**Your brain with a concussion**

These symptoms are caused by damage to your neurons—the hard jolt of a concussion basically bruises your brain, and the neurons get stretched out and then can't communicate with one another very well. As part of the brain's response, the levels of a natural chemical called [brain-derived neurotrophic factor (BDNF)](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2504526/) drop. That's a problem because BDNF is important for helping damaged neurons recover. The good news? Raising your BDNF levels can help you bounce back more quickly from a concussion.

**Nutrition for recovery**

A quick and complete recovery (within a couple of weeks) is more likely if you're immediately taking nutritional supplements that support the production of BDNF. If you begin these supplements within a day of your concussion, they can help speed the recovery process, support other aspects of brain healing, and get you feeling better, faster. (https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2504526/).

**1. Power up with protein.**

To support your production of BDNF and help heal your brain, you [need](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3951738/) plenty of dietary protein. Aim for 1 gram of protein for every kilogram of your body weight. If nausea and vomiting are creating [problems](http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD001530.pub2/abstract) and keep you from wanting to eat high-protein foods like steak and eggs, try a shake with whey protein and added branched-chain amino acids.

**2. Take creatine for cognition.**

This amino acid may help [prevent damage](https://www.ncbi.nlm.nih.gov/pubmed/11079535) following traumatic brain injury by increasing energy production in brain cells. After a concussion, supplemental creatine helps give your brain an energy boost by preserving the function of your [mitochondria](http://www.mindbodygreen.com/0-17678/why-taking-care-of-your-mitochondria-might-be-the-key-to-health-vitality.html). Add 10 grams a day to your protein drink during recovery.

**3. Fix inflammation with fish oil.**

The omega-3 fatty acids EPA and DHA, found abundantly in fish oil, are crucial for [reducing](https://www.ncbi.nlm.nih.gov/pubmed/15672635) brain inflammation, raising BDNF, and building strong, flexible cell membranes. For the first few weeks after a concussion, supplement with up to 4,000 mg daily of a high-quality fish oil. Continue with 2,000 to 4,000 mg daily for three months after that.

**4. Protect your brain with vitamin D.**

Vitamin D is neuroprotective and can help [prevent](https://www.ncbi.nlm.nih.gov/pubmed/27185224) post-concussion syndrome, a condition where concussion symptoms linger—sometimes for months. Take 5,000 IU daily for the first few weeks after a concussion. Most people are low in vitamin D even if they're frequently in the sun, so continue with 2,000 IU daily after that.

**5. Use magnesium for brain health.**

Magnesium is [necessary](https://www.ncbi.nlm.nih.gov/pubmed/17725510) for brain function, especially for manufacturing the neurotransmitters that help neurons communicate with one another. Magnesium also helps prevent delayed brain injury and post-concussion syndrome. Supplements in the form of magnesium-l-threonate cross the brain-blood barrier more effectively than other forms and don't cause digestive upsets. Take up to 600 mg daily.

**6. Get better with glutathione.**

Glutathione is your body's most abundant natural antioxidant. A recent [study](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3930079/) has shown that it can help reduce brain tissue damage by as much as 70 percent if it's administered intravenously after an injury. But while it works in the lab, glutathione isn't readily available—even in an emergency room—and unfortunately, oral glutathione supplements aren't well-absorbed. You can still gain the benefits of glutathione by supplementing with substances that support the glutathione pathway, such as N-acetyl-cysteine and vitamin C.