

# Lesson Plan: *Wipe Out*

(A documentary by Lionel Goddard, Canada, 2008, 50 minutes)

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## Plan at a glance

### Levels of Education

High school, college, university

### Objectives

- Raise student awareness about TBI (Traumatic Brain Injuries)
- Analyze problems related to TBI in general or one type of TBI: concussions (facts, risk factors, consequences)
- Analyze solutions and factors of protection associated with TBI
- Encourage action taking by becoming a safety advocate

### Disciplines

- Physical Education and Health
- English

### Structure of Proposed Activity

- **Activity 1: Initial Questions and Viewing the Documentary**
  - o Initial questions
  - o Viewing the documentary
  - o Brief discussion on spontaneous reactions
  - o Presenting the activities for the next two classes
- **Activity 2: Problems Analysis**
  - o Class discussion on Traumatic Brain Injury (TBI)
  - o Team work on risk factors for TBI
  - o Spokespersons speak up!
  - o Class discussion on the consequences of TBI
  - o Explaining research homework
- **Activity 3: Solutions Analysis and Taking action!**
  - o Discussion on solutions and factors of protection
  - o Let's take action! Becoming safety advocates

### Reference For More Information:

- ***Wipe Out* Web site on the Knowledge Network:**  
<<http://wipeout.knowledgenetwork.ca/wipeout.html>>

**Activity 1: Initial questions and Viewing the Documentary (75 min)**

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<p><b>1. Initial questions for the whole class:</b></p> <ul style="list-style-type: none"> <li>- Which sports do you practise?</li> <li>- What kinds of injuries could happen to you while practising that sport?</li> <li>- In your opinion, which sports could lead to most severe injuries?</li> <li>- Do you think some people have personalities that are more prone to risk taking?</li> <li>- Do you know anybody who has suffered brain injury?</li> <li>- What do you think are the consequences of brain injury?</li> <li>- Do you think boys and girls engage in as much risky behaviour in sports?</li> </ul>	15 min
<p><b>2. View the documentary</b></p>	50 min
<p><b>3. Brief discussion on spontaneous reactions</b> For the few minutes left, ask students to share their spontaneous thoughts on the documentary.</p>	8 min
<p><b>4. Present the two next classes' activities</b></p> <ul style="list-style-type: none"> <li>- <b>Activity 2</b> will be devoted to further discussing the problems related to Traumatic Brain Injuries</li> <li>- <b>Activity 3</b> will focus on thinking about solutions and taking action!</li> </ul>	2 min

## Activity 2: Problems Analysis (75 min)

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<p><b>1. Class discussion on Traumatic Brain Injury (TBI).</b> Start a class discussion by asking these questions:</p> <ul style="list-style-type: none"> <li>- What happened to the three young men we saw in the documentary?</li> <li>- Before watching the film, were you aware that TBI was the number one cause of death and disability among youth?</li> <li>- Is TBI (Traumatic Brain Injury) the same as a concussion*? What is the difference between the two?</li> </ul> <p>* For more information on TBI or concussions, refer to the Appendix or the Web site: <a href="http://wipeout.knowledgenetwork.ca/wipeout.html">http://wipeout.knowledgenetwork.ca/wipeout.html</a> - <i>Learn</i> section</p>	15 min
<p><b>2. Teamwork on risk factors for TBI.</b></p> <p>Divide the class into teams of 5. Ask students to list, as teams, why there are so many cases of TBI in their opinion. They write their ideas on paper and determine who will be spokesperson for the team. Give them 15 minutes to discuss and list their ideas.</p>	15 min
<p><b>3. Spokespersons speak up!</b></p> <p>Ask each team's spokesperson to stand up so that you can compile their ideas. Draw four columns on the board with these categories on top: <b>neurobiological</b>, <b>sociodemographic</b>, <b>social</b> and <b>media</b>. As the spokespersons share their teams' conclusions on the risk factors, write them under the appropriate column. Refer to the Appendix for an example. Other answers might come up; if they don't fit into any of those categories, add a fifth column for "Other" (e.g. recent years' increase in popularity for sports such as snowboarding). Also, make sure you specify that often, it is <u>not a single factor</u> but <u>a combination</u> of those that explain why TBI occurs.</p>	20 min
<p><b>4. Class discussion on the consequences of TBI</b></p> <ul style="list-style-type: none"> <li>- What are the consequences of brain injuries <u>on the person suffering them</u>? (Explore topics such as memory loss, concentration difficulties, motor impairment, personality changes [i.e. "not being the same person"], etc.)</li> <li>- What are the consequences <u>on their entourage</u>? (Explore topics such as: emotional stress for family and friends; taking care of an injured person requires time and dedication, which often bring life changes [e.g. having to quit one's job; moving to be closer to services, such as in Chris Tutin's case], etc.).</li> </ul>	15 min
<p><b>5. Explain research homework.</b> Divide class into four groups. Assign homework to each group (homework is to be done individually; groups are only formed to assign 4 homework categories). Explain that their research will help them for the next activity: becoming safety advocates.</p> <p><b><u>Here are the four research* tasks (one per group):</u></b></p> <ol style="list-style-type: none"> <li>a. <b>Brain injuries:</b> Research one of these topics: TBI, Concussions, or Brain Anatomy (brain's functions by section: frontal lobes, parietal lobes, occipital lobes, temporal lobes and cerebellum).</li> <li>b. <b>Risk factors</b></li> <li>c. <b>Helmets</b></li> <li>d. <b>Taking the online quiz and noting important facts</b></li> </ol> <p>* Information for these four research tasks can be found on the <i>Wipe Out</i> Web site: <a href="http://wipeout.knowledgenetwork.ca/wipeout.html">http://wipeout.knowledgenetwork.ca/wipeout.html</a> - <i>Learn</i> section</p>	10 min

**Activity 3: Solutions Analysis and Taking Action! (75 min)**

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<p><b>1. Discussion on solutions and factors of protection.</b></p> <p>The last activity focused on problems associated with TBI. This one will take a more positive angle and explore solutions and factors of protection. Ask students what are some solutions, in their opinion, to help prevent TBI or simply to help deal with it. If they don't name them, make sure that you talk about:</p> <p><b><i>Solutions for the prevention of TBI</i></b></p> <ul style="list-style-type: none"> <li>- Helmets (TBI is the number one cause of death and disability among youth. It is also one of the most preventable ones. 60 to 85% of injuries can be prevented by using a helmet).</li> <li>- Public education campaigns</li> </ul> <p><b><i>Post-TBI Solutions</i></b></p> <ul style="list-style-type: none"> <li>- Treatment and therapy (various types: medical care, physiotherapy, occupational therapy, psychology, etc.)</li> <li>- Having a support network (e.g. family and friends that are there for you)</li> <li>- Developing personal strategies to cope (e.g. finding alternative activities one enjoys, etc.)</li> </ul>	20 min
<p><b>2. Let's take action! Becoming safety advocates</b></p> <p>Form teams of four. Make sure that each team has a member of each of the homework groups (a, b, c and d) in order to have an "expert" on each topic in every team.</p> <ul style="list-style-type: none"> <li>- Tell students they will become safety advocates themselves today. They will be making posters to be displayed, if possible, on the gym's walls or elsewhere in the school where safety messages can be seen. They can use facts, slogans, images or other means they can think of to spread awareness and safety messages.</li> <li>- An extension of this could be going from class to class, to those who haven't seen the documentary, to tell them about TBI facts and ways to prevent them.</li> </ul>	55 min

### **A Healthy Brain**

Inside the brain, neurons form tracts that carry messages to various parts of the brain. The brain uses these messages to perform functions that coordinate the body's life systems and comprise every movement, thought, sensation and emotion of the human experience. Each part of the brain serves a specific function and links with other parts of the brain to perform more complex functions.

### **An Injured Brain (Traumatic Brain Injury)**

Traumatic Brain Injury (TBI) occurs when an outside force impacts the head hard enough to cause the brain to move inside the skull. It can then cause bruising, bleeding, twisting or tearing of brain tissue. The injury can affect the functions of the neurons, nerve tracts or different sections of the brain. This can change how a person thinks, acts, feels and moves. It can also affect the complex internal functions of the body. Brain injuries are all different. Some are temporary, others permanent. Some cause partial impairment, others a complete inability to perform a function.

### **Concussions**

Concussions are the most common kind of Traumatic Brain Injury (TBI). Concussions are caused by a direct or indirect blow to the head or body that produces a temporary loss of normal brain function. Suffering a single, even mild, concussion greatly increases the risk of more severe injuries – or even death. Repeated concussions can cause profound and prolonged impairments on brain function and behaviour, including long-term memory loss, reduced processing speed and depression.

***Symptoms and signs:*** Symptoms vary widely and often disappear within minutes or appear later, making the injury's severity and recovery requirements difficult to determine. Symptoms can include: confusion, disorientation, headache, nausea, dizziness, blurred vision, slurred speech, fatigue and irritability. Signs can include: inappropriate behaviour, vacant stare, poor balance, mood swings and problems with concentration, memory and sleeping.

***What to do:*** If you suffer ANY head injury, STOP playing. If you suffer any signs and/or symptoms of a concussion, you shouldn't be alone and you must seek medical advice as soon as possible. If you've suffered loss of consciousness, get immediate medical attention.

**Risk factors**

Neurobiological factors	Sociodemographic factors	Social factors	Media factors
<ul style="list-style-type: none"> <li>- <b>The teenage brain</b> Double risk: 1) Prefrontal cortex, which evaluates risk and inhibits risky behaviour, not yet fully developed;</li> <li>2) Reward system overactive in adolescence</li> <li>- <b>Thrill-seeking (or 'T type') personalities</b></li> <li>- <b>Previous brain injuries</b> (After one BI you have a 3 times greater risk for a 2<sup>nd</sup> BI)</li> </ul>	<ul style="list-style-type: none"> <li>- <b>Sex</b> (males are twice as much at risk as females)</li> <li>- <b>Age</b> (males 15-24 are particularly at risk)</li> </ul>	<ul style="list-style-type: none"> <li>- <b>Crowds you hang out with</b> ("Birds of a feather flock together"; Thrill-seeking types tend to hang out with friends like themselves)</li> <li>- <b>Peer pressure</b></li> </ul>	<ul style="list-style-type: none"> <li>- <b>Video-sharing sites on the Internet</b> (When a camera is present, some teens, especially the thrill-seeking type, may exaggerate)</li> <li>- <b>Television</b></li> <li>- <b>Video games</b> (e.g. Skaters never wear helmets in video games)</li> </ul>