

# Nutrition for Injury Recovery



All nutrients play roles in injury recovery. Some nutrients are especially critical to healing damaged skin, muscles, ligaments, tendons, and bones. Adequate intakes of these nutrients from foods, beverages, or supplements can aid the healing process and get you back into training.<sup>1</sup>

## Nutrients, functions, and food sources<sup>1</sup>

Nutrients	Healing Functions	Some Food Sources
Protein	Tissue growth, repair, and maintenance	Meat, poultry, fish, beans, eggs, nuts, deeds, milk and foods made with milk
Iron	Transportation of oxygen to body cells, structure of hemoglobin	Red meat, eggs, fortified cereals, spinach, potato, avocado
Zinc	Physical growth, wound healing	Red meat, chicken, oysters, fortified cereals, lentils, almonds, chickpeas, yogurt
Copper	Collagen formation (connective tissue)	Whole grain products, seafood, oysters, nuts, seeds
Vitamin C	Collagen formation (connective tissue), scar tissue, bone growth and repair, iron absorption, antioxidant, helps fight off infection	Citrus fruit and juice (lemon, orange, grapefruit), papaya, green peppers, strawberries, Brussels sprouts, tomatoes, cabbage, spinach, potatoes, cauliflower
Vitamin A	Epithelial cell (skin tissue) formation, helps fight off infection	Green and yellow vegetables, yellow fruits, fortified margarine, butter, egg yolks, fortified milk, fish
B Vitamins	Help produce red and white blood cells, aid in antibody formation	Yeast, leafy green vegetables, beans, lean meats, milk, eggs, cheese, whole grains
Vitamin E	Antioxidant	Vegetable oils, vegetables, wheat germ, whole grain products, nuts, fruits, meats

## Nutrient Supplements for Injury Recovery<sup>1</sup>

- Consume 0.7-1.0 grams of protein per pound of body weight
- Take one multivitamin/mineral supplement per day
  - Choose a multivitamin/mineral supplement that contains at least 100% of the Dietary Reference Intake (DRI) for most of the nutrients.
- Do not exceed the Upper Limit (UL) for vitamin and mineral intakes. ULs are amounts of vitamins and minerals from food and supplements (including vitamin water) combined that are not likely to cause adverse effects when consumed regularly. This means these are probably safe daily intake amounts. The lowest UL value in the range is for women and highest is for men.

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## Recommended Supplementation<sup>1</sup>

Longer Term Injury Recovery	Acute Injury Recovery
Vitamin C 200-400 mg/day	Vitamin C 1,000 mg/day
Vitamin E 200-400 mg/day	Vitamin E 400-800 mg/day
	Zinc 34-40 mg/day

Upper Limits – Vitamins <sup>1</sup>	Upper Limits - Minerals <sup>1</sup>
Vitamin A 2800 – 3000 mcg (ug)/day	Iron 45 mg/day
Vitamin C 2000 mg/day	Zinc 34-40 mg/day
Vitamin E 800 – 1000 mg/day	Copper 8000-10,000 mcg (ug)/day
B-Complex Vitamins:	Calcium 2500 mg/day
B-1 Thiamin Not determined	
B-2 Riboflavin Not determined	
B-3 Niacin 30-35 mg/day	
Vitamin B-6 80-100 mg/day	
Folate 1000 mg/day	
Pantothenic Acid Not determined	
Biotin Not determined	
Vitamin B-12 Not determined	

## Surgery, Infection, and Nutrition Needs<sup>2</sup>

- 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.
- 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.
- Balance the calories and protein you need to heal and rehabilitate without gaining or losing weight.

## One more thing<sup>2</sup>

Don't be surprised if you receive advice about dietary supplements from well-meaning friends, family, and others who want to speed your recovery. Ask a (sports) dietitian for scientific advice on nutrients involved in healing and recovery.

### Sources:

1. Winning Sports Nutrition Athlete Handouts, L. Houtkooper, J. Abbott, and V. Mullins. DSW Fitness 2007, Tucson, AZ.
2. Sports Nutrition: A Practice Manual for Professionals. M. Dunford, Ed. American Dietetic Association, 2006, Chicago, IL.