



# CONCUSSION

*Helping the Student Return  
to Learning*

Alan G. Kulberg, M.D.

Berkshire Medical Center Concussion Clinic  
[berkshirehealthsystems.org/concussion](http://berkshirehealthsystems.org/concussion)



If you have ever seen a student discussion, you have seen **EXACTLY ONE** concussion. **every concussion is unique.**

## Consider the following situations:

- A 12 yr. old with headache, fatigue after 6th period math
- A 16 yr. old returns to school appearing withdrawn after spending 2 weeks after a concussion in her dimly-lit bedroom with no mobile phone
- A 15 yr. old with first-time migraine symptoms
- A 10 yr. old with a headache after lunch
- A 17 yr. old with daily headaches, history of generalized anxiety, and improving grades says she is “not any better” 2 months post-injury
- A 13 yr. old who slipped on the ice has a bad headache upon awakening

# How a Concussion Can Affect a Student



Concussions may:

- cause pain
- impair learning
- cause chronic mood problems





# What are our Greatest Concerns?

## Second Impact Syndrome

- Students who sustain a concussion are at a higher risk for depression and anxiety symptoms.
- Experiencing a second concussion before signs and symptoms of a first concussion have resolved may result in rapid and usually fatal brain swelling.
- Symptoms such as pain, sleep impairment and substance abuse also contribute to suicidal thinking.

# Most Common Symptoms

- **Headache: throbbing, steady, or both**
- **Light and/or noise sensitivity**
- **Cognitive difficulties (concentration, fogginess, slowness, memory)**
- **Fatigue**
- **Dizziness (Cognitive vs. Vestibular type)**

# What Your Students Say...



“I got my bell rung”

“Dinged”

“I feel weird”



# Got a Concussion?



**The Student:**

**May not know**

**May not report**

**May lack insight**



**Physical**



- **Headache**
- **Photo / Phono- sensitivity**
- **Diplopia / Blurriness**
- **Gastrointestinal symptoms**
- **Fatigue**
- **Dizziness**

**Cognitive**



- **Memory problems**
- **Decreased attention**
- **Slowed processing**
- **Confusion**

**Emotional/Mood**

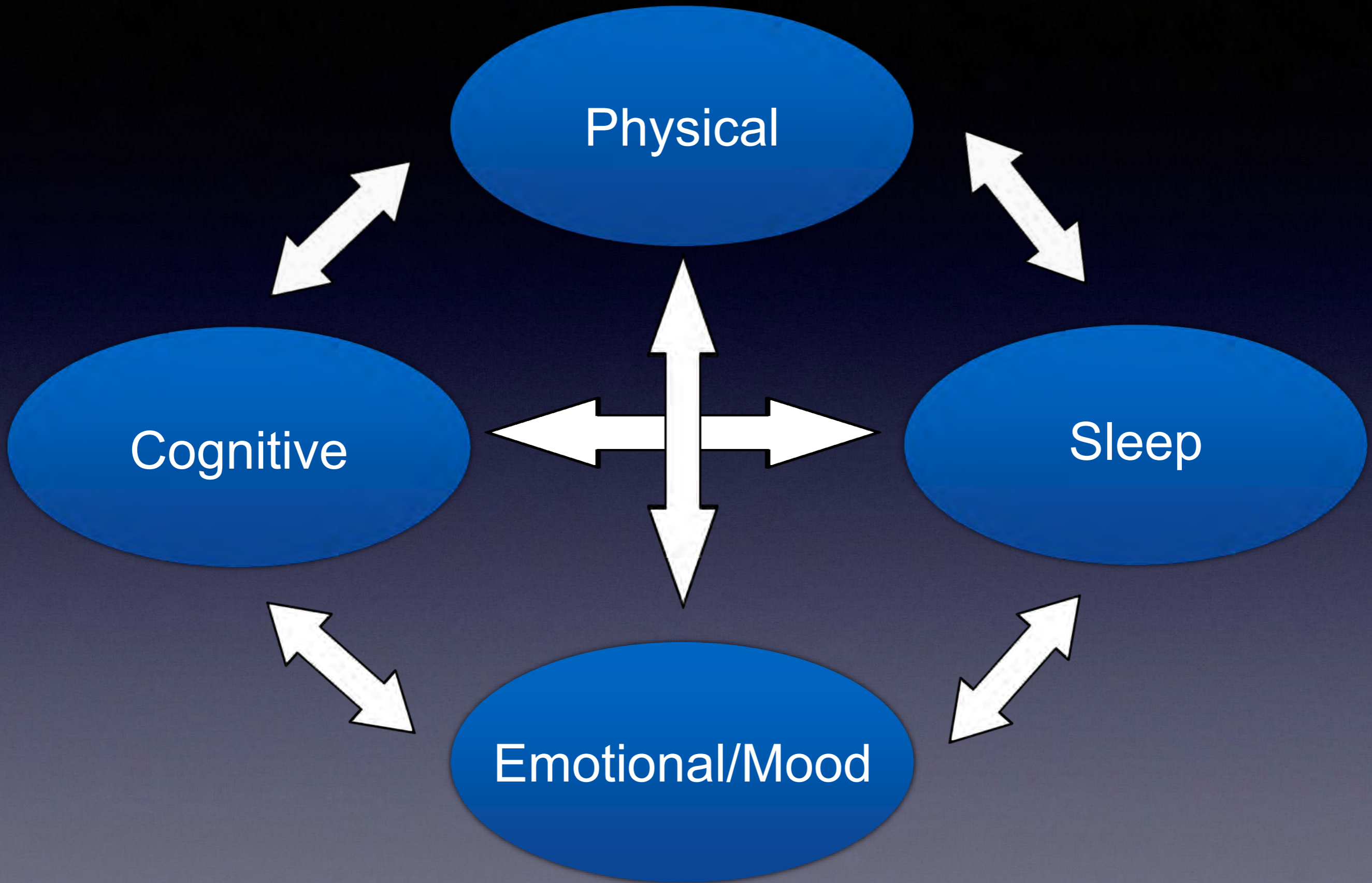


- **Sadness/depression**
- **Anxiety**
- **Irritability**
- **Emotionality**

**Sleep**



- **Increased sleep**
- **Decreased sleep**
- **Delayed sleep onset**



# Predictors of Complicated or Prolonged Recovery

- Migraine/post-traumatic migraine > simple headache
- Higher initial symptom score
- Recent concussion
- Level of cognitive activity
- “Cocooning”
- Pre-existing mood disturbance
- ADHD/Learning difficulties

# Why is determining **prognosis** important?

- Individualized management
- Opportunity for cognitive counseling
- Encourages adherence with therapies



# Barriers to Learning

## What a Student may Experience Returning to the Classroom Post-Concussion

- Changing perceptions and attitudes
- Working harder to no avail
- Feeling socially isolated
- Getting “special treatment”
- Feeling anxious re: make-up work
- Having a loss of identity: academic, social group, athletic
- Experiencing labile emotions and irritability
- Aggravating pre-existing mood issues



# How Neuropsychological Deficits Affect Classroom Function

## Attention/Concentration



Short focus on lectures, class work, homework

## Working Memory and Memory Retrieval



Holding instructions in mind as well as retaining and accessing new information

# How Neuropsychological Deficits Affect Classroom Function

## Processing speed



**Keeping pace, processing verbal information effectively, taking notes**

## Fatigue



**Decreased arousal/activation to engage basic attention, working memory**

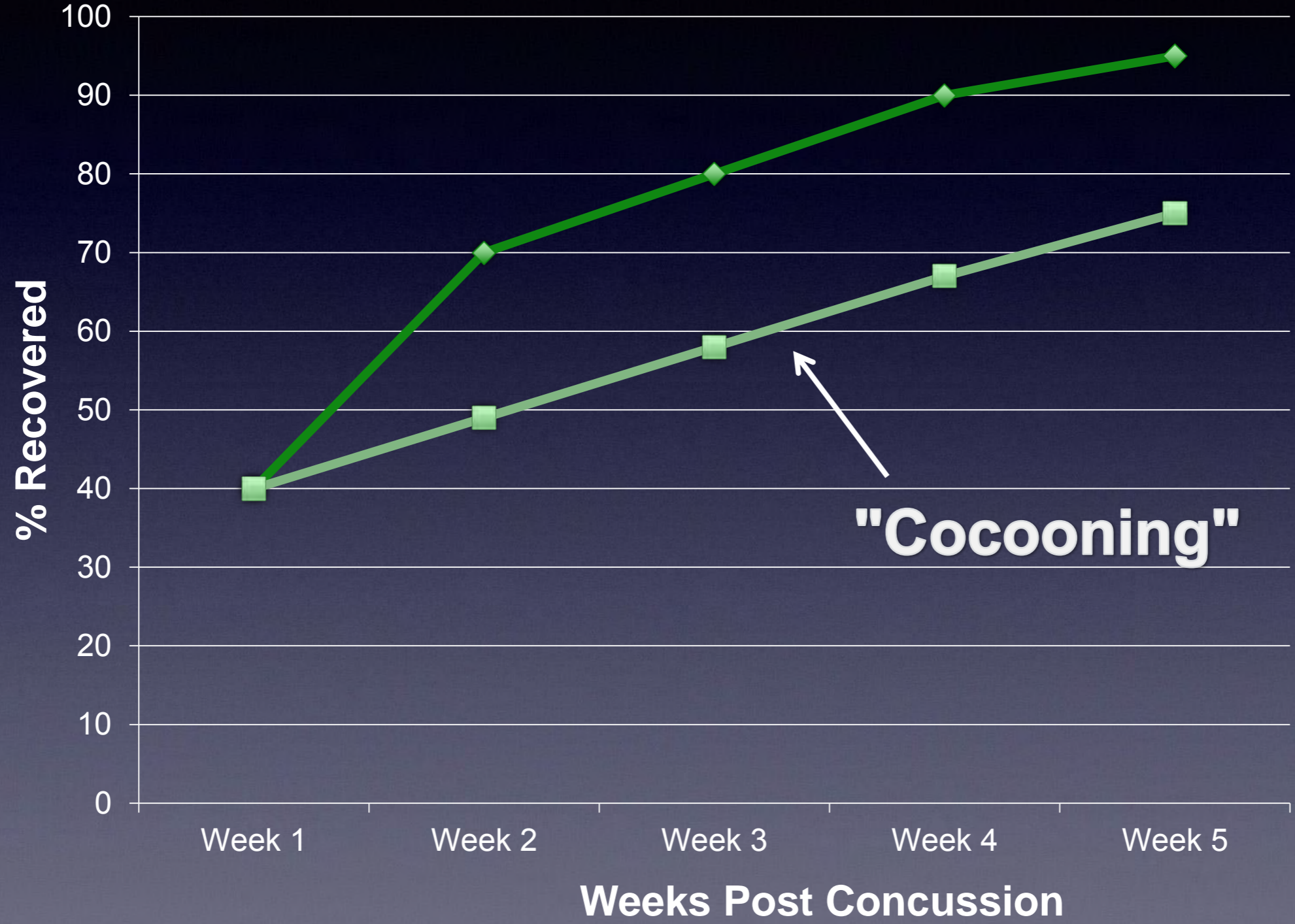
# What the Student Should Be Told



- Get good rest for first 24-48 hours...Don't cocoon!
- Gradually increase physical activity as tolerated
- Maintain regular sleep pattern
- Hydrate
- Try to avoid situations / stimuli that might cause the symptoms to escalate



# Recovery from Concussion





# “Return to Learn”

## Some Classroom Modifications for Physical Symptoms

Symptom	School Problem	Adjustment
Headache	Symptom provocation	Breaks, rest periods
Photosensitivity/ Visual difficulties	Reading and note-taking	Reduce screen brightness Wear hat or tinted glasses Seat near window may help Enlarge font
Phonosensitivity	Noisy areas (cafeteria, gym, hallways)	Lunch in quiet area Avoid band, shop, gym Early class dismissal

# Consider...



- Reducing cognitive demands (homework, extended deadlines)
- Emphasizing concepts vs memorization
- Quality vs quantity of learning
- Helping students plan strategic rest breaks ([School Nurse is essential link!](#))
- Exemptions / postponement / modification of work / alternate methods of assessing mastery

# About Those Kids...

- A 12 yr. old with headache, fatigue after 6th period math
- A 16 yr. old returns to school appearing withdrawn after spending 2 weeks after a concussion in her dimly-lit bedroom with no mobile phone
- A 15 yr. old with first-time migraine symptoms
- A 10 yr. old with a headache after lunch
- A 17 yr. old with daily headaches, history of generalized anxiety, and improving grades says she is “not any better” 2 months post-injury
- A 13 yr. old who slipped on the ice has a bad headache upon awakening



# CONCUSSION

*Helping the Student Return  
to Learning*

Alan G. Kulberg, M.D.

Berkshire Medical Center Concussion Clinic  
[berkshirehealthsystems.org/concussion](http://berkshirehealthsystems.org/concussion)