

# Nutrition & Concussions

By: Matt Darnell, PhD, RD, CSSD, SCCC

*If you play sports, or are involved with an athlete that does, chances are you know someone who has experienced a sports related concussion. Maybe you've even experienced one yourself. An estimated 3.8 million sports related concussions occur each year, with up to 1.9 million occurring in in children and teens.<sup>(1)</sup>*

*Sports related concussion awareness is higher now than ever before, leading to improvements in equipment and policies for concussion prevention as well as better diagnosis and treatments for when they do occur. Current research is looking into strategies like rest, physical therapy, and even nutrition to help individuals recover from concussions.<sup>(2,3)</sup>*

## WHAT IS A CONCUSSION?

A concussion is a mild traumatic brain injury caused from a hit, impact, or whiplash that disrupts normal brain function.

Just like when other parts of our body are injured and benefit from nutrition to help it heal, the same is thought to be true for the brain. Limited research has been done to identify specific nutrients, however, the current recommendations encourage maintaining a healthy, balanced diet to ensure your body has the nutrients it needs to heal.

**See other side for five healthy concussion recovery tips!**

### References:

1. Halstead ME, Walter KD, and Moffatt K. Sport-Related Concussion in Children and Adolescents. *Pediatrics* 142: e20183074, 2018.
2. Institute of Medicine (US) Committee on Nutrition, Trauma, and the Brain; Erdman J, Oria M, Pillsbury L, editors. *Nutrition and Traumatic Brain Injury: Improving Acute and Subacute Health Outcomes in Military Personnel*. Washington (DC): National Academies Press (US); 2011. 6, Energy and Protein Needs During Early Feeding Following Traumatic Brain Injury. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK209308/>
3. Gomez-Pinilla F, Kostenkova K. The influence of diet and physical activity on brain repair and neurosurgical outcome. *Surg Neurol*. 2008;70(4):333-5; discussion 335-6.



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## Here are **5** Ways Proper Nutrition May Play a Role in Concussion:

### 1 Maintain adequate calorie and protein intake.

Calories and protein are needed for most tissue to heal and repair. Studies have demonstrated improved outcomes in traumatic brain injuries with early and adequate feedings post injury.<sup>(2)</sup> Try to maintain energy balance and look to include high quality sources of protein with meals.

#### Some examples include:

- Meat, such as chicken, beef or pork
- Seafood, such as fish and shellfish
- Eggs
- Beans and lentils
- Dairy foods, such as Greek yogurt, cheese and milk

#### Tip:

Greek yogurt can serve as a great addition to smoothies, make a great base for salad dressings, dips, marinades, creamy sauces; and can even be used in baking for muffins to increase the protein content.

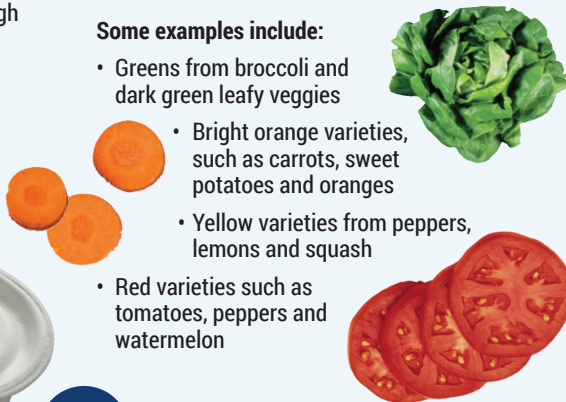


### 2 Eat a variety of colorful fruits and vegetables.

Fruits and vegetables are the hallmark of any balanced diet. Many fruits and vegetables are packed with antioxidants and phytonutrients that are associated with improvement in memory and cognitive function. While all fruits and vegetables are great for you, aim to include a variety of colors so your body gets a variety of nutrients.

#### Some examples include:

- Greens from broccoli and dark green leafy veggies
- Bright orange varieties, such as carrots, sweet potatoes and oranges
- Yellow varieties from peppers, lemons and squash
- Red varieties such as tomatoes, peppers and watermelon



### 4 Small frequent meals may help.

If you suffer from nausea or loss of appetite, it can be helpful to focus on eating smaller meals more frequently. Try to include a nutritious option every 2-3 hours throughout the day.

#### Some examples include:

- Crackers with nut butter
- Hummus and vegetables
- Greek yogurt with fruit
- ½ sandwich instead of a whole
- Smoothies are another excellent way to supply necessary nutrients when appetite is down. Check out these three smoothie recipes that are packed with nutrients.

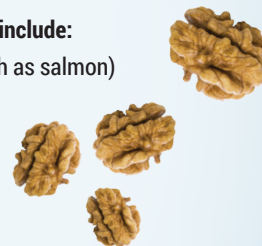


### 3 Focus on healthy fats.

Consuming foods rich in Omega-3 fats, while limiting excessive intakes of saturated fats, may aid in concussion recovery. Omega-3 fats are essential fats that our bodies can't make on their own. They have been shown to play a role in neural recovery and inflammation.<sup>(3)</sup> Additionally, diets that are excessive in saturated fats may lead to decreased levels of brain growth factors.<sup>(3)</sup>

#### Some examples include:

- Fatty fish (such as salmon)
- Walnuts
- Flaxseeds
- Chia seeds



### 5 Stay hydrated.

The majority of the body is made up of water and maintaining hydration is key for health and recovery. A fluid loss as little as 2% body weight has been shown to impair cognitive performance and induce headaches. Drink a variety of fluids throughout the day, starting first thing in the morning.



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