for upper-body dressing and your occupational therapist will help you decide which method is the best for you. Some considerations will be your ability to balance and the time it will take you to manage the closures (e.g., buttons and zippers). Some methods will be easier if you have good shoulder strength and relatively good balance. Other methods using a throwing action require less balance, but a lot of practice. You may find it easier to dress your upper body while in your wheelchair. This will give you better balance than long sitting on the bed. Your feet can remain on the bed or on the footrests of the wheelchair depending on your ability to stabilize yourself.

### **Method One**

If you have good shoulder and hand function, you may be able to put on your shirt in the usual fashion, putting one arm into a

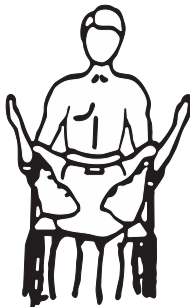
sleeve and reaching behind your back with the other arm to the second sleeve.

### Method Two

#### Upper-Body Dressing Technique

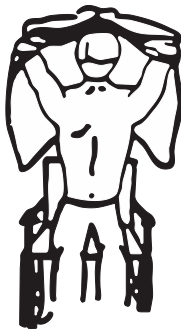


1. Place the back of the shirt on your lap with the label face up and the collar toward you.
2. Put your arms into the sleeves until the armholes are above the elbows and your hands are free.
3. Put your hands under the bulk of the shirt, push the shirt away from your chest and flip it up over your tucked chin.
4. As the shirt reaches the back of your neck, straighten your arms and allow the shirt to fall into position.



### Method Three

1. Place the back of the shirt onto a high table that you can pull up under in your wheelchair, or elevate your hospital bed enough so that you can lean forward onto it. Place the shirt with the label face up and the collar toward you if it is a button down. If the shirt is a pull over, place the label face down and the bottom of shirt facing you.
2. Lean onto the table or bed and put your arms into the sleeves until the armholes are above the elbows and your hands are free.
3. Put your hands under the bulk of the shirt and pull it over your head as you are leaning on the table or bed.
4. As the shirt reaches the back of your neck, straighten your arms to help the shirt fall into place. Push yourself back into an upright position in your wheelchair or have someone assist you.



# Glossary

<b>Dressing Stick</b>	This device makes dressing and retrieving items easier for those with decreased range of motion. It has a small C-shaped hook at one end and a larger hook at the other end.
<b>Long-Handled Sponge</b>	This device allows those with decreased range of motion to reach down to the lower body or back for bathing activities.
<b>Portable Hand-Held Shower</b>	A device that allows those who will be seated during showering to hold the shower head in their hand.
<b>Reacher</b>	This device allows those with decreased range of motion or an inability to reach items to retrieve them. It has a trigger device that is hand operated for closing the “jaws” around objects.
<b>Sock Donner</b>	This allows those with limited hand function or limited trunk mobility or balance to pull socks or stockings onto their feet. The sock is placed onto a plastic trough and the donner is placed next to the foot. Cord handles are attached to the donner. Continued pulling of the device brings the sock up over the heel and onto the calf.

# References

1. Graf M. Environmental control unit considerations for the person with high-level tetraplegia. *Topics in spinal cord injury rehabilitation*. 2(3), 30-40. Gaithersburg, MD: Aspen Publishers, 1997.
2. Edwards PA.(Ed.) *The specialty practice of rehabilitation nursing: A core curriculum*. p. 130-131. Skokie, IL: ARN, 2000.
3. Zedjlik CM. *Management of spinal cord injury*. p 427-460. Monterey, CA: Wadsworth Publishers, 1991.

# Comments and Feedback

The staff of the center has recently spent a lot of time and effort in revising this manual. However, we realize that those who are actively reading and using the manual can improve it. As a part of our program of continuous quality improvement, we ask you to help guide our efforts to improve the manual.

In the next section of the chapter are two forms. The first form is an overview by chapter that seeks to identify those areas of the manual that could benefit the most from additional work. We also seek to identify any major areas of concern that have not been addressed.

The second section is a more focused questionnaire that has as its goal the specific items that should be targeted. For example, should an item be added to the glossary or the definition changed. Should a drug be added to the discussion of bowel programs?

The more specific the comments are the more likely that we will be able to make the improvements that form the basis of your idea. By communicating with the Regional Spinal Cord Injury Center of the Delaware Valley, however, users grant us permission to use any information, suggestions, ideas, drawings or concerns communicated for any purpose we choose, commercial, public or otherwise, without compensation or acknowledgement whatsoever.

Thank you for taking the time to assist us in improving this manual.

Sincerely,

SCI Manual Committee

Regional Spinal Cord Injury Center of the Delaware Valley  
Thomas Jefferson University Hospital  
132 S. 10th Street  
375 Main Building  
Philadelphia, PA 19107

# Feedback Form

Rate each chapter by placing an "X" on the scale underneath the term that best captures your opinion. Using the next page, provide specific comments regarding your ratings. Feel free to make copies of the next page.

	No Opinion	Fair	Satisfactory	Good	Excellent
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<b>Spinal Cord Injury</b>					
<b>Bladder</b>					
<b>Bowel</b>					
<b>Respiratory</b>					
<b>Respiratory Dependent</b>					
<b>Skin</b>					
<b>Cardiovascular</b>					
<b>Nutrition</b>					
<b>Activities of Daily Living</b>					
<b>Equipment</b>					
<b>Mobility</b>					
<b>Psychology</b>					
<b>Vocational Services</b>					
<b>Recreational Therapy / Resource Guide</b>					
<b>Travel and Transportation</b>					
<b>Sexuality</b>					
<b>Spinal Cord Injury Follow-Up Care System</b>					
<b>Master Glossary</b>					

# Suggestions and Comments

Chapter: \_\_\_\_\_

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Comments: \_\_\_\_\_

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Any terms that need to be added to the glossary? How would you define the terms?

Any section or paragraph that was not clear?

Any drawing or sketch that would help to illustrate the material being covered?

Any additional topic that should be covered?

Any questions you have that you feel should have been answered by the manual?

What is the question?

What is the suggested answer?

Any references that should be added? Any other resources that should be mentioned?

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