

Nutrition for Healing

Healing: What you can do to support your recovery

What you eat can help you recover from injury and/or surgery, heal wounds, and strengthen bones and muscles. There are 2 phases of recovery from injury or surgery and both must be addressed nutritionally for a rapid and successful recovery.

Phase 1

After injury or surgery, treatment may require resting your bone or joint and using medicines or specific treatments advised by your doctor. You may need to take pain medicines and may get side effects such as constipation from those medicines. Additionally, the lack of movement required to promote initial recovery will result in loss of muscle mass and strength, and the time required for recovery may take several months.

Eating foods that help your body to decrease inflammation, minimize muscle mass loss, heal wounds and manage your weight will help you toward a rapid recovery.

- Manage inflammation by eating foods that lower inflammation.
- Minimize muscle mass loss by eating high-quality protein foods and creatine.
- Manage weight by eating enough calories to help you heal but avoiding weight gain.
- Heal wounds and prevent infection after surgery by eating foods that promote tissue healing.
- Eat high fiber to combat constipation.
- Eat enough calories to support walking on crutches, and physical therapy, but less than what you ate when you were active and exercising daily.

Phase 2

The second phase of recovery requires rehabilitation (muscle strengthening, muscle and tendon flexibility and neuro-motor control/agility) to return to activity and limit recurrent injuries. To reach these goals we recommend eating high-quality protein foods, creatine monohydrate 5 grams daily and continuing to get adequate Vitamin C, Zinc, Calcium, and Vitamin D.

Nutritional Goals in Phase 2

- Regain muscle mass by continuing to eat high-quality protein foods and creatine monohydrate 5 grams daily.
- Help your body continue to heal by including foods that are high in vitamin C 500mg daily, zinc, vitamin D 1000-5000IU daily, and calcium 1200mg daily.





Foods That Lower Inflammation

- Fruits and vegetables
- Legumes (beans and peas)
- Whole grains
- Fish that are rich in omega-3 fats (salmon, halibut, scallops, tuna, sardines, herring, anchovies, oysters, trout, mackerel)
- Plant foods that are rich in omega-3 fats (walnuts, flaxseed oil, canola oil)

High Quality Protein Foods

You should aim to eat 1 to 1.2 grams of protein per kilogram body weight. For example, a 200 pound man should consume 90 to 110 grams of protein each day ($200 \text{ lbs}/2.2 \text{ kg} = 90 \text{ kg} \times 1.2 \text{ grams protein} = 110 \text{ grams protein}$).

Protein is needed to heal wounds, repair broken bones, build healthy blood cells, keep your immune system strong, and support muscle protein growth and strength. If you've had surgery, it is normal for your appetite to be low, so eat a small amount of protein at each meal and snack. You may also consider starting low dose creatine monohydrate (5grams daily) and/or a protein supplement to prevent further muscle loss.

Examples:

- Eggs, egg whites, and egg substitutes
- Low-fat yogurt (regular and Greek)
- Lean meats (beef, pork, chicken, turkey, lamb, buffalo)
- Soy foods (tofu, tempeh, miso, soy nuts, soy vegetable protein)
- Low-fat cheese and cottage cheese
- Low-fat milk
- Low-fat soy milk
- Fish

Fiber

It may sound odd to mention fiber with healing foods, but the pain medications that are commonly prescribed after injury or surgery cause constipation. Prunes or prune juice (along with drinking plenty of water) have a natural laxative effect that can alleviate constipation while on pain medications. Other good fiber sources include fresh fruits and vegetables, high-fiber whole grain cereals, and legumes.

Vitamin C and Zinc

While all nutrients are important, vitamin C and zinc are superstar nutrients for their roles in healing. Vitamin C is needed to make a protein called collagen and for repairing tendons, ligaments, bones, and skin. Citrus fruits are high in vitamin C, but don't overlook other sources of vitamin C such as strawberries, kiwi fruit, baked potatoes, broccoli, and bell peppers. We recommend 500mg of vitamin C daily in both phase 1 and phase 2 of healing. Zinc is a mineral found mostly in animal foods such as meat, fish, poultry, and dairy foods. Zinc is also found in whole grain breads and cereals, legumes (dried beans and peas), and nuts. It is better to get zinc from foods than supplements. High-dose zinc supplements can cause nausea and vomiting.

Calcium and Vitamin D

Calcium and vitamin D are nutrients associated with healthy bones, so if you have a broken bone, stress fracture or have had a joint replacement, make sure to get plenty of these nutrients to strengthen your bones. The best sources of calcium and vitamin D are low-fat dairy foods. Fat-free (skim) milk has slightly more calcium than full-fat or low-fat (1%) milk and is fortified with vitamin D to help your body absorb the calcium. Yogurt, a good source of calcium, is not always fortified with vitamin D, so check the nutrition label of your favorite yogurt to make sure you are getting vitamin D.