WHAT IS A CONCUSSION?
Concussion is the most underreported, under diagnosed and underestimated type of brain trauma, accounting for 90% of all traumatic brain injuries. Despite this epidemic, there is still no universally accepted, evidence-based definition of concussion. Brain Trauma Foundation was funded by the Department of Defense to develop one, using the most current evidence-base. This definition is now accepted by leading organizations, such as NCAA.

Brain Trauma Foundation defines a concussion as a change in brain function as a result of:
• An external force to the head, which
• May or may not be accompanied by temporary loss of consciousness, but is
• Identified in awake individual, with
• Measures of neurologic and cognitive dysfunction.

HOW IS CONCUSSION BEST TREATED?
Evidence demonstrates that the following steps lead to the best outcomes for concussion patients:
• Start cardio exercise as soon as possible after concussion
• Improve sleep quality; Sleeping through the night is key to recovery
• Provide support in maintaining a positive outlook

WHAT DOES A TYPICAL RECOVERY LOOK LIKE?
• Most people with a concussion recover fully after the injury
• 98% of people recover fully in 1-3 months post concussion
• However, not all symptoms improve at the same time
• Everyone recovers differently

WHAT SIGNS AND SYMPTOMS OFTEN FOLLOW A CONCUSSION?
• Disorientation or concussion immediately after the event
• Impaired balance or nausea
• Slower reaction time
• Impaired attention and memory
• Headaches
• Dizziness
• Vision problems
• Sleep problems

WHAT ARE THE LONG-TERM SYMPTOMS OF CONCUSSION?
• Fatigue
• Difficulty making decisions
• Forgetfulness
• Sensitivity to light noise
• Nervousness
• Sadness
• Irritability
TREATMENT RECOMMENDATIONS

1. Engage in cardio activity
   • Begin with moderate intensity cardio immediately following injury.
   • Aim for 4-5 times a week for 20-30 minutes.

2. Improve Sleep Quality
   • Aim for 7-8 hours of sleep
   • Wake up at the same time daily
   • Limit naps to 30 minutes
   • Minimize noise and light
   • Go to bed only when you are sleepy
   • Maximize exposure to natural light
   • Do not exercise before bed
   • Do not drink caffeine 6 hours before bedtime
   • Do not drink extra liquid or eat heavily before sleep

3. Observe Mood Management
   Mood changes are common after a concussion. Here are few ways to address the changes:
   • Consult with a physician for a referral to psychologist or psychiatrist if needed
   • Track your mood and identify triggers that worsen mood
   • Pace yourself. Schedule challenging tasks at a time when you feel that you are most efficient and give yourself plenty of time to complete the tasks.
   • Practice relaxation strategies (i.e. deep breathing, visual imagery) to reduce day-to-day stress

RESOURCES

Concussion Information
   • Brain Trauma Foundation (www.braintrauma.org)
   • Brain Injury Association of America (www.biausa.org/concussion)
   • Brain Injury Association of California (www.biacal.org)
   • Brainline (www.brainline.org)

Vestibular Rehabilitation
   • Vestibular Disorders Association (www.vestibular.org)

Find a local support group
   (www.biacal.org/brain-injury-support-groups-california.htm)

Source: CDC, Photography by Amanda Mills

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