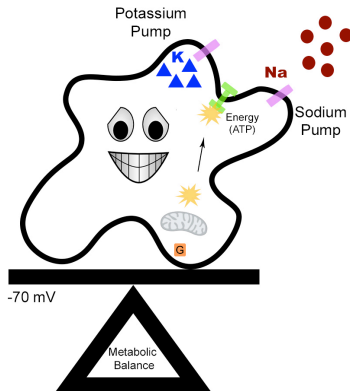


The Importance of Rest Following Concussion

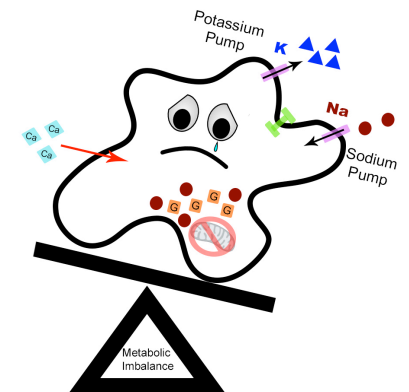


What is a healthy brain cell?

A healthy, happy brain cell is characterized by metabolic balance. Each cell has a “pump” (shown in green) that helps keep potassium ions inside of the cell and sodium ions outside of the cell, achieving an energy gradient that allows for the transport of material into and out of the cell.

What happens right after a concussion?

A concussion is a type of traumatic brain injury that typically results from a blow to the head. Most concussions only have short-term effects; however, if not enough time is taken off for recovery, there can be long-term consequences such as brain damage and disability. Immediately following injury, the brain’s metabolic balance is disrupted. Initially, there is an overabundance of glucose in the cell, followed by reduced blood flow to the brain, and then a large drop in the glucose levels. This fluctuation in the cerebral glucose levels causes the brain to suffer from neurometabolic stress due to the greater demand for energy to restore metabolic balance.



Why rest?

Immediately following injury, the first 24-48 hours are crucial to recovery. Both cognitive and physical rest is required for an effective recovery. Cognitive rest consists of limited screen time (television, computer, cell phone) and having a lightened workload at school. Physical rest means sleeping, relaxing, and avoiding intense sports or activities. It is hypothesized that exercise and cognitive stress (screen time) can inhibit the process of restoring metabolic balance because these activities increase the cellular demand for energy in the brain.

Patients often ask what the ideal resting time for recovery is. Further research is still needed to

determine an exact recovery time; however, scientists have found that concussion injuries tend to heal spontaneously over several days. About 90% of concussion patients heal fully within 7-10 days of injury, but children and adolescents may take longer. Doctors recommend that patients gradually return to school and exercise as long as it does not worsen symptoms. So, what can you do to speed the healing process up? The simplest answer is: nothing. Returning to your regular activities is not as important as fully healing. The best thing you can do is keep an eye out for how you feel, because if you start getting a headache or feeling confused, your brain is telling you that it needs more rest.