



Concussion and Mild Traumatic Brain Injury (TBI)



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What is a concussion / mild traumatic brain injury (mTBI)?

The terms ‘concussion’ and mild traumatic brain injury (mTBI) often mean the same thing. Experts disagree about where the dividing line should be, if there is one. A concussion is caused by a blow to the head that temporarily changes a child’s thinking or behavior. Concussions can cause a child to be “knocked out” (loss of consciousness) or feel dazed (altered consciousness). Many children and adolescents who have had a concussion/mTBI also have temporary changes in their thinking, feelings and body that are often called “post-concussion symptoms”. These may include headache, fatigue, sleep problems, attention problems, memory problems, irritability, and anxiety. These symptoms can be stressful and disruptive, but they typically get better, usually within 3 months. During recovery, it is important to balance taking it easy with getting back into life. Completely avoiding people or school, especially for a long time, can make symptoms last longer. On the other hand, having a lot of stress at home or at school also can make post-concussion symptoms more severe and last longer.

Where can I find help?

Children who have had a recent concussion or mTBI should see a doctor before they go back to their normal activities. Usually, it is best to visit the pediatrician or family doctor. However, a child should get immediate medical care under certain circumstances, such as when he or she is knocked out for more than a brief period, displays severe or worsening headaches, or displays any sudden change in thinking or behavior. Seeing a doctor is especially important for athletes who play contact sports like football, cheerleading, soccer, basketball, and baseball. It is easy for an athlete to get hurt again if a head injury caused them to be less alert, quick, or coordinated. Getting a new head injury while still recovering from one can make symptoms worse and last longer. In many states, a health professional has to say it is okay for a child to return to sports after a concussion.

What can school do to help?

While they are recovering from a concussion or mTBI, children or teens may struggle at school. Schools can help by giving support that is targeted to an injured student’s needs and that is weaned away as they get better. Any school – public or private – can help. If a child’s education is affected by a concussion or mTBI, public schools are required to help, and can set up what is called a Section 504 plan or an Individualized Education Program (IEP) to guide things.

Symptom	Classroom accommodation
Attention problems	<ul style="list-style-type: none"> • Seat student near teacher and away from distractions like window and doors • Build in frequent breaks during classroom work and homework • Use small groups when teaching new information • Use prompts such as subtly touching the student’s shoulder if he/she is distracted
Memory problems	<ul style="list-style-type: none"> • Provide written outlines of classroom discussions • Use multiple choice formats for tests • Provide written organizer for student to write down assignments and due dates • Provide repetition when teaching new material • Ask student to repeat back what he/she heard
Slowed processing	<ul style="list-style-type: none"> • Extend time on tests and assignments, dividing tests into smaller parts with brief breaks in between • Reduce homework load • Focus on quality of work, not quantity
Headache	<ul style="list-style-type: none"> • Provide student with a quiet place to rest if he/she gets a headache • Allow student to bring a water bottle to class to stay hydrated • Provide opportunities for student to take any prescribed medication at school
Fatigue	<ul style="list-style-type: none"> • Schedule academic classes during time when student is most alert • Provide frequent breaks • Consider half-day school attendance initially

How does a neuropsychologist help a child with concussion?

After a child gets injured, a neuropsychologist can

- look for and point out post-concussion symptoms (and symptoms that are probably *not* from the head injury),
- talk with children and families about what has happened, what to expect, and what to do next,
- help with decisions about when a young athlete should return to play sports,
- develop treatment plans to support recovery, deal with school problems, and manage changes in behavior or adjustment,
- coordinate with primary health providers, school personnel, and athletic staff
- help the child and family overcome stress related to the injury and its effects.

Where can I find online resources?

Resource	Link
Centers for Disease Control and Prevention (CDC) Tools and resources for concussion and mTBI	http://www.cdc.gov/concussion/index.html
Brain Injury Association of America Information on education, advocacy, and local support groups	http://www.biausa.org/
US Department of Education Reviews the rights of children/families under the Individuals with Disabilities Education Act (IDEA)	http://idea.ed.gov/

Are there books or articles that give the “big picture” for professionals?

Absolutely, but it is impossible to list all of the books that provide general coverage. Here is a good list to start from:

Apps, J.N. & Walter, K.D. (Eds.). (2012). <i>Pediatric and Adolescent Concussion: Diagnosis, management, and outcomes</i> . New York: Springer.
Halstead, M.E. & Walter, K.D. (2010). Clinical report: Sport-related concussion in children and adolescents. <i>Pediatrics</i> , 126, 597 – 615.
Kirkwood, M.W. & Yeates, K.O. (Eds.).(2012). <i>Mild Traumatic Brain Injury in children and adolescents: From basic science to clinical management</i> . New York: The Guilford Press.
Kirkwood, M.W., Yeates, K.O., Taylor, H.G., Randolph, C.R., McCrea, M., & Anderson, V.A. (2008). Management of pediatric mild traumatic brain injury: A neuropsychological review from injury through recovery. <i>The Clinical Neuropsychologist</i> , 22, 769- 800.

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Additional Information:

What is board certification in clinical neuropsychology?

Believe it or not, most states allow licensed psychologists to call themselves neuropsychologists without showing they have any special training on how to care for people who have neurological or neurodevelopmental disorders. Clinicians who are board-certified in clinical neuropsychology have proven, through a rigorous evaluation, that they are fully competent. That evaluation is conducted by the largest certification group in psychology, [the American Board of Professional Psychology \(ABPP; http://www.abpp.org\)](http://www.abpp.org), and its subspecialty board, The American Board of Clinical Neuropsychology. The goal of ABPP is to protect the public by examining and certifying psychologists who demonstrate competence in approved specialty areas.

How do I find a board-certified clinical neuropsychologist?

These are listed by name and by location on the web site of the [American Academy of Clinical Neuropsychology \(AACN; http://theaacn.org\)](http://theaacn.org). Once you find a neuropsychologist near you, click on their name for more information, including the kinds of people they work with and how to contact them.

What is pediatric neuropsychology?

[Click here \(http://www.div40.org/resources.htm\)](http://www.div40.org/resources.htm) to download a pamphlet that explains what makes pediatric neuropsychology unique, and what to expect from an evaluation by a pediatric neuropsychologist.



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