# **NUTRITION FOR INJURY PREVENTION/RECOVERY**

## **Fueling the Healing Process**

As hard as we work to prevent them, injuries happen. At which point, the athlete is pulled from practice to work towards recovery. Remember, just because you are not training alongside your teammates does not mean your body no longer requires fuel from the foods you eat. In fact, nutrition can play a huge role in speeding up the recovery process, maintaining muscle mass and providing the body nutrients to combat inflammation. All of which still requires energy which we get from the foods we eat.

Consult a sports dietitian to develop a plan individualized to you to promote your healing process!

### **Key Components of Recovery**

<u>Protein</u> will help in repairing damaged tissue while also preserving current muscle mass. Leucine is an amino acid specific to helping repair damaged muscles. Animal protein sources like meat, fish, poultry, eggs, and dairy products provide all the essential amino acids for optimal protein absorption. Aim to consume protein with every meal throughout the day between 15-40 grams per meal/snack or 1.6-2.5g/kg body weight/ day.

<u>Carbohydrates</u> are protein-sparing meaning they provide energy for protein to help in tissue repair. Focus on complex carb intake from whole grains, fruits, and vegetables for fiber rich sources to help manage inflammation and regular digestion.

<u>Fats</u> help in managing inflammation required for healing. Focus on anti-inflammatory nuts, seeds, plant-based oils and fatty fish (tuna, salmon).

## **Injury Specific Nutrients**

Bone injuries can range from stress reactions or fractures to full bone breaks. Two key nutrients for healthy bones are <u>calcium</u> and <u>vitamin D</u>. Calcium helps to maintain bone structure and rebuilding of new bone while vitamin D helps to absorb calcium from the foods we eat. Food sources include dairy products, broccoli (Calcium), eggs, leafy greens and fortified foods.



Soft tissue injuries can range from damage to the muscle, ligament, or tendon like bruises, sprains/strains or tears. Manage inflammation with variety of fruit, vegetable and whole grain intake. <a href="Vitamin C">Vitamin C</a> and <a href="collagen">collagen</a> work together to aid in strengthening connective tissue. Food sources Include citrus fruits, bell peppers, broccoli, potato, tomato and leafy greens.

# **Meals & Snacks to Promote Recovery**

- Low-fat Greek yogurt with berries, granola, and walnuts
- Veggie omelet with toast and milk
- Oatmeal with low-fat Greek yogurt, apples, cinnamon & ground flax seeds
- Smoothie with spinach, mango, avocado, and protein powder
- Grilled salmon with sweet potato, broccoli, and cauliflower
- Ground turkey, mixed bell pepper, and brown rice stir fry
- Low-fat string cheese with an orange
- Wild-caught tuna packet with whole grain crackers
- Low-fat cottage cheese with raspberries and chia seeds

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### INFLAMMATION

Inflammation is our bodies response to protect itself from damage or foreign substances. It signals the immune system to heal and repair the damaged tissue. Without inflammation, wounds would not heal and small infections would become deadly. Inflammation can be short term (acute) or long-term (chronic).

What causes inflammation:

- Infections
- Autoimmune disorders
- Stress
- · Lack of physical activity
- Sleep

- Poor diet
- · Deficiencies in certain vitamins and minerals
- Excessive sugar intake
- Excessive saturated/trans fat intake
- Alcohol and tobacco

When we exercise, we cause inflammation through small tears in our muscles. You may feel this through soreness a day or two after a hard training session.

Inflammation does not always show physically, but it could look like redness, joint pain, swelling and stiffness.

When you have long-term untreated inflammation, it can cause:

- Decreased recovery
- Tissue death
- Internal scarring
- Conditions like cardiovascular disease and diabetes

### **MANAGING INFLAMMATION**

	Function	Sources
Fluid	Provides protective fluid between joints and acts as a transport shuttle for micronutrients to injured area	Water, sports drinks (Gatorade, Propel)
Omega-3	Provides essential fats to support brain health and reduce inflammation	Salmon, tuna, walnuts, flaxseed, chia seed
Antioxidants	Removal of toxins that promote inflammation	Leafy greens, avocado, broccoli, peppers, berries, citrus, tomatoes, carrots, squash, cherries
Nitric oxide & Nitrates	Increase blood flow which may reduce inflammation	Celery, leafy greens, beets,
Herbs & Spices	Provide antioxidants and minerals	Ginger, turmeric, garlic, cinnamon, rosemary

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