**Athlete presents with signs, symptoms or behaviors of a concussion.**

**Perform Concussion Evaluation**

Evaluation should include assessment for these RED FLAGS

- Headache that worsens
- Seizure
- Looks very drowsy or can't be awakened
- Repeated vomiting
- Slurred speech
- Can't recognize people or places
- Increasing confusion or irritability
- Weakness or numbness in arms or legs
- Unusual behavioral change
- Loss of consciousness > 30 seconds

Does the athlete exhibit any "Red Flags"?

- **Yes**
  - Neurosurgery Referral
  - Consideration should be made for EMS, ED or Advanced Imaging.

- **No**
  - Based on clinical judgment, has the athlete sustained a concussion?

- **Yes**
  - Did Imaging or Emergency Department find evidence of an Intracranial Bleed?

- **No**
  - Monitor and/or treat as clinically indicated

**Concussion Modifiers**

- Duration of symptoms
- Number of symptoms
- Severity of symptoms
- Prolonged LOC (>30 seconds)
- Presence of amnesia
- History of concussive convulsion
- Number of concussions
- Recent concussion
- History of two concussions in a short period of time
- Concussion caused by a lower threshold force
- Age (younger athlete takes longer to recover)
- History of migraine (personal or family)
- History of depression or other mental health disorder
- History of ADD/ADHD
- History of a learning disability
- History of a sleep disorder
- Psychoactive medication
- Dangerous style of play
- High-risk activity

1. Recommend modifications in both school and personal activities
   - Physical Rest (no running, biking, lifting, etc.)
   - Cognitive Rest (no school work, video games, etc.)

2. Hand out patient information form and continue to monitor signs and symptoms

**Follow-up Evaluation**

- 1. Progression back to daily life and school activities as symptoms improve
- 2. Monitor signs and symptoms as activities increase

**Continue to Monitor**

Failure to resolve after 3-4 weeks should warrant consideration for referral to a Specialty Care Center

**Begin Graduated "Return-to-Play" Protocol**

(There should be a minimum of 24 hours between stages; however the speed of progression should be based on clinical judgment with consideration of the presence of any of the Concussion Modifiers)

If return of signs or symptoms during the protocol, then re-evaluation is warranted and athlete must wait 24 hours and be free of “Signs and Symptoms at Rest” before returning to Stage 1 of protocol.

**Stage 1**

- Light Aerobic Exercise
  - (Exertion Level: HR range 100-140 / RPE range 3-4)

**Stage 2**

- Sport-Specific Exercise
  - (Exertion Level: HR range 120-160 / RPE range 4-6)

**Stage 3**

- Non-Contact Training Drills
  - (Exertion Level: HR range 140-180 / RPE range 6-8)

**Stage 4**

- Full Contact Practice
  - (Exertion Level: HR range 160-200 / RPE range 8-10)

**Has the athlete successfully completed all stages of the "Return-to-Play" protocol without return of symptoms?**

**RETURN TO PLAY**
Sports Concussion—Graduated “Return-to-Play” Protocol

(Guidelines for exercise progression from your Health Care Provider)

Complete rest from physical activity—until asymptomatic

If asymptomatic after ______ day(s)

Stage 1—Light Aerobic Exercise—walking, swimming, stationary cycling, etc.
Exertion Level: 30-40% of maximum exertion / HR range 100-140 / RPE range 3-4. Duration: 20 minutes

If asymptomatic after ______ day(s)

Stage 2—Sport-Specific Exercise—moderate running, skating, dribbling or weight training, etc.
Exertion Level: 40-60% of maximum exertion / HR range 120-160 / RPE range 4-6. Duration: 30 minutes

If asymptomatic after ______ day(s)

Stage 3—Non-Contact Training Drills—sprinting/running, full weight training, etc.
Exertion Level: 60-80% of maximum exertion / HR range 140-180 / RPE range 6-8. Duration: 30-60 minutes

If asymptomatic after ______ day(s)

Stage 4—Full Contact Practice—resume normal training activities.
Exertion Level: 80-100% of maximum exertion / HR range 160-200 / RPE range 8-10. Duration: full practice

If asymptomatic after ______ day(s)

CLEARED FOR RETURN-TO-PLAY.

Please note

• Each stage is to take at least 24 hours, but longer in recurrent or severe cases.

• Each stage should be completed without a return of concussive symptoms before proceeding to the next stage.

• If the athlete becomes symptomatic during the course of the protocol, he or she should be reevaluated by a health care provider for clearance before restarting the protocol. When the athlete restarts the protocol, he or she needs to begin again at stage 1.

• RPE is an abbreviation for Rating of Perceived Exertion. It should be measured on a scale from 1 to 10.
Sports Concussion
(Office-based instructions from your Health Care Provider)

You have been diagnosed with a concussion (also known as a mild traumatic brain injury). This personal plan is based on your symptoms and is designed to help speed your recovery. Your careful attention to these instructions can also prevent a worsening condition or further injury.

Rest is the key. It is very important to limit all physical activity. Particularly, you should not participate in any high-risk activities (e.g., sports, physical education (PE), skateboarding, riding a bike, etc.) if you still have any of the signs and symptoms below.

Common Signs & Symptoms
It is common for a concussed child or young adult to have one or many concussion signs or symptoms. Signs or symptoms present at time of evaluation are circled or checked.

<table>
<thead>
<tr>
<th>PHYSICAL</th>
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<th>SLEEP</th>
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<tbody>
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<td>Sensitivity to light</td>
<td>Feeling mentally foggy</td>
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</tr>
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<td>Nausea</td>
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<td>Balance problems</td>
<td>Dizziness</td>
<td></td>
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Red Flags
Call your doctor or go to your emergency department if you suddenly experience any of the following:

<table>
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<th>Headache that worsens</th>
<th>Feel very drowsy or can’t be awakened</th>
<th>Can’t recognize people or places</th>
<th>Unusual behavior change</th>
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<td>Seizure</td>
<td>Repeated vomiting</td>
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<td>Neck pain</td>
<td>Slurred speech</td>
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Returning to Daily Activities
- Get lots of rest. Be sure to get enough sleep at night—no late nights. Keep the same bedtime weekdays and weekends.
- Drink lots of fluids and eat carbohydrates and protein to maintain appropriate blood sugar levels and caloric intake.
- During recovery, it is normal to feel frustrated and sad when you do not feel right and you can’t be as active as usual.
- Repeated evaluation of your signs and symptoms is recommended to help guide recovery.

Physical Exertion [check all that apply]
- No physical exertion/athletics/gym class
- Begin return-to-play protocol as indicated below
  - Low levels of physical activity (only if symptoms do not come back during or after the activity). This includes walking, light jogging, light stationary biking, and light weight lifting. (lower weight, higher reps, no bench, and no squat)
  - Moderate levels of physical activity with some non-rapid body/head movement. This includes moderate jogging, brief running, moderate-intensity stationary biking, moderate-intensity weightlifting. (reduced time and/or reduced weight from your typical routine)
  - Heavy, non-contact physical activity. This includes sprinting/running, high-intensity stationary biking, regular weightlifting routine, non-contact sport-specific drills (in 3 planes of movement)
    - Full contact in controlled practice
    - Full contact in game play

Brain Exertion [check all that apply]
- No school, homework, or other after school academic activities
- No reading or texting
- No driving
- No computer time or video games
- Limit television time
- Avoid loud noise and bright lights
- Allow listening to low-volume music (i.e., iPod, book on tape, etc.)
- Allow light reading for _____ minutes at a time, for a total of _____ minutes per day
- Allow homework for _____ minutes at a time, for a total of _____ minutes per day
- Allow computer work for _____ minutes at a time, for a total of _____ minutes per day
- Allow texting for _____ minutes at a time, for a total of _____ minutes per day
Accommodations for Students
(Instructions from the Health Care Provider)

Patient Name: ____________________________________________

Date of Evaluation: __________________

Restrictions should be applied from ___/___/___ until ___/___/___

This patient had been diagnosed with a concussion and is currently under our care. It is recommended that the below accommodations be implemented to avoid increasing concussion symptoms and delaying recovery.

Physical Exertion [check all that apply]

- [ ] No physical exertion/athletics/gym class
- [ ] Begin return to play protocol as indicated below
  - [ ] Low levels of physical activity (only if symptoms do not come back during or after the activity). This includes walking, light jogging, light stationary biking, and light weight lifting (lower weight, higher reps, no bench, and no squat)
  - [ ] Moderate levels of physical activity with some non-rapid body/head movement. This includes moderate jogging, brief running, moderate-intensity stationary biking, moderate-intensity weight lifting (reduced time and/or reduced weight from your typical routine)
  - [ ] Heavy, non-contact physical activity. This includes sprinting/running, high-intensity stationary biking, regular weight lifting routine, non-contact sport-specific drills (in 3 planes of movement)
  - [ ] Full contact in controlled practice
  - [ ] Full contact in game play

Brain Exertion [check all that apply]

- [ ] No school, homework, or other after-school academic activities
- [ ] No reading or texting
- [ ] No computer time or video games
- [ ] Limit television time
- [ ] Avoid loud noise and bright lights
- [ ] Allow listening to low-volume music (i.e. iPod, book on tape)
- [ ] Allow light reading for _____ minutes at a time, for a total of _____ minutes per day
- [ ] Allow homework for _____ minutes at a time, for a total of _____ minutes per day
- [ ] Allow computer work for _____ minutes at a time, for a total of _____ minutes per day
- [ ] Allow texting for _____ minutes at a time, for a total of _____ minutes per day

Academic Accommodations (check all that apply)

Attendance

- [ ] No school for _____ day(s)
- [ ] Part time attendance for _____ day(s), as tolerated
- [ ] Full school days, only as tolerated
- [ ] Tutoring homebound/in school, as tolerated
- [ ] No school until symptom free or significant decrease in symptoms
- [ ] Initiate homebound education

Visual Stimulus

- [ ] Allow student to wear sunglasses in school (including in class)
- [ ] Permit pre-printed notes for class material or note taker
- [ ] Limit smart boards, projectors, computers, TV screens or other bright screens
- [ ] Enlarge font when possible
- [ ] Allow student to sit near the front of the classroom

Workload/Multi-tasking

- [ ] Reduce overall amount of make-up work, class work and homework when possible
- [ ] No homework
- [ ] Limit homework to _____ minutes a night
- [ ] Prorate workload when possible
- [ ] Limit backpack weight
- [ ] Limit stair use

Breaks

- [ ] Allow student to go to the nurse's office, if symptoms increase
- [ ] Allow student to go home, if symptoms do not subside

Audible Stimulus

- [ ] Allow student to leave class 5 minutes early to avoid noisy hallways
- [ ] Provide opportunity to have lunch in a quiet place
- [ ] Use audible learning (discussions, reading out loud, or if possible, text-to-speech programs or Kindle)

Testing

- [ ] No testing
- [ ] Extra time to complete tests
- [ ] No more than one test a day
- [ ] Oral testing only
- [ ] Open book testing
- [ ] Testing in a quiet environment

Work Restrictions

- [ ] No work at this time
- [ ] Limit work to _____ hours per day

Additional Instructions:

__________________________________________________________

__________________________________________________________

__________________________________________________________

__________________________________________________________

Provider Signature: ______________________________________
Sports Concussion
(Sideline instructions from your Health Care Provider)

Athlete Name: ___________________________ DOB: _______________ Date: _______________ Date of Injury: _______________

When To Seek Care Urgently
Seek care quickly if symptoms worsen or if there are any behavioral changes. Also watch for any of the following serious signs/symptoms, which may not appear immediately following the trauma, but can develop hours after the injury itself.

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Common Signs & Symptoms
It is common for a concussed child or young adult to have one or many concussion signs or symptoms. Signs or symptoms present at time of evaluation are circled or checked.

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It is okay to: There is no need to: Do not:
- Use acetaminophen (Tylenol) for headaches
- Check eyes with flashlight
- Drink alcohol
- Use ice pack on head and neck as needed for comfort
- Test reflexes
- Take sleeping pills or sleeping aids
- Eat a light diet
- Stay in bed
- Take products that contain ibuprofen (Advil, Motrin)
- Go to sleep
- Wake up every hour
- Take products that contain aspirin or naproxen (Aleve)
- Rest
- Drive until medically cleared

Returning to Daily Activities
- Limit activities that require thinking or concentration (e.g., homework, job-related activity) as much as possible. These activities can make symptoms worse.
  1. Limit screen time (television and computer) as much as possible. Especially in the early stages of healing, a good rule of thumb is no screen time.
  2. Avoid reading, video games and text messaging as much as possible.
  3. Limit extra-curricular activities.
  4. Avoid loud noise and bright lights.
  5. As symptoms decrease, encourage frequent study breaks to avoid provoking symptoms (for example, studying for 15 minutes, then resting for 10-15 minutes, etc.)
- No physical activities until cleared by a medical professional. Physical activity includes PE, sports practices, weight training, running, exercising, heavy lifting, etc.
- Get lots of rest. Be sure to get enough sleep at night - no late nights. Keep the same bedtime weekdays and weekends.
- Take rest breaks when you feel tired or fatigued.
- Drink lots of fluids and eat carbohydrates and protein to maintain appropriate blood sugar levels and caloric intake.
- Under provider supervision, and as symptoms decrease, you may gradually return to your daily life activities. If symptoms worsen or return, lessen your activities, and follow-up with your health care provider.
- During recovery, it is normal to feel frustrated and sad when you do not feel right and you can’t be as active as usual.
- Repeated evaluation of your signs and symptoms is recommended to help guide recovery.

Comments: _____________________________________________
________________________________________________________
________________________________________________________

Do not return to sports/vigorous physical activity until all your symptoms have completely cleared and you have been cleared by a medical professional.

Recommendations provided to: _____________________________
Relationship: _____________________________________________
Date: ____________________________________________________

Health Care Provider Name & Contact Information: __________
_________________________________________________________

Please feel free to contact me if you have any questions. I may be reached at: __________________________________________