

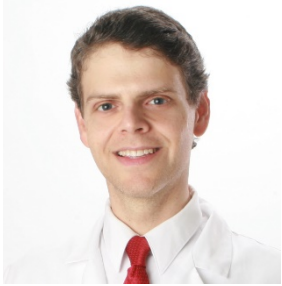
# Traumatic Brain Injury Curriculum

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## About the Author



Ari Magill, M.D. earned a B.S. in Zoology from the University of Texas in Austin, TX, and graduated with an M.D. from UT Southwestern Medical School in Dallas, TX. Dr. Magill completed his neurology residency at the University of Arizona in Tucson, AZ, and completed a movement disorders neurology fellowship at the University of Colorado Anschutz Medical Center in Aurora, CO. He formerly practiced as a staff neurohospitalist at Northwest Medical Center in Tucson, AZ. Currently, Dr. Magill conducts independent VA disability exams on veterans who sustained traumatic brain injury (TBI) and serves as a clinical research investigator for the IMA Group at their Alea Clinical Research facility.

Dr. Magill enjoys medical writing and participating in medical education and has a special interest in cognitive, behavioral, and memory disorders and functional medicine health coaching. He is passionate about advancing dementia and TBI treatment through clinical research and aggressive lifestyle change aided by judicious use of supplements. Dr. Magill is an avid bicycle rider, a film enthusiast, and enjoys playing basketball in his free time.

## Lesson Two – Concussion Signs and Symptoms

### Lesson Overview

*Concussion has potentially debilitating signs and symptoms, including sleep disturbance, headache, changes in vision and hearing, confusion, short-term memory deficits, and irritability. Participants will learn to recognize symptoms and signs of concussion.*

### Lesson Objectives

After completing this lesson, participants will be able to:

- Identify, physical, sensory, cognitive, and behavioral symptoms and signs of concussion.
- Identify physical, cognitive, and behavioral signs and symptoms of more severe TBI.
- Describe Second Impact Syndrome.
- Describe Post-Concussion Syndrome.

### Lesson at a Glance

Activity	Materials	Preparation	Approximate class time
FOCUS	<ul style="list-style-type: none"> <li>• <i>Concussion Signs and Symptoms</i> slide presentation</li> <li>• <i>Concussion Signs and Symptoms Chart</i></li> <li>• Signs and Symptoms of Traumatic Brain Injury poster</li> </ul>	<ol style="list-style-type: none"> <li>1. Prepare to show <i>Concussion Signs and Symptoms</i> slide presentation.</li> <li>2. Print/photocopy <i>Concussion Signs and Symptoms Chart</i> (one per participant).</li> <li>3. Hang poster for reference.</li> <li>4. Internet access ready for videos.</li> </ol>	10–20 minutes
LEARN	<ul style="list-style-type: none"> <li>• Concussion Education Kit</li> <li>• <i>Concussion Signs and Symptoms</i> slide presentation</li> <li>• Signs and Symptoms of Traumatic Brain Injury poster</li> <li>• <i>Concussion Experience Checklist</i></li> <li>• <i>Interview Questions and Answers</i> worksheet</li> <li>• <i>On the Grasshopper and Cricket</i> worksheet</li> <li>• <i>Basic Math Quiz</i></li> </ul>	<ol style="list-style-type: none"> <li>1. Print/photocopy <i>Concussion Experience Checklist</i> (one per participant).</li> <li>2. Set up each simulation station.</li> <li>3. Check to ensure the Concussion Education Kit materials are ready to use.</li> </ol>	60-90 minutes
REVIEW	<ul style="list-style-type: none"> <li>• <i>Concussion Signs and Symptoms Quiz</i></li> <li>• <i>Concussion Signs and Symptoms Quiz – Answer Key</i></li> </ul>	<ol style="list-style-type: none"> <li>1. Print/photocopy the <i>Concussion Signs and Symptoms Quiz</i> (one per participant).</li> </ol>	20 minutes

## Lesson Two – Concussion Signs and Symptoms

# FOCUS: Concussion Signs and Symptoms

10-20 minutes

### Purpose:

Concussion has potentially debilitating signs and symptoms, including sleep disturbance, headache, changes in vision and hearing, confusion, short-term memory deficits, and irritability. Participants will learn to recognize symptoms and signs of concussion.

### Materials:

- *Concussion Signs and Symptoms* slide presentation
- *Concussion Signs and Symptoms Chart*
- Signs and Symptoms of Traumatic Brain Injury poster

### Facilitation Steps:

1. Begin by introducing concussion signs and symptoms. Give each participant the *Concussion Signs and Symptoms Chart* to complete as they listen. Display the poster as an additional reference source for the lesson.

**Slide 2:** Symptoms of Concussion can vary depending on which area of the brain was damaged, which will be more pronounced in cases of more severe injury where focal damage has occurred from a brain contusion or hemorrhage. However, there is a general constellation of symptoms that can be grouped as physical, sensory, cognitive, and behavioral.

**Slide 3:** Physical signs and symptoms:

- Brief loss of consciousness from seconds to a few minutes
- Headache, plus or minus nausea, plus or minus vomiting
- Fatigue/ drowsiness and sleep disturbances (such as insomnia, worsened sleep quality, or excessive sleep)
- Dizziness/vertigo, incoordination, impaired balance

**Slide 4:** Sensory signs and symptoms:

- Vision: transient blurred vision, seeing “stars,” inability to maintain focus for an extended

amount of time, or sensitivity to light (aka photophobia)

- Hearing: ear ringing (aka tinnitus) and sensitivity to sound (aka phonophobia or hyperacusis)
- Taste or smell: partial loss or alteration of taste or smell

**Slide 5:** Cognitive signs and symptoms:

- Feeling dazed, confused, or disoriented immediately following the injury
- Trouble with short-term memory (such as misplacing items, forgetting new information or parts of conversations, and names) or loss of memory for events surrounding the head injury (aka post-traumatic amnesia)
- Trouble maintaining focus, concentration, and attention
- Mild trouble processing language (either comprehension or expression verbally or in writing) such as occasional trouble coming up with names
- Difficulty planning and organizing (executive function)
- Losing track of time or why you went somewhere
- Slowed processing speed

**Slide 6:** Behavioral signs and symptoms:

- Irritability
- Poor ability to handle stress
- Anxiety, depression, and rapid mood fluctuations
- Impulsive behavior (compromised ability to inhibit inappropriate reactions or urges)

2. If time permits, share a short video about concussion signs and symptoms. Here are a few suggested links but there are many others.

<https://www.youtube.com/watch?v=SKPHF6ZOarM>

<https://www.youtube.com/watch?v=wMlpP2dqfW0>

[https://www.youtube.com/watch?v=0Gi2Uz\\_yF9w](https://www.youtube.com/watch?v=0Gi2Uz_yF9w)

Name: \_\_\_\_\_ Class: \_\_\_\_\_

# Concussion Signs and Symptoms Chart

Complete the chart below from lecture information, slides, posters and/or Internet sources.

	Signs (Visible to others)	Symptoms (Felt by Affected Individual)
<b>Physical</b>		
<b>Sensory</b>		
<b>Cognitive</b>		
<b>Behavioral</b>		