



# Nutrition in Rehabilitation and Recovery From Injury

No one wants to get injured, but injuries do happen. You might not think food is important during rehabilitation and recovery, but nutrients help your body to heal and get strong again. Tell your doctor or athletic trainer that you want to meet with a sports dietitian to help you with recovery and rehabilitation.

## Important Nutrients for the Healing Process

- Vitamin C helps your body to form collagen. (Collagen is a protein needed for strength and flexibility; it repairs tendons and ligaments and strengthen bones.) The concentration of vitamin C in your body decreases when your body is under stress. Stress also increases urine losses of vitamin C.
- To heal, your body needs vitamin A for cell growth and development, bone development, and to help immune function.
- Zinc is involved in wound healing.
- See the boxes in this handout for food sources of these nutrients.

### Food Sources of Vitamin C

- Oranges and orange juice
- Broccoli
- Red bell peppers
- Strawberries
- Grapefruit and grapefruit juice
- Baked potatoes
- Cabbage
- Tomatoes
- Papaya
- Cantaloupe

Note: The Recommended Dietary Allowance (RDA) for vitamin C is 90 milligrams per day for men and 75 milligrams per day for women. Do not take more than 2,000 milligrams per day.

### Food Sources of Vitamin A

- Liver
- Sweet potatoes
- Carrots
- Mango
- Turnip greens
- Spinach
- Papaya
- Red bell peppers

Note: The RDA for vitamin A is 900 retinol activity equivalents (RAE) per day for men and 700 RAE per day for women. Do not take more than 3,000 RAE (10,000 IU) per day.

### Food Sources of Zinc

- Meat
- Seafood
- Sunflower seeds
- Almonds

Note: The RDA for zinc is 11 milligrams per day for men and 8 milligrams per day for women. Do not take more than 40 milligrams per day.

## **Surgery, Infection, and Your Nutrition Needs**

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- Surgery, anesthesia, and the surgical wound are traumatic and increase the stress on your body. When your body is stressed, you need more calories and protein, so it is critical that you eat enough calories for energy and protein for recovery after surgery.
- Before surgery, food and fluids are restricted, and you may not eat for many hours after surgery. Therefore, you may lose muscle and fat when you have surgery. Before surgery, make sure that you are eating well so you will have adequate reserves to withstand the time after surgery when you cannot eat.
- If you get an infection after surgery or injury, this can also lead to changes in your nutritional needs. Infection increases your need for calories and protein.

## **Nutrition Assessment**

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If you are injured or have surgery, you should get a nutrition assessment from a sports dietitian. It should include the following:

- Body measurements, such as body weight, amount of body fat, and muscle mass.
- Blood values, such as albumin, transferrin, prealbumin, and retinol-binding protein. These data assess your body's protein status.
- Other data, including recent weight changes, appetite changes, nausea or vomiting, diarrhea or constipation, and interactions between food and the drugs you are taking.

## **Rehabilitation**

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- In rehabilitation, you use energy in physical therapy sessions.
- If you have anterior cruciate ligament (ACL) knee surgery, you will probably begin rehabilitation 2 to 4 days after surgery. You don't burn many calories in early rehabilitation, but within 4 weeks, you'll burn more because therapy becomes more demanding.
- Many athletes continue to eat the amount of food that they ate when they were training and competing. If you do this, you may gain weight. Extra weight can put more strain on a surgically repaired hip, knee, or ankle joint. A sports dietitian can help you strike a healthy balance so you get the calories needed for recovery without eating excess calories that will lead to weight gain.
- Try to get the calories and protein you need to heal and rehabilitate without gaining or losing weight.

## **Other Important Points**

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- When you are sidelined with an injury, you may experience depression or anxiety. A sports dietitian can help you choose foods for optimal recovery.
- Don't be surprised if you receive advice about dietary supplements from well-meaning friends, family, and fans who want to speed your recovery. Ask a sports dietitian for scientific advice on nutrients involved in healing and recovery.