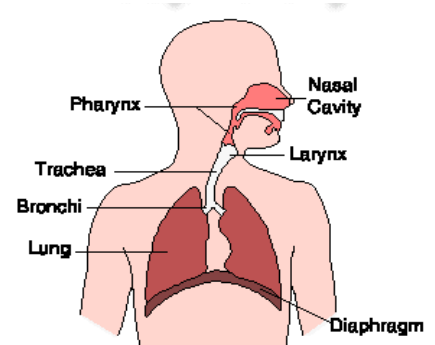


# Spinal Cord Injury and Your Breathing

## WEAKENED BREATHING MUSCLES MAY MAKE YOU FEEL:

- More tired
- Breathless
- Run out of energy during work
- Have trouble coughing, sneezing, shouting or singing.

The good news is we have many ways of helping to build the strength and improving the function of the muscles that are working for you (binder, breathing exercises and other devices).



## HOW DO I KEEP MY LUNGS HEALTHY?

- Stop smoking: smoking increases your lung secretions and the likelihood of getting a lung infection. Smoking hurts your lungs just like it does everyone. The difference is that your lungs are more vulnerable.
- Do your breathing exercises: Do you know what your breathing exercises are? Do you know what your other breathing treatments are? (*Hydration, incentive spirometry, use of an abdominal binder, P-flex, acapella, chest vest, CPAP or BiPAP, Oxygen*)
- If you get a cold or sore throat: Do more exercises, call your doctor
- Importance of Flu vaccine and Pneumovax shot.

## WHY DOES EVERYONE KEEP TALKING ABOUT THE TOP 3 MEDICAL REASONS FOR READMISSION TO A HOSPITAL?

Because we want you to know what the common problems are and learn the ways to try to avoid them, stay out of the hospital and do more of the things that you like. Non fatal lung problems (*pneumonia* is one of the top 3 reasons for re-admission (*the others are skin wounds/infections, urinary tract infections*)). The good news is if you learn how to do your breathing program you can keep yourself healthier.

## HOW DO I KNOW WHEN I HAVE A LUNG PROBLEM AND NEED TO CALL THE DOCTOR?

- An increase in your shortness of breath
- Rapid breathing
- Increased congestion in your lungs
- Headache, fever, chills, unusual drowsiness
- A lower reading on your incentive spirometry

**IN GENERAL, IF YOU ARE HAVING BREATHING TROUBLE, CALL YOUR DOCTOR.**

## **WHAT ABOUT THE ABDOMINAL BINDER THAT I HAVE HEARD ABOUT. DO I NEED ONE AND WHY?**

The abdominal binder is a rectangular elastic wrap that goes around your abdomen and a bit of your lower chest. It is strongly recommended for people who have had spinal cord injuries above the level of T12. The reason is this..... The abdominal muscles normally (even when we don't do sit ups or have a 6 pack) have some muscle tone to them and they hold all of the abdominal organs in. These organs push into the diaphragm and help it assume its high dome position. Normally, when the diaphragm muscle tightens it lowers by 2 inches and this space change in the chest draws air in. Without the normal tone in the diaphragm the abdominal organs relax and drop down and this draws the diaphragm muscle down into a lower position. In this position, the muscle when tightened on lowers ½ inch or so and less air enters the lungs. This is why you may feel tired or breathless or run out of loud speaking voice. So the binder acts like the abdominal muscles and really helps! By the way it may also help with your blood pressure. You might need help to get it on. The good news is even without abdominal muscles you can get in a deeper breath by using a binder and doing your breathing exercises.



## **WHAT IS AN EFFECTIVE COUGH? HOW DO I KNOW IT? WHAT IF I NEED HELP?**

An effective cough is being able to cough when you need to (clear your throat or a piece of food that is kind of stuck) and be able to be successful within 3-4 tries. You would know you had an effective cough if it was strong enough to get rid of the phlegm or piece of stuck food. People with a spinal cord injury at the level of T9 or 10 and above have weakened muscles that help with a forceful cough. If this is the case for you it would be important to learn techniques to strengthen your cough or techniques that a caregiver can learn. This is really quite important for your safety.

## **WHAT IS MY BREATHING EXERCISE PROGRAM AND WHY DO I HAVE TO DO IT?**

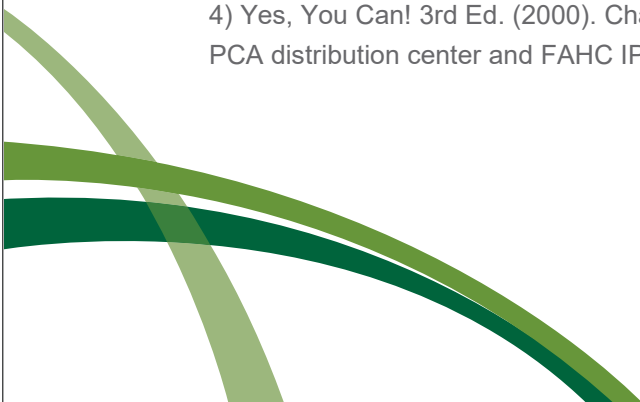
The simple reason is to stay healthy. Since your spinal cord injury your lungs are vulnerable. You need to follow your pulmonary program (hydration, binder, exercises, P flex/ incentive spirometer, acapella or chest vest) in order to strengthen the breathing muscles that you do have to breathe better. It is important to do your program to gain endurance (*remember that the air you breathe is like the gas to run your car*). Following your breathing program can help you avoid being re-admitted to the hospital. The good news is your pulmonary or breathing program is something that you can learn and take with you where ever you go.

# Breathing

## Additional Resources

- 1) \_\_\_\_\_ Understanding and Managing Respiratory Complications after Spinal Cord Injury. <http://images.main.uab.edu/spinalcord/html/res2001.ppt>
- 2) \_\_\_\_\_ Understanding and Managing Respiratory Complications after Spinal Cord Injury. <http://www.spinalcord.uab.edu> (Publications, Information Sheets, SCI Info Sheets, Info Sheet #19)
- 3) \_\_\_\_\_ Yes, You Can! 3<sup>rd</sup> Ed. (2000). Chapter 4- Respiratory Care. This manual is available through [www.pva.org](http://www.pva.org) and is a standard patient education tool.

### Patient and Family Resources:

- 1) [www.spinalcord.uab.edu/show.asp?durki=28921](http://www.spinalcord.uab.edu/show.asp?durki=28921) This is a web site that addresses Understanding and management of Respiratory Complications after Spinal cord injury. (requires web access and ability to read)
  - 2) [www.spinalcord.uab.edu/show.asp?durki=44544](http://www.spinalcord.uab.edu/show.asp?durki=44544) This is a web site written specifically for the patient/family consumer. It was last revised in Sept. 2001. Good, long
  - 3) [www.craighospital.org/C\\_Rsearch/c2y\\_breathing.html](http://www.craighospital.org/C_Rsearch/c2y_breathing.html) This is an educational brochure by Craig Hospital, published in the Paraplegia News in April 2001
  - 4) Yes, You Can! 3<sup>rd</sup> Ed. (2000). Chapter 4- Respiratory Care. It is available through PCA distribution center and FAHC IP Rehab Center.
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## Resources on Sexuality After Spinal Injury

### ON THE WEB

<http://www.spinalcord.uab.edu>

Excellent information clearing house from one of the country's best model spinal cord injury programs. A highly recommended site! Has information on almost everything, including an excellent area on sexuality, including:

- Sexual aids
- Sexual dysfunction
- Sexual orientation
- Sexuality in general

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

Website of the National Spinal Cord Injury Association. Excellent overall information on spinal cord injury, with an A-Z list of topics and links to hundreds of useful sites. Includes a section on post-injury sexuality, with multiple links.

[www.sexualhealth.com](http://www.sexualhealth.com)

Information on physiology, fertility, and changes in sexuality after an injury

Webcasts section includes clips about penile implants (patient interviews and a graphic overview of the surgery itself), as well as segments on:

- Effects of a cord injury on sexuality
- Vaginal intercourse
- Sexual pleasure
- Fertility and pregnancy
- Medication options like Viagra

[www.muhealth.org/~momscis/series/explore.htm](http://www.muhealth.org/~momscis/series/explore.htm)

Website of the Missouri Model Spinal Cord Injury System, with information on exploring post-injury sexuality.

[www.calder.med.miami.edu/points/sexuality.html](http://www.calder.med.miami.edu/points/sexuality.html)

Good, basic information from a Rehab team. Includes info on:

- Erections and ejaculation
- Orgasms
- Intercourse
- Sex drive
- Fertility, contraception, pregnancy and childbirth

[www.scisexualhealth.com](http://www.scisexualhealth.com)

Info on sexual health, physiology, fertility, sexual changes after injury, with links to other sites, including an e-magazine for people with spinal cord injuries.

## VIDEOS

One of the best we've found is **Sexuality Reborn\***. An excellent resource, geared to promoting active, fulfilling sex lives following a spinal cord injury. Frank discussions by four couples who demonstrate and share personal experiences concerning self-esteem, dating, bowel and bladder functioning, sexual responses, and varying types of sexual activities.

## BOOKS

**\*Sexuality After A Spinal Cord Injury: Answers to Your Questions**, by Stanley H. Ducharme and Kathleen M. Gill (Paul H. Brookes Publishing). Includes answers to many questions and has a useful resource guide.

**\*Enabling Romance**, by Ken Kroll and Erica Levy Klein (No Limits Communications). A guide to love, sex, and relationships for people with disabilities and the people who care about them. A general guide for people with disabilities, with a chapter on spinal cord injuries. Also includes a helpful list of resources, organizations, and groups for people with disabilities.

**\*We have these available, please let any member of your treatment team know if you'd like to see them.**

## Discharge Information

Below is a list of important provider names, phone numbers and appointments:

1. Primary Care Doctor: \_\_\_\_\_
2. Physiatrist: \_\_\_\_\_
3. Surgeon: \_\_\_\_\_
4. Urologist: \_\_\_\_\_
5. Neurologist: \_\_\_\_\_
6. Psychologist: \_\_\_\_\_
7. Inpatient Rehabilitation: OT \_\_\_\_\_ PT \_\_\_\_\_
8. Out-patient appointments (name, date, telephone number):
  - a. Doctor: \_\_\_\_\_
  - b. Doctor: \_\_\_\_\_
  - c. Psychologist: \_\_\_\_\_
  - d. Home Care Agency (name, start date and time, telephone #):  
\_\_\_\_\_  
\_\_\_\_\_
  - e. Brace Clinic appointment (location, time, vendor name, telephone #):  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
  - f. Vocational Rehabilitation appointment (location, time, telephone #):  
\_\_\_\_\_
  - g. Driver Rehabilitation appointment (location, time, telephone number):  
\_\_\_\_\_
  - h. Outpatient rehabilitation appointments (location, time, telephone #):
    - 1) OT: \_\_\_\_\_
    - 2) PT: \_\_\_\_\_
9. Additional Services:
  - a. Meals on Wheels: \_\_\_\_\_
  - b. Transportation: \_\_\_\_\_

Discharge Equipment	Vendor	Telephone #	Rental/ Purchase

**MEDICATIONS**

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

6. \_\_\_\_\_

7. \_\_\_\_\_

# Discharge Planning

## LIVING ARRANGEMENTS AFTER DISCHARGE:

1. Where am I going to live after discharge? ( see home evaluation form):

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2. List of the home barriers:

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3. List of the home modifications and safety recommendations:

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## CAREGIVER TRAINING:

1. Do I need someone to help me with my care?

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2. How do I find a caregiver?

---

3. Who will be my caregiver?

---

4. What do I need help with?

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Tasks	Who	When	Training: Initiated/ Practiced/ Completed

## HOME EXERCISE PROGRAM

# Discharge Information

## Additional Information

- 1) \_\_\_\_\_ University of Alabama SCI Injury—Info. Sheet #6 *Personal Care Assistants*. <http://images.main.uab.edu/spinalcord/pdffiles/info-6.pdf>
- 2) \_\_\_\_\_ University of Alabama SCI Injury—Info. Sheet #17: *Caregivers for SCI*. <http://images.main.uab.edu/spinalcord/pdffiles/17care.pdf>
- 3) \_\_\_\_\_ Yes, You Can! - Chapter 20, pp. 173-179. *Home Modifications; Making Your Home Accessible*.



### FOR MORE INFORMATION

To find health information, or for convenient and secure access to your medical record through MyHealth Online, please visit **UVMHealth.org/MedCenter** or call us at **(802) 847-0000**.

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