CONCUSSION

CAMPAIGN KIT

USER GUIDE

FATAL VISION® CONCUSSION SIMULATION GOGGLE

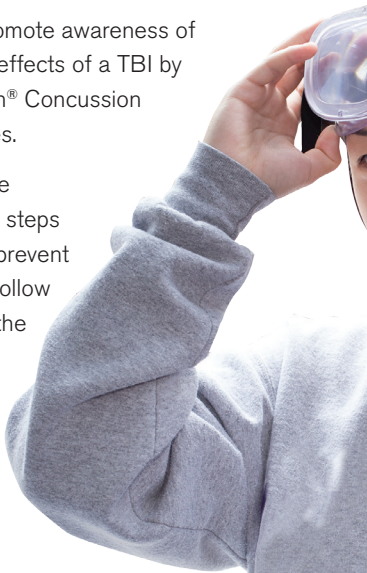
Introduction

A concussion is a type of traumatic brain injury (TBI) caused by a bump, blow or jolt to the head. This sudden movement causes the brain to bounce around in the skull, creating chemical changes that make it more vulnerable to further injury.

Objective

Concussion victims may believe they are able to continue in their regular activities, such as competing in sports, studying or participating in other physically and cognitively demanding tasks after a TBI. The aim of this program is to:

1. Demonstrate and promote awareness of some of the distinct effects of a TBI by using the Fatal Vision® Concussion Goggles and activities.
2. Instruct and persuade participants to follow steps that will minimize or prevent concussions and to follow emergency steps in the event they or others sustain a TBI.



3. Create a sense of empathy in caregivers for individuals affected by a TBI, motivating all concerned parties to encourage and support those affected by TBI and follow a medical professional's prescribed recovery protocol.

Evidence-Based Approach

Using the Fatal Vision® Concussion Goggles with specially designed activities, participants will experience the modeled effects of a low-grade concussion and see the potential severity of a TBI. By taking part in a hands-on, engaging and relevant learning experience, participants will more likely be persuaded and motivated to take deliberate steps to avoid a concussion or adhere to a recommended course of action to recover from it.

Immediately following a concussion, the brain is more sensitive to any increased stress or injury until it fully recovers. If a person suffers a second concussion during this vulnerable recovery period, a condition known as Second Impact Syndrome, can lead to serious injury or death.

You can't see a concussion. It is a disruption of how the brain works — not a "bruise to the brain." That's why brain computed tomography (CT) scans and magnetic resonance imaging (MRI) tests are standard procedures in diagnosing most concussions. Symptoms of a concussion can last from several minutes to even months.

Signs and symptoms of a concussion by an observer

- Appears dazed, stunned or confused
- Forgets an instruction
- Is unsure of game, activity, score or opponent
- Moves clumsily
- Answers questions slowly
- Loses consciousness (even briefly)
- Shows mood, behavior or personality changes
- Can't recall events prior to or after hit or fall

Symptoms reported by those experiencing

- Headache or "pressure" in head
- Nausea or vomiting
- Balance problems, dizziness or double or blurry vision
- Sensitivity to light and noise
- Concentration or memory problems
- Confusion

If signs or symptoms appear to become worse, call 9-1-1. In rare cases, a dangerous blood clot may form on the brain in the individual with a concussion and squeeze

the brain against the skull. The following are signs of a medical emergency:

- One pupil larger than the other
- Drowsiness or inability to wake up
- A headache that becomes worse and does not go away
- Weakness, numbness or decreased coordination
- Repeated vomiting or nausea
- Slurred speech
- Convulsions or seizures
- Inability to recognize people or places
- Increasing confusion, restlessness or agitation
- Loss of consciousness (even a brief loss of consciousness should be taken seriously)

Preventing a concussion

- Always wear a seat belt in a car.
- Wear appropriate headgear and safety equipment when biking, rollerblading, skateboarding, snowboarding, skiing or playing contact sports.
- Avoid playing in environments where you could easily slip and fall.

Elementary
Walk-The-Line

Activity Purpose
Experience some of the loss of balance effects that can be caused by a concussion and encourage discussion concerning the severity of a concussion.

Modeled Symptoms of a TBI
A TBI can affect balance, slow gross motor skills and cause difficulties with coordinating complex motor tasks.

Materials
- Fatal Vision® Concussion Goggles
- "Walk-the-Line" Tape on the floor (about 8 feet long)
- Ball or other object at the end of the line
- Spotters to make sure the participant is safe

Activity Steps
Introduction

1. We are going to simulate a couple of the signs and effects of a concussion with these Concussion Goggles.

2. "We need a volunteer who can put these on and tell us what they are experiencing."

   Have a volunteer come up and put on the goggles.

Sample Instructions

3. "I would like you to walk a straight line right down this line, with your arms at your side. When you get to the end, pick up this ball, turn around and again walk the line to right where you started."

4. Use a spotter or two on each side of the participant as they walk down the line, making sure they do not fall.

5. Have several participants do the same activity.

Discussion
ASK: "How many of you had trouble seeing and keeping your balance?"

"Why isn't it safe to continue playing sports or any other activity when someone is like this?"

Sample Wrap Up
"These are just a few things that might happen to someone who experienced a concussion. The part of the brain that helps see and balance was injured and needs to recover. If more parts of the brain were injured there could be even more effects to how a person thinks, feels and behaves. Knowing how to keep your brain safe is very important!"

Elementary
Peg Game

Activity Purpose
Experience some of the loss of hand-eye coordination that can be caused by a concussion and provoke discussion concerning the severity of a concussion.

Modeled Symptoms of a TBI
A TBI can affect fine motor tasks coordination, and hinder problem solving abilities.

Materials
- Fatal Vision® Concussion Goggles
- Triangle activity

Activity Steps
Introduction

1. We are going to simulate a couple of the signs and effects of a concussion with these Concussion Goggles.

2. "We need a volunteer who can put these on and tell us what they are experiencing."

   Have a volunteer come up and put on the goggles.

   Center game in front of the participant.

Sample Instructions

3. "I would like you to play this triangle activity game. The rules of the game are to jump a single peg at a time by a peg next to that one. You take out the peg you jumped. The game ends when you have only one peg left, or there are no more pegs left next to each other that you can jump."

4. For added effect, tell the participant to look up at you after each peg is moved and when you say "OK" they can continue the activity.

5. Have several participants do the same activity. Note the difficulty in placing the pegs in the holes. They might not realize when they make a mistake with the peg placement. They don't have to finish the game. The goal is to experience the effects that the goggles simulate.

Discussion

ASK: "How difficult was it to put the pegs in the right hole?" "If someone had to concentrate on a task with these symptoms, how do you think they would do?"

Sample Wrap Up

"These are just a few things that might happen to someone who experienced a concussion. The part of the brain that helps see and balance was injured and needs to recover. If more parts of the brain were injured there could be even more effects to how a person thinks, feels and behaves. Knowing how to keep your brain safe is very important!"

High School/College
Timed Catch

Activity Purpose
Recognize some concussion impairment effects when standing still and trying to aim and throw.

Modeled Symptoms of a TBI
A TBI can affect spatial awareness, and make targeting tasks difficult.

Materials
- Fatal Vision® Concussion Goggles
- Two people standing about 10 feet away from each other
- A ball
- Timer

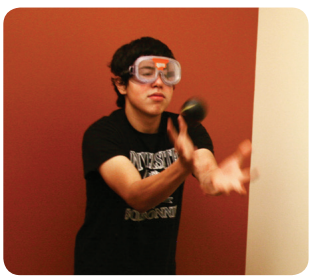
Activity Steps
1. Using a stopwatch, the two people must play catch with a ball for 10 consecutive throws/catches. The first time they will not use the Concussion Goggles, and the instructor or volunteer will use the stopwatch to time how long it takes the pair to toss the ball 10 times.

2. After recording the time used for the first attempt, they will again time the pair for 10 consecutive throws using the Concussion Goggles on one of the participants. Again time the pair and see how long it takes for the participant to do the activity.

Discussion

You may hear some of the comments below. Refer to these in your discussion:
- Feelings of dizziness and nausea
- Visual disconnect between the ball and the hands
- Disorientation and loss of spacial awareness while standing
- Hesitation, apprehension, confusion and lack of confidence while doing the activity


SOLIDARITY



High School/College
Timed Wall Touch

Activity Purpose
Recognize some concussion impairment effects when changing vision levels, turning and moving from one place to another.

Modeled Symptoms of a TBI
A TBI can cause dizziness, and create a sense of disorientation.

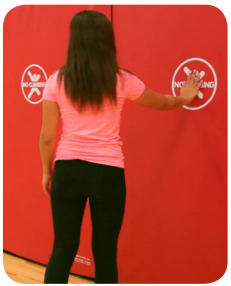
Materials
- Fatal Vision® Concussion Goggles
- Two spotters on either side of the chair
- One sturdy chair without armrests
- Timer

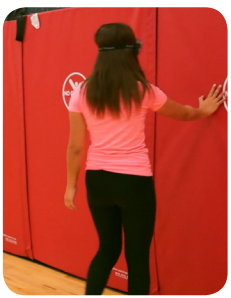
Activity Steps
1. Place the chair 10 feet away from a wall, facing that same wall. Have a participant sit in that chair and at the instructor's command to "Go," have the participant stand up, walk to the wall, touch the wall, turn 180 degrees, walk back to their chair, put their arms at their sides, turn around and sit down carefully. This process will be timed by a stopwatch.

2. Using the first time as a benchmark, the participant will repeat activity. This time they will wear the Concussion Goggles while doing the activity. The person with the stopwatch will once again time the participant, and they must do the activity in the same amount of time that it took the first time. The spotters must be careful when the participant turns around to sit in the chair once more. The participant might only sit half-way on the chair.

Discussion

You may hear some of the comments below. Use these in your discussion:
- Feelings of dizziness and nausea
- Visual disconnect between where they think the chair is and where it really is
- Disorientation and loss of spacial awareness while standing and walking
- Hesitation, apprehension, confusion and lack of confidence while doing the activity.


High School/College
Card Game – Concussed

Activity Purpose
Learn to recognize some concussion impairment effects on speed and hand-eye coordination and experience our susceptibility to those effects as a result of a simulated concussion.

Modeled Symptoms of a TBI
A TBI can affect hand-eye coordination, and produce higher rates of error in activities that require both speed and accuracy.

Materials
- Fatal Vision® Concussion Goggles
- Four stress brain models
- "Concussed" set of playing cards
- Maximum 5 players

Activity Steps
1. Place brain models in the middle of the table. The number of brain models must be one less than the number of players. Deal four cards to each person. One player wears the Concussion Goggles. In order to keep the game moving, the dealer does not wear the goggles.

2. Dealer picks up a card from the deck and discards one card face-down to the person on their left. They will either keep the new card and give away an unwanted one to the player on their left. Pass the unwanted card face down.

3. The players may only have four cards in their hand at a time during the game. Once play has begun, all players are moving as quickly as possible through the cards. The last person to receive the cards (the person on the dealer's right) will make a discard pile next to the deck pile. Use the discard pile as the deck pile when the dealer is out of cards. When a player collects four of a kind, as subtly as possible, take a brain from the center of the table. The rest of the players must grab a brain. One of the players will not grab a brain in time, and most likely it will be the participant wearing the Concussion Goggles.

Discussion

Sample questions and statements for the person wearing the Concussion Goggles: "What did you experience while doing the activity?" "In what ways were you at a disadvantage?" "What would be steps to take for someone who has these symptoms?" "The disorientation that you experienced while wearing the Concussion Goggles was caused by a simple visual distortion. The effects from a concussion can be much more disorienting and longterm."

Further discussions using the Concussed Cards: There are three types of cards: concussion causes, action steps, and ways to prevent concussions.

- Cards 2, 3, 4, 6, 7, and 10. How do these cards relate to causing a concussion?
- Cards 5, 8, 9. How do these cards relate to what to do in the event of a concussion occurring? Can you put these three cards in order?
- Cards Jack, Queen, King, Ace. How can these card tips help prevent a concussion?
- Use the Risk and Prevention Notes for further help with each card.

Sports Activities
Teammate Catch

Activity Purpose

In this activity, our goal is to experience some of the impairment effects of a concussion concerning accuracy, targeting ability as well as spatial awareness and afterwards, encourage further discussion regarding the potential severity of a concussion.

Modeled Symptoms of a TBI

Injury to the right side of the brain can make it difficult to perceive where you are in space and in relation to other items.

Materials

- Fatal Vision® Concussion Goggles
- 4-foot x 10-foot mat
- A ball

Activity Steps

1. Ask two people to face each other standing on the footprints marked on the mat. Time them as they toss the ball back and forth 10 times, counting the tosses without wearing the Concussion Goggles.
2. Repeat the activity with one person wearing the Concussion Goggles.
3. Note the difference in performance and the amount of time it takes to finish the 10 throws.

Kapoor, N., MS. (2002, January 1). Vision Disturbances Following Traumatic Brain Injury. Retrieved August 6, 2016, from http://visiontherapy.ca/vision_disturbances_following_traumatic_brain_injury.pdf

Brain Injury. (n.d.). Retrieved September 06, 2016, from http://www.tandfonline.com/doi/abs/10.1080/02699050500456410

Sports Activities
Goal Kicks

Activity Purpose
In this activity, our goal is to experience some of the impairment effects of a concussion concerning balance, visual pursuit as well as accuracy, and afterwards prompt further discussion regarding the potential severity of a concussion.

Modeled Symptoms of a TBI
Research suggests that many patients with concussion or post-concussion syndrome have visual problems that may cause headaches, eye headaches, double vision, eye strain or blurred vision. This can affect the ability to track a moving target or scan from one point to another.

Materials
- Fatal Vision® Concussion Goggles
- 4-foot x 10-foot mat or 3-foot x 5-foot mat (for a smaller area)
- 3 stress balls (black, orange, red)

Activity Steps
1. Place the balls by the arrows corresponding to their color.
2. When the instructor calls out a number in front of a ball, kick the ball toward the red and white goal at the other end of the mat. The first attempt is performed without the Concussion Goggles.
3. After kicking all three balls, reset them.
4. Repeat the activity while wearing the Concussion goggles.
5. Note the differences in performance and stability.

Focus on Vision and Balance Deficits Following Youth Concussion. (2015). Retrieved September 06, 2016, from http://blog.research.chop.edu/focus-on-vision-and-balance-deficits-following-youth-concussion/

Sports Activities
Five Tap Target

Activity Purpose

In this activity, our goal is to experience some of the impairment effects of a concussion concerning changing levels, hand-eye coordination as well as switch-handed tasks, and afterwards prompt further discussion regarding the potential severity of a concussion.

Modeled Symptoms of a TBI

TBI survivors often have difficulty with hand-eye coordination. Each side of the brain may have difficulty switching controls to different sides of the body.

Materials

- Fatal Vision® Concussion Goggles
- 4-foot x 10-foot mat or 3-foot x 5-foot mat (for a smaller area)
- A ball or 5 cups

Activity Steps

1. Place the ball on the "start" spot and stand on the footprints facing the ball without the Concussion Goggles.
2. Bend down, grab the ball with your left hand and stand up straight.
3. Tap the "1" target with the ball in your left hand, stand up, switch ball to right hand.
4. Tap the "2" target with the ball in your right hand, stand up, switch ball to left hand.
5. Tap the "3" target with the ball in your left hand, stand up, switch ball to right hand.
6. Tap the "4" target with the ball in your right hand, stand up, switch ball to left hand.
7. Place the ball directly on the "5" target.
8. Repeat the activity wearing the Concussion Goggles.
9. Note the difference in performance and accuracy.

Analyses of gait, reaching, and grasping in children after traumatic brain injury . (n.d.). Retrieved September 06, 2016, from http://www.sciencedirect.com/science/article/pii/S0003999302048359

Hammond-Tooke, G. D. (2010, March 1). Concussion causes transient dysfunction in cortical inhibitory networks but not the corpus callosum. Retrieved September 6, 2016, from http://www.jocn-journal.com/article/S0967-5868(09)00560-8/abstract

If using cups in the activity, please follow these steps:

1. To set up the cups, stand on the footprints and place the corresponding numbered cups near the numbers on the edge of the mat in the white dots from left to right: 1, 3, 5, 4, 2.
2. Stand on the footprints facing the "Start" spot without the Concussion Goggles.
3. Bend down, grab the "1" cup with your left hand and stand up straight.
4. Cross your left hand over and place the "1" cup in your left hand onto the corresponding No. 1 dot. Stand up straight.
5. Bend down and grab the "2" cup with your right hand, stand up, cross your right hand over to place the "2" cup on the corresponding No. 2 dot. Stand up straight.
6. Bend down and grab the "3" cup with your left hand, stand up, cross your left hand over to place the "3" cup on the corresponding No. 3 dot. Stand up straight.
7. Bend down and grab the "4" cup with your right hand, stand up, cross your right hand over to place the "4" cup on the corresponding No. 4 dot. Stand up straight.
8. Bend down and grab the "5" cup with your left hand, stand up, and immediately place the "5" cup on the corresponding No. 5 dot. Stand up straight.
9. Repeat the activity wearing the Concussion Goggles.
10. Note the difference in performance and accuracy.

If possible, video the first and second attempt of the participant tapping the targets. A video will document the dramatic difference between the participant's first unimpaired performance and his second concussed performance.

Sports Activities
Ring Step

Activity Purpose

In this activity, our goal is to experience some of the impairment effects of a concussion concerning balance, as well as gross motor coordination and afterwards, provoke further discussion regarding the potential severity of a concussion.

Modeled Symptoms of a TBI

A TBI can affect balance, slow gross motor skills and cause difficulties with coordinating complex motor tasks.

Materials

- Fatal Vision® Concussion Goggles
- 4-foot x 10-foot mat

Activity Steps

1. Stand near the arrows pointing toward the tire rings without the Concussion Goggles.
2. Travel the length of the mat stepping only in the center of the orange tire rings.
3. Turn around at the end and return to the beginning, stepping only in the center of the white tire rings.
4. Repeat the activity wearing the Concussion Goggles.
5. Note the differences in performance and accuracy.

Modality-specific, multitask locomotor deficits persist despite good recovery after a traumatic brain injury. (n.d.). Retrieved September 06, 2016, from http://www.ncbi.nlm.nih.gov/pubmed/19735789

Sensorimotor recovery in children after traumatic brain injury: Analyses of gait, gross motor, and fine motor skills. (n.d.). Retrieved September 06, 2016, from http://www.ncbi.nlm.nih.gov/pubmed/14667074

Sports Activities
Balance Line

Activity Purpose

In this activity, our goal is to experience some of the impairment effects of a concussion concerning loss of balance, and afterwards prompt further discussion regarding the potential severity of a concussion.

Modeled Symptoms of a TBI

Between 30 and 65 percent of people with a TBI suffer from dizziness and lack of balance at some point during their recovery.

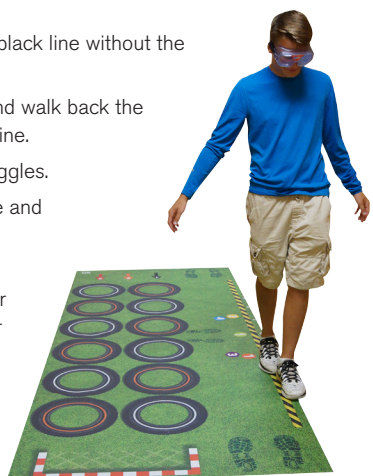
Materials

- Fatal Vision® Concussion Goggles
- 4-foot x 10-foot mat or 3-foot x 5-foot mat (for a smaller area)

Activity Steps

1. Walk heel-toe down the yellow and black line without the Concussion Goggles.
2. Turn around at the end of the line and walk back the same way, without stepping off the line.
3. Repeat wearing the Concussion Goggles.
4. Note the differences in performance and balance.

This activity can be performed with the '"Line Detector"' underneath the line for an increased awareness to the number of times the participant loses balance or shifts weight off the line.



Balance Problems after Traumatic Brain Injury. (n.d.). Retrieved September 06, 2016, from http://www.msktc.org/tbi/factsheets/Balance-Problems-After-Traumatic-Brain-Injury

Study Activities
Organize the Rainbow

Activity Purpose

In this activity, our goal is to experience some of the impairment effects of a concussion on cognitive flexibility, processing speed as well as concentration, and afterwards encourage further discussion regarding the potential severity of a concussion.

Modeled Symptoms of a TBI

Research has shown that a concussion – especially multiple concussions – is associated with decrements in high-level executive/attentional functioning. This activity challenges selective attention, cognitive flexibility and processing speed.

Materials

- Fatal Vision® Concussion Goggles
- 2 color card stacks
- Timer

Wall, S. E., Williams, W. H., Cartwright Hatton, S., Kelly, T. P., Murray, J., Murray, M., . . . Turner, M. (2006). Neuropsychological dysfunction following repeat concussions in jockeys. Retrieved September 06, 2016, from http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2077488/

Pediatric Traumatic Brain Injury and Attention Deficit. (2015, September). Retrieved September 06, 2016, from http://pediatrics.aappublications.org/content/136/3/534

Activity Steps

Full Version

1. Spread out one stack of the Color Cards without the Concussion Goggles.

2. Select cards, putting them in the order determined by the instructor using the color of text only, ignoring the color of the cards and the color named by the words. Use the acronym ROY G BIV - Red, Orange, Yellow, Green, Blue, Indigo, Violet. Do not use any of the extra colors.

3. Time the activity.

4. Repeat the activity with the second stack of Color Cards while wearing the Concussion Goggles and time the activity.

5. Note the differences between the two trials in processing speed, confusion and performance.

Simple Version

1. The instructor will give the participant a specific order in which to place the cards. It is recommended to write the order down for the participant. For example, "Red Orange Yellow Green Blue."

2. Spread out a stack of the Color Cards without wearing the Concussion Goggles.

3. Select cards, putting them in the order determined by the instructor using the color of text only, ignoring the color of the cards and the color named by the words. To make it even more simple, include only the selected colors in the stack and leave out the extra colors.

4. Time the activity.

5. Repeat the activity using the second stack of Color Cards while wearing the Concussion Goggles.

6. Note the differences between trials in processing speed, confusion and performance.

Study Activities
Three Sets of 21

Activity Purpose

In this activity, our goal is to experience some of the impairment effects of a concussion on processing speed, perception as well as concentration, and afterwards encourage further discussion regarding the potential severity of a concussion.

Modeled Symptoms of a TBI

A traumatic brain injury can hinder academic performance due to impaired processing abilities; difficulties in sustained attention tasks; and headaches, dizziness and visual problems.

Materials

- Fatal Vision® Concussion Goggles
- "Concussed" set of playing cards
- Timer

Activity Steps

1. Turn the stack of the Concussed playing cards face up and mix them on a table without wearing the Concussion Goggles.
2. Build three unique sets of cards that each add up to 21, excluding face cards (king, queen, jack, ace). Each set must be a different combination of numbers adding to 21. Do not repeat a combination of numbers if it's already been laid.
3. Time the activity.
4. Repeat the activity using the Concussion Goggles.
5. Note the differences in processing speed, hesitation, confusion, and performance.

If this math activity is too difficult as a baseline task, you may alter the difficulty to whatever is appropriate for your participant's ability level.

By examining the frequency and types of academic issues faced by students during concussion recovery, and what students are most affected, evidence-based standards can be developed for guiding the return to school. (2015, June). Academic Effects of Concussion in Children and Adolescents. Retrieved September 06, 2016, from http://pediatrics.aappublications.org/content/135/6/1043

Study Activities
Memory Test

Activity Purpose
In this activity, our goal is to experience some of the impairment effects of a concussion on memory, as well as concentration, and afterwards encourage further discussion regarding the potential severity of a concussion.

Modeled Symptoms of a TBI
Memory is one of the first problems people experience after a head injury, and is often one of the last cognitive functions to return.

Materials
- Fatal Vision® Concussion Goggles
- "Concussed" set of playing cards
- Timer

Activity Steps
1. Turn the stack of the Concussed playing cards face up and mix them on a table without wearing the Concussion Goggles.
2. The instructor will name three specific cards to pick up, e.g. 4 of diamonds, king of spades and 6 of hearts.
3. Find the cards and place them in order, timing the process and memorizing the cards.
4. Mix the cards into a fresh pile.
5. When the instructor says "go," find the same cards and place them in order while wearing the Concussion Goggles.
6. Note the differences in recall ability, hesitation, confusion, and performance.

Gray, B. B. (2014). Even Mild Concussion Can Cause Thinking, Memory Problems: Study. Retrieved September 06, 2016, from https://consumer.healthday.com/cognitive-health-information-26/brain-health-news-80/even-mild-concussion-can-cause-thinking-memory-problems-study-689811.html

Cognitive Effects of TBI Q&A. (n.d.). Retrieved September 06, 2016, from http://www.tbinrc.com/cognitive

Croal, I., MRes. (2014, August 5). White matter correlates of cognitive dysfunction after mild traumatic brain injury. Retrieved September 6, 2016, from http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4142001/

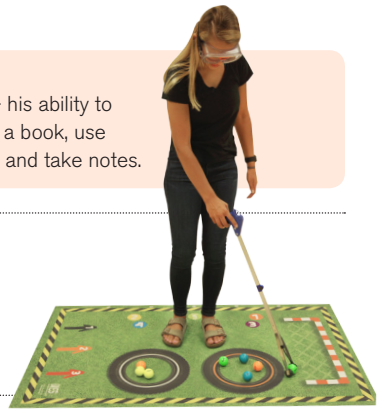
Study Activities
Grabber Swap

Activity Purpose

In this activity, our goal is to experience some of the impairment effects of a concussion on fine motor skills, as well as information processing speed, and afterwards encourage further discussion regarding the potential severity of a concussion.

Modeled Symptoms of a TBI

A TBI can affect a person's fine motor skills – his ability to color, write, eat, use a computer, turn pages in a book, use buttons/zippers when dressing, tie shoe laces and take notes.



Materials

- Fatal Vision® Concussion Goggles
- 4-foot x 10-foot mat or 3-foot x 5-foot mat (for a smaller area)
- Grabber and golf balls
- Timer

Activity Steps

1. Place the light-colored golf balls (yellow and orange) in one tire, and the dark-colored golf balls (green and blue) in another tire.

2. Use the grabber tool to pick up and transfer the balls, one at a time, from one pile to another so that the light-colored balls will have switched places with the dark-colored balls. Time the attempt, which is performed without wearing the Concussion Goggles.

3. Repeat the activity while wearing the Concussion Goggles.

4. Note the differences in accuracy, control, decision making skills, and performance.

Kuhtz-Buschbeck, J. P. (2003, December). Sensorimotor recovery in children after traumatic brain injury: Analyses of gait, gross motor, and fine motor skills. Retrieved September 06, 2016, from http://www.ncbi.nlm.nih.gov/pubmed?Db=pubmed

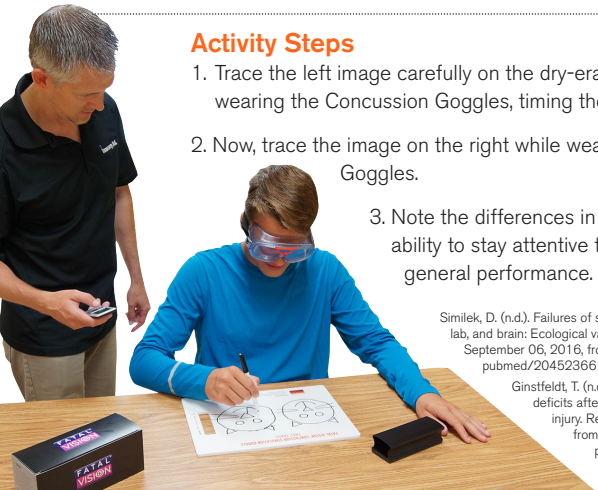
Walker, W. C., MD. (n.d.). Motor impairment after severe traumatic brain injury: A longitudinal multicenter study. Retrieved September 6, 2016, from http://www.rehab.research.va.gov/JOUR/07/44/7/pdf/walker.pdf

Study Activities
Face Trace

Activity Purpose
In this activity, our goal is to experience some of the impairment effects of a concussion on sustained attention, concentration as well as fine motor skills, and afterwards encourage further discussion regarding the potential severity of a concussion.

Modeled Symptoms of a TBI
Sustained attention is one of the most vulnerable cognitive functions affected due to a TBI. This can lead to problems encoding new information and accessing stored memories. Children may find it difficult to learn in the classroom or complete assignments on time.

Materials
- Fatal Vision® Concussion Goggles
- Set of erasable whiteboards, eraser, and black dry erase marker
- Timer



Activity Steps
1. Trace the left image carefully on the dry-erase board without wearing the Concussion Goggles, timing the attempt.
2. Now, trace the image on the right while wearing the Concussion Goggles.
3. Note the differences in accuracy, control, ability to stay attentive to the task, and general performance.

Similek, D. (n.d.). Failures of sustained attention in life, lab, and brain: Ecological validity of the SART. Retrieved September 06, 2016, from http://www.ncbi.nlm.nih.gov/pubmed/20452366

Ginstfeldt, T. (n.d.). An overview of attention deficits after paediatric traumatic brain injury. Retrieved September 06, 2016, from http://www.ncbi.nlm.nih.gov/pubmed/20715886

CONCUSSION

Please call 800-272-5023 if you have any questions about your kit or the activities included in your kit! We want to make your experience using our products as easy and productive as possible!