



# Nutrition After Paralysis



Figure 1: Photo Credit: Courtesy of Craig Hospital.

Paying attention to eating habits is key to maintaining overall health. For people living with spinal cord injury, a healthy diet can also help limit negative outcomes related to secondary conditions.

## Q: What are the basics of good nutrition?

A healthy diet requires a variety of fruits, vegetables, grains, protein foods and dairy. Poor nutrition, such as consuming too many processed or refined foods, can contribute to high blood pressure, high cholesterol, and chronic diseases like diabetes.

The U.S. Department of Agriculture's MyPlate tool (<https://www.myplate.gov/myplate->

[plan](#)), available on its website, provides examples of healthy choices from all food groups, budget-friendly shopping tips, and portion suggestions to help individuals build healthy eating habits.

### **Q: How do dietary needs change after spinal cord injury?**

Metabolic activity and muscle mass are diminished following a spinal cord injury, creating a higher risk of obesity. As a result of these changes, individuals may need fewer calories than before their injury. In general, people with spinal cord injuries should seek out low-calorie nutrient dense foods, such as fruits, vegetables, whole grains, lean meats, nuts, beans and seeds.

Consult with a dietician or physiatrist with experience caring for people with spinal cord injuries for suggestions on how to adjust your caloric intake and diet to maintain a healthy weight.

### **Q: How can eating certain foods improve my bowel program?**

Eating foods that are high in fiber is crucial for cultivating a healthy bowel program and preventing constipation, diverticulitis, and hemorrhoids. Fiber helps keep stool soft, allowing it to pass through the digestive system more easily. Foods that are high in fiber include whole grain cereals and breads, fruits (apples, pears, prunes) and vegetables (peas, corn, potatoes), and plain popcorn.

Some foods that may cause excessive gas include onions, celery, carrots, brussels sprouts, cucumber, cabbage, cauliflower, radishes, dried beans, raisins, bananas, apricots, prunes, dried fruit, bagels, pretzels, peas, green salads, bran cereal, brown rice and parsnips.

Staying hydrated is also important for bowel health. Aim to drink about 8–12 cups of water per day.

### **Q: Are there any foods that should be avoided to minimize bowel unpredictability?**

High fat foods, including processed meat, store-bought baked goods and fried foods can harden stool and cause constipation. White bread, pasta, dairy and bananas can also make bowel movements more difficult. On the flip side, caffeine, alcohol, chocolate and spicy foods may cause diarrhea. Keeping a food journal can help people identify the specific foods that irritate or cause problems with individual bowel programs.

### **Q: What effect does diet have on secondary conditions?**

Spinal cord injuries cause a range of secondary complications, including urinary tract infections, bone loss and pressure sores. Eating the right foods can help minimize the

impact of these complications.

- To help prevent bone loss, eat plenty of foods that contain calcium, such as dairy products, dark, leafy green vegetables, tofu, canned salmon, and calcium-fortified orange juice.
- To help limit urinary tract infections, drink lots of fluids to flush bacteria from the bladder.
- To help prevent pressure sores, maintain a healthy weight. Being overweight may decrease the ability to easily transfer and regularly shift positions, while being underweight (with limited fat between the skin and bones) can increase friction to unprotected bones. Stay hydrated to prevent skin tears and eat plenty of protein.
- To maintain bone strength and help lower blood pressure, regularly eat foods containing calcium, including low-fat dairy products, green leafy vegetables, and fish such as anchovies, sardines and salmon.

### **Q: What can people with limited mobility do to maintain a healthy weight?**

Obesity in people with paralysis increases the risk of developing cardiovascular disease, diabetes, and metabolic syndrome. A variety of eating strategies and lifestyle adaptations can help individuals maintain a healthy weight.

- Stay active. There are exercise options for all injury levels, from adaptive yoga to handcycling. The Reeve Foundation’s Adaptive Sports and Recreation for People with Paralysis booklet (<https://s3.amazonaws.com/reeve-assets-production/Reeve-Sports-and-Rec-online-06-2022.pdf>) can help identify activities that not only match individual needs but provide a fun social outlet. Set a goal to be moderately active for 60 minutes each day for five days a week.
- Avoid sodas, fried foods and high fat snacks.
- Do not skip meals, which can lead to excess hunger and overeating.
- Be aware of portion sizes, especially when eating out.
- Eat a wide variety of whole grains, fruits, vegetables, and protein-rich foods, such as lean meats, eggs, nuts, and beans.

Before beginning any new diet, always talk to your healthcare provider.

### **Q: Can medications cause weight gain?**

Some common medications that may cause weight gain include antidepressants; beta-blockers used to treat high blood pressure; diabetes drugs such as insulin and sulfonylureas; and oral corticosteroids which are prescribed for rheumatoid arthritis,

inflammatory bowel disease, asthma, and allergies.

Consult with your healthcare provider if you have concerns about weight gain that may be caused by medication. Do not stop taking any medications without first speaking with your doctor.

*Sources: Veterans Affairs Health Care, Craig Hospital, Model Systems Knowledge Translation Center, University of Washington Northwest Regional Spinal Cord Injury Center, Shepherd Center.*

#### **Need to talk to someone?**

Our Information Specialists are available to answer your questions.

Call toll-free 1-800-539-7309 Mon-Fri, 9 am-8 pm EST.

Schedule a call or ask a question online at <https://www.ChristopherReeve.org/Ask>

## **Resources for Nutrition:**

### **Sites with general information on nutrition and weight management:**

#### **American Heart Association (AHA)**

<https://www.heart.org>

#### **American Heart Association: The Skinny on Fats**

<https://www.heart.org/en/health-topics/cholesterol/prevention-and-treatment-of-high-cholesterol-hyperlipidemia/the-skinny-on-fats#.VqkYqIUrdU>

This page has information on various kinds of fats.

#### **American Heart Association: Facts on Fats**

<https://www.heart.org/en/healthy-living/healthy-eating/eat-smart/fats/the-facts-on-fats>

This page lists recommendations regarding the use of fats.

#### **Health Canada - Santé Canada: Canada's Food Guide**

<http://www.hc-sc.gc.ca/fn-an/food-guide-aliment/index-eng.php>

This site has information and tools to help people maintain healthy eating and activity habits.

**Health.gov: Dietary Guidelines for Americans, 2020-2025.** 9<sup>th</sup> edition. U.S. Department of Agriculture and U.S. Department of Health and Human Services. Washington, DC. Dec. 2020.

[https://www.dietaryguidelines.gov/sites/default/files/202012/Dietary\\_Guidelines\\_for\\_Americans\\_2020-2025.pdf](https://www.dietaryguidelines.gov/sites/default/files/202012/Dietary_Guidelines_for_Americans_2020-2025.pdf)

This document provides information and advice to help people choose a healthy eating pattern to achieve and maintain a healthy weight.

#### **Kids Health: Figuring Out Food Labels**

[http://www.kidshealth.org/kid/stay\\_healthy/food/labels.html](http://www.kidshealth.org/kid/stay_healthy/food/labels.html)

This page has audio and text to help children understand food labels.

**Linus Pauling Institute: Micronutrient Information Center – Glycemic Index and Glycemic Load**

<http://lpi.oregonstate.edu/infocenter/foods/grains/gigl.html>

This page has information on the body's response to carbohydrates, measured through glycemic index, and disease prevention. The Micronutrient Information Center's pages on vitamins, minerals, supplements and other nutrients are easily accessible through the index on the left.

**National Resource Center on Nutrition & Aging**

<https://nutritionandaging.org/>

1550 Crystal Drive, Suite 1004

Arlington, VA 22202

Phone: 703-548-5558

The National Resource Center on Nutrition and Aging (NRCNA) is hosted by Meals on Wheels America as part of a cooperative agreement with the Administration for Community Living. They provide resources to consumers (current and future older adult populations) and nutrition training and technical assistance to the aging network.

**U.S. Department of Agriculture's National Agricultural Library: Food and Nutrition Information Center**

<https://www.nal.usda.gov/fnic>

**Food and Nutrition Information Center: Weight and Obesity**

<https://www.nal.usda.gov/fnic/weight-and-obesity-0>

This page has information and resources on a variety of topics related to weight and obesity, including treatment and prevention guidelines and practical advice for weight control.

**U.S. Department of Agriculture: MyPlate**

<http://www.choosemyplate.gov/>

This site has information on healthy eating, weight management and physical activity. MyPlate replaced the food pyramid in June 2011.

**U.S. Food and Drug Administration**

<http://www.fda.gov/>

**U.S. Food and Drug Administration: How to Understand and Use the Nutrition Fact Labels**

<http://www.fda.gov/Food/IngredientsPackagingLabeling/LabelingNutrition/ucm274593.htm>

**U.S. Food and Drug Administration: Dietary Supplements**

<http://www.fda.gov/ForConsumers/ConsumerUpdates/ucm153239.htm>

**Sites with information specific to people with disabilities and/or spinal cord injury:**

**American Dietetic Association Evidence-Based Library: Spinal Cord Injury Guidelines**

[www.adaevidencelibrary.com/topic.cfm?cat=3485](http://www.adaevidencelibrary.com/topic.cfm?cat=3485)

The guidelines will help clinicians determine the nutrition needs of their patients with SCI.

**CDC: Disability and Obesity**

<http://www.cdc.gov/ncbddd/disabilityandhealth/obesity.html>

This page has information on overweight and obesity, including recommendations for healthy eating and physical activity.

**CDC: Overweight and Obesity Among People with Disabilities Factsheet**

<http://www.cdc.gov/ncbddd/disabilityandhealth/documents/obesityFactsheet2010.pdf>

**CDC: Tip Sheet on Obesity in People with Disabilities by State**

[http://www.cdc.gov/ncbddd/disabilityandhealth/documents/obesity-tip-sheet\\_-\\_phpa\\_1.pdf](http://www.cdc.gov/ncbddd/disabilityandhealth/documents/obesity-tip-sheet_-_phpa_1.pdf)

“Obesity and People with Disabilities: A Tip Sheet for Public Health Professionals”

**Craig Hospital: Diet**

<https://craighospital.org/resources/topics/diet>

Craig specializes in the treatment of people with spinal cord injury and brain injury.

**Craig Hospital: Preventing Weight Gain after Spinal Cord Injury**

<https://craighospital.org/resources/weight-gain-battle-of-the-bulge>

**Mealtime Partners**

<http://www.mealtimepartners.com>

1137 S.E. Parkway

Azle, TX 76020

Phone: 817-237-9991, 800-996-8607

E-mail: [info@mealtimepartners.com](mailto:info@mealtimepartners.com)

Mealtime Partners makes products that facilitate independent eating and drinking for people with disabilities who cannot independently feed themselves.

**Model Systems Knowledge Translation Center: Bowel Function after Spinal Cord Injury**

<https://msktc.org/sci/factsheets/bowel-function-after-spinal-cord-injury>

**National Center for Health, Physical Activity and Disability (NCHPAD)**

<http://www.nchpad.org/>

400 Ridgeway Dr.

Birmingham, AL 35209

Phone: 800-900-8086

NCHPAD is positioned to effect change in health promotion/obesity management among people with disabilities through its history of providing advocacy, services and programs to numerous organizations and people throughout the country on the topics of health and physical activity in people with disabilities.

**NCHPAD: Children with Disabilities and Obesity**

<http://www.nchpad.org/1143/5653/Obesity~Cardiovascular~Disease~in~Children~with~and~without~Disabilities~and~Prevention>

This fact sheet discusses the risks of obesity and the benefits of physical activity.

**NCHPAD: Nutrition**

<http://www.nchpad.org/Individuals~Caregivers>

This page lists many articles on nutrition for people with disabilities.

**e-Health Dietary Points Calculator and Meal Planner For People with Spinal Cord Injury**

<http://www.nchpad.org/sci/>

is made possible by a collaboration between the National Center on Health, Physical Activity and Disability and the Christopher & Dana Reeve Foundation.

**Shepherd Center: Bowel Health and Nutrition**

<https://www.myshepherdconnection.org/sci/Nutrition/bowelhealth>

**Spinal Cord Injury Information Network (SCIIN)**

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

**SCIIN: Nutrition**

<http://www.uab.edu/medicine/sci/daily-living/nutrition>

This page lists pamphlets, articles and presentations related to nutrition and people with spinal cord injuries.

**SCIIN: EatRight Weight Management Program**

<http://www.uab.edu/medicine/sci/uab-scims-information/eatright-weight-management-program>

This 12-week weight management program was designed for individuals with spinal cord impairments, which includes persons with spinal cord injury, dysfunction and disease. The program includes a workbook and video which participants can follow each week.

**Northwest Regional Spinal Cord Injury System (NRSCIS)**

<http://sci.washington.edu/>

**NRSCIS: Everyday Nutrition for Individuals with Spinal Cord Injury**

[http://sci.washington.edu/info/forums/reports/nutrition\\_2011.asp](http://sci.washington.edu/info/forums/reports/nutrition_2011.asp)

This report by Harborview Medical Center dietitian Vickeri Barton and occupational therapy clinical specialist Susie Kim was given on April 12, 2011. The presentation can be read online or viewed as a streaming video.

**Veterans Affairs: Nutrition and Spinal Cord Injury**

<https://www.nutrition.va.gov/docs/UpdatedPatientEd/NutritionandSCI01-15.pdf>

**Streaming Videos:**

**Shepherd Center: Empowering Women with Spinal Cord Injury –Diet and Exercise**  
<https://www.shepherd.org/more/resources-patients/women-sci-resource-videos>

**University of Kansas: Diet Project for People with Physical Disabilities**  
<http://www.youtube.com/watch?v=nF2CVMll8Rs&list=UU97Dz-3Cj74N7lqTquQtuPQ&index=1&feature=plcp> (7 minutes)

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