

# Nutrition for Immobilization and Surgery



## PERFORMANCE NUTRITION

### Changes in Metabolism

- Athletes may need additional calories during recovery to facilitate healing
- Even though an athlete may not be participating in exercise, the energy of ambulation must still be taken into account.
  - Crutching takes 2-3 times as much energy as walking.
- Energy intake affects muscle protein synthesis.
  - Reduced caloric intake may lead to reduced muscle protein synthesis by up to 20%.
- Meeting with a dietitian will help you to understand your needs during this time. It is essential to maintain adequate nutrition to promote complete and efficient healing.



**Important note:** Inflammation is high during this state. Providing athletes with meals that contain greasy meats, fried foods, excess cheeses, and sodas will contribute to the inflammatory state. Instead, choose lean meats, whole grains, fruits and vegetables.

### Post-Operative Considerations

#### **Nausea or vomiting may decrease appetite**

- Follow a bland diet
- Avoid extremely cold or hot food temperatures
- Avoid aromatic foods
- Avoid spicy or highly seasoned foods
- Eat slowly and taking small bites
- Eat familiar foods
- Eat smaller, more frequent meals throughout the day
- Incorporate nutrient-dense liquids (milk, smoothies, shakes) until appetite returns

#### **Constipation**

- Increase fiber-rich foods and water intake
- Consume 1oz of prune juice per day
- Add activity within athlete's ability, such as walking, crutching, or scooting
- If doctor recommends stool softener or laxative, increase water intake to prevent dehydration

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# Nutrition for Immobilization or Surgery



## PERFORMANCE NUTRITION

### Stage 1: Tissue repair, immobilization, atrophy

### Meeting Nutritional Goals

Increase daily protein intake to facilitate muscle repair and inhibit breakdown.

- 100lbs – 90g pro
- 150lbs – 136g pro
- 200lbs – 182g pro
- 250lbs – 227g pro
- 300lbs – 273g pro

Leucine, a branch chain amino acid, has been shown to prevent muscle loss.

- Aim for 2-2.5g per meal
- Ex: 4oz turkey, 5oz wild trout, or 3oz beef sirloin

Avoid nutrient deficiencies before and during time of trauma.

- Eat a variety of colors of fruits and vegetables
- Do not purposely limit food intake

### Stage 2: Rehabilitation, hypertrophy

### Meeting Nutritional Goals

Increased muscle growth means increased caloric need.

- Eat a variety of colors of fruits and vegetables
- Consume whole grains and lean proteins
- Get Healthy fats from Omega-3 sources such as: Fish, nuts, and oil.
- Do not purposely limit food intake

Increase daily protein intake to facilitate muscle building

- 100lbs: 55-90g pro
- 150lbs: 82-136g pro
- 200lbs: 109-182g pro
- 250lbs: 136-227g pro
- 300lbs: 164-273g pro

### Throughout the Healing Process:

- Avoid pro-inflammatory foods:
  - Fried foods, high fat meats, excess cheese, and sodas/sugary beverages
- Incorporate anti-inflammatory foods:
  - Consume 8oz tart cherry juice daily
  - Eat plenty of fruits and vegetables
  - Consume sources of Omega-3 fatty acids such as: Fish, nuts, and oil.
- Maintain adequate hydration
  - Drink 50-100% of your body weight in ounces
  - Example: 200 pound athlete should drink 100-200oz of fluid per day