

Nutrition for injury recovery

MEALS CAN HEAL

Words SUE APPELBOOM, BSC, MBANT, CNHC



A

s a result of the heavy training load undertaken by many rowers, injury is almost inevitable, and incapacity may lead to muscle wastage.

Nutrition can be used as a means of managing injury since eating the right food can speed recovery, while nutrient deficiency impedes the healing process. The distinct and predictable phases of

soft tissue healing – inflammation, proliferation and remodelling – allow targeted nutritional interventions to influence injury recovery. All phases are energy-intensive and can increase demand, even by around 20% in cases of severe injury. Therefore, restricting energy intake during inactivity may be appropriate, but over-restriction will impede healing. A balance needs to be struck. Carbohydrate intake should reflect activity level, being reduced during inactivity.

The inflammation phase, initiated immediately after acute injury and lasting about five days, is a normal and essential response associated with pain, swelling and immobility. While aggressive pharmaceutical or supplemental treatment might inhibit this early response, anti-inflammatory foods will temper inflammation without impeding repair. Omega-3 fatty acids – the best sources of which are found in oily fish (salmon, mackerel, sardines, herring, trout) – have anti-inflammatory

properties that inhibit inflammation. Nuts and seeds contain both omega-3 and omega-6 fatty acids, but walnuts, flax seeds and chia seeds have a good omega-3:omega-6 ratio and are ideal because too much omega-6 increases inflammation. Therefore, use of vegetable oils high in omega-6 (e.g., sunflower, safflower oil) and processed foods should be reduced during the healing.

Injured athletes would do well to eat three to four portions of oily fish per week and one to two tablespoons of nuts and seeds per day. These healthy polyunsaturated fats, together with a source of monounsaturated fat, from olive oil and avocados, will help balance saturated fat intake from meat and dairy produce. There is no need to increase overall intake of fat during injury. Herbs and spices with anti-inflammatory properties include ginger, turmeric, garlic and bromelain (in pineapple). Flavonoids are potent antioxidants and those exerting anti-inflammatory actions include blue-purple berries, cherries and grapes, green tea and cocoa.

Both the proliferation and remodelling phases of healing involve protein synthesis for cell proliferation, growth of new capillaries, connective tissue matrix, collagen deposition and the remodelling of fibres for tensile strength. Immobilisation causes a decrease in muscle protein synthesis, leading to muscle loss, of particular importance to lightweight rowers who may struggle to maintain adequate lean muscle mass. Protein intake must be sufficient to support healing, but does not need to be increased above the recommended intake for athletes of 1.2g–1.6g per kilogram of bodyweight per day. In practical terms, a portion of lean

“Eating the right food can speed recovery, while nutrient deficiency impedes the healing process.”

IN A NUTSHELL

Plan for several weeks post-injury:

- Eat regularly spaced meals and two to three quality snacks for sustained energy.
- Include protein with every meal and snack.
- Eat a balance of healthy fats and avoid processed foods.
- Eat plenty of fruit and vegetables for micronutrients involved in healing.
- Eat herbs and flavonoids for anti-inflammatory and antioxidant support.
- Adjust portion size during inactivity, but don't over-restrict energy intake.

meat or fish the size and depth of the palm of your hand, or two large eggs, or a double handful of lentils or pulses contain about 20g of protein. Boiling chicken, lamb or beef bones yields a mineral-rich bone broth high in collagen components, and makes a great soup stock.

Several micronutrients (vitamins and minerals) are critical to the metabolic reactions involved in healing. Vitamin A supports cell differentiation at the site of injury and good sources are found in liver, orange vegetables, green leafy vegetables and dried apricots. Vitamin C, crucial for collagen synthesis – the protein found in connective tissue, tendons, ligaments and muscle – is also a potent antioxidant, enhancing immune cell function. The body cannot store Vitamin C, so it should be consumed throughout the day from high sources such as bell peppers, dark green leafy vegetables, parsley, brassicas and citrus fruits. Zinc, essential for tissue regeneration, is obtainable from shellfish, lean beef or lamb and pumpkin seeds, alongside nuts which also provide copper for collagen synthesis.

The use of specific supplements that may accelerate injury recovery is not covered in this article, but for a positive effect on injury recovery athletes should focus on a healthy nutrient-dense diet, incorporating healing foods. [ROW360](#)

Biography

Sue Appelboom is a Registered Nutritional Therapist, practicing clinical nutrition and sport nutrition. She was a member of the GB Rowing Team during the 1990s and competed in the lightweight single scull. info@neatNT.com