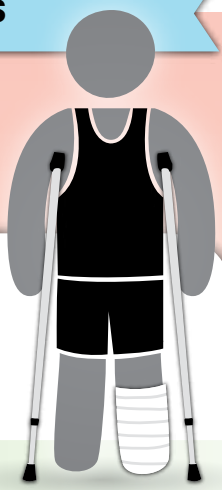
NUTRITION SUPPORT FOR INJURY RECOVERY AND RETURN TO SPORT

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Injuries are an unavoidable part of sport. Nutrition cannot prevent every injury, but it can support recovery and often help it progress faster. Poor nutrition can slow healing and delay an athlete's return to play.

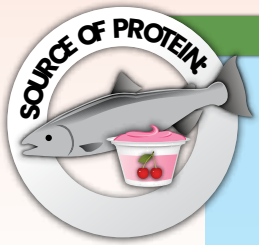


A sports dietitian should begin nutrition support as soon as an injury occurs. Assess the athlete for nutrient deficits, energy and lipid balance, hydration, and sleep habits. Tailor the plan to the stage of injury, resting metabolic rate (RMR), physical activity and the goal of limiting increases in body fat.

NUTRITION SUPPORT GOALS:

• Promote muscle protein synthesis. • Retain muscle mass. • Balance energy. • Limit body fat gains.

NUTRITION PRIORITIES:



PROTEIN

- Supports healing and muscle tissue repair.
- Prioritize leucine-rich proteins, aiming for about 3g leucine per serving.
- Aim for 1.6-2.5g protein/kg BW/day, depending on the stage of injury.
- **Protein guidelines:**
  - **Per meal** = 20-40g, depending on leucine content.
  - **Timing** = about every 3-4h, across 4-6 daily meals.
  - **Type** = fast-digesting, leucine-rich protein in the day, such as whey, part-skim cheddar and lean meat; choose slow-digesting protein before sleep, such as low-fat cottage cheese or low-fat Greek yogurt.



CARBOHYDRATE (TAILORED TO THE SITUATION)

- Supplies fuel, allowing dietary protein to support healing and muscle repair.
- Requirements are usually lower to limit excess weight gain*.
- Include whole grains, fresh fruit and vegetables.
- **Recommended carbohydrate intake** is 3-5g/kg BW/day.
  - For a 170lb man, this is 232-386g/day; a typical 4oz whole-wheat bagel has 60g.
  - Select foods with a low glycemic index, such as whole grains.

*Athletes should know that some weight gain may be preferable when it helps support complete recovery.



FAT (TAILORED TO THE SITUATION)

- Vital for healing, recovery and reducing inflammation.
- Choose anti-inflammatory sources: nuts, nut butters, seeds, avocado, oily fish, flaxseed oil, extra virgin olive oil and omega-3 fish oil.
- Limit pro-inflammatory omega-6 vegetable oils, saturated fats and trans fats.
- Keep the omega-6/omega-3 ratio low to support an anti-inflammatory effect.

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MICRONUTRIENTS	FOODS	ROLE
Vitamin C	Citrus fruits, red or green peppers, and cantaloupe	Antioxidant action, wound healing, tissue repair and immune support
Vitamin A	Sweet potatoes, spinach, carrots and tomatoes	Cell growth, development and immune support
Vitamin D	Sunlight, oily fish, dairy foods and fortified foods	Supports calcium absorption and healthy bones
Calcium	Low-fat milk, fortified non-dairy milk, low-fat Greek yogurt, cheese, broccoli, kale and fortified orange juice	Maintains skeletal structure and function
Magnesium	Almonds, sesame seeds, sunflower seeds, cashews, peanuts and bananas	Helps make nucleic acids and protein; enhances calcium and vitamin D absorption and metabolism; supports circulation
Zinc	Lean beef, crabmeat, chicken, cashews and fortified cereals	Supports wound healing, protein production and immunity
Copper	Sesame, pumpkin and sunflower seeds, cashews and shiitake mushrooms	Helps form red blood cells (RBCs), supports immunity and bone health, and regenerates elastin

EVIDENCE-BASED SUPPLEMENTS & NUTRITION PRIORITIES (0-8 WEEKS):

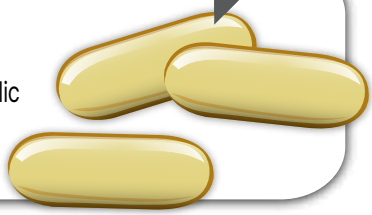
A balanced diet with a wide range of whole foods is the best foundation for an injured athlete's nutrition plan. Supplements may add value alongside meals and snacks. Athletes should work with a sports dietitian to determine how to include supplements safely.

FOODS THAT MAY HELP SPEED INJURY RECOVERY:



- **High-quality omega-3 fatty acids:** obtain from cold-water fish, including salmon and tuna.
- **Branched-chain amino acids (BCAAs):** 3g leucine every 3-4 hours, supplied by 25-30g whey protein powder, 140g chicken or 170g fish.
- **Casein:** take 20-25g before sleep, from casein powder, 1 cup low-fat cottage cheese or 1½ cups Greek yogurt.
- **Tart cherry juice:** 12-24oz daily to support anti-inflammatory and antioxidant effects.
- **Gelatin or foods containing gelatin:** may help support collagen production.

EVIDENCE-BASED SUPPLEMENTS THAT MAY HELP SPEED INJURY RECOVERY:



- **Creatine monohydrate:** 10g/day for 2 weeks, followed by 5g/day (appropriate in some cases, according to the individual situation).
- **Beta-hydroxy-beta-methylbutyrate (HMB):** a leucine metabolite with demonstrated anabolic and anti-catabolic effects on lean mass; 3g/day as calcium HMB or the free acid form.
- **Fish oil:** recommended intake is 3-4g/day DHA + EPA.

Eat a nutritious diet every day to maximize nutrient stores, rather than improving your nutrition only after an injury.

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