

Appendix F) Specific Nutrition Interventions for Concussion Management

Wherever possible there should be communication with the athlete's sports dietitian to assess specific nutrition-impacting components of the concussion symptoms and nutrition strategies to best support the individual athlete. Fatigue, dizziness, nausea and headaches can all impact on appetite, and the brain requires fuel and nutrients to support optimal healing following injury. In the absence of this information, or in the interim, the following tips may be useful.

- Do not skip meals as this can worsen concussion symptoms – it is important to maintain energy intake over the day even when not training as the brain requires significant energy to heal when injured.
- Ideally, eat small, frequent meals over the day (e.g. every 3-4 hrs) to provide sufficient fuel for the brain to heal. Consume a quality carbohydrate choice along with protein and healthy fats (eg, oily fish) as outlined below, each time you eat.
- If appetite is low or nausea is present, small frequent meals/snacks can also help manage nausea more effectively than eating large meals.
- Stay hydrated by drinking small amounts of water or other fluids frequently, to ensure optimal blood flow to the brain.
- If nausea is substantial, avoid foods with strong smells. Cold foods may be more tolerable than cooked meals. Toast with vegemite or dry, salty crackers with cheese may be good options to start with.
- If preparing meals is challenging or appetite is poor, choose liquid meal alternatives such as smoothies, Sustagen Sport or Up & Go's, or more liquid-based meal options such as soup.
- Eat as many colourful foods as possible – berries, citrus and tropical fruits, green leafy vegetables, capsicum, broccoli, carrots, sweet potato, pomegranate juice and tart cherry juice for their natural anti-oxidant and anti-inflammatory properties.
- If possible, consume oily fish at least every other day for their omega-3 fatty acids which support brain healing. Examples include salmon, sardines, mackerel, tuna.
- Include a protein-rich food in each meal/snack throughout the day to minimise muscle loss during rest and to provide essential amino acids to the brain to optimise healing. Protein-rich foods include meat, poultry, fish and seafood, dairy products (milk, yogurt, cheese), eggs, legumes (lentils, chickpeas, kidney beans, baked beans), tofu, and nuts.
- Avoid alcohol, as cognitive function can worsen and there is an increased risk of injury re-occurrence.
- Avoid caffeine and caffeinated products (coffee, tea, energy drinks) in the days following injury to reduce the degree of symptoms and help promote effective sleep.
- The intake of foods high in added sugar and saturated fats, and highly refined foods (baked goods, white bread, white rice etc), appear to have a more inflammatory effect in the body. Limited animal studies also indicate these foods may exacerbate the effects of concussion on cognition and neuroplasticity. We therefore recommend limiting the intake of foods high in added sugar and saturated fat, such as donuts, cakes / brownies, sweet biscuits / cookies, pastries (including pies), soft drinks, lollies, fatty meats such as salami, and fried foods. Use more healthy fats such as extra virgin olive oil, avocado, nuts and nut butters, chia and flax seed.