WHAT IS A CONCUSSION?
A concussion is a type of traumatic brain injury that changes the way the brain normally works. Children and adolescents are among those at greatest risk for concussion. Proper recognition and response to concussion can prevent further injury and help with recovery. All concussions are serious and affect people differently.

SIGNS AND SYMPTOMS
The signs and symptoms of concussion can show up immediately after an injury or they may not appear or be noticed until hours or days later. These can include:
- Headache
- Nausea, vomiting
- Balance problems, dizziness
- Light/sound sensitivity
- Feeling sluggish
- Concentration or memory problems

As a parent you may notice your child appears dazed, confused about tasks, forgets instructions, moves clumsily, answers questions slowly or shows mood or personality changes. With time and proper management these should improve.

RECOVERY
Most people with a concussion recover quickly and fully. Usually 80 percent recover fully in four weeks with proper management. During recovery, people often have a range of symptoms. Some symptoms may appear right away, while others may not be noticed until trying to perform usual activities.

Ignoring the symptoms and trying to “tough it out” often makes symptoms worse. Be patient because healing takes time. If symptoms come back or new ones arise as your child becomes more active, that is a sign of pushing too hard. Stop and have your child take more time to rest and recover. As the days go by, you can expect your child to gradually feel better.

WELLNESS AFTER CONCUSSION

NUTRITION: Excellent nutrition can improve performance and reduce injuries. Focus on small, frequent meals/snacks with complex carbohydrates and protein. Limit processed foods, saturated fat and sodium. Do not skip meals. The brain needs fuel to heal from the injury.

HYDRATION: Adequate hydration prevents headaches. Drink enough fluid, preferably water, to stay hydrated. Younger children need less and older children need more. Fluid intake should be increased when active or outdoors. Avoid caffeine as this causes dehydration and over-stimulates the brain cells.

VITAMINS/SUPPLEMENTS: Certain vitamins may be recommended based on your child’s individual needs.

SLEEP: Sleep is critical to performance and well-being. Adequate sleep can prevent headaches, reduce drowsiness and improve your mood. Sleep requirements are age-dependent – younger children need more and older children need less. Limit daytime naps to 30 minutes to allow for full rest overnight. Establish a bedtime routine with consistent bed time and wake time and limit screen use before bed.
**DAILY ACTIVITIES**
It is important to rest the brain (cognitive rest) and the body (physical rest) for a few days, and then begin to gradually return to daily activities as tolerated. If symptoms worsen or return, lessen your child’s activities, then try again to increase gradually. Your provider will help guide you and your child during the return.

**SCHOOL**
Concussion may impact on a child’s cognitive ability to learn at school. It is reasonable for a child to miss 2–5 days of school after a concussion, but extended absence is uncommon. In some children, a graduated return-to-school program will need to be developed. If any particular activity worsens symptoms, the child should abstain from that activity until it no longer causes symptom worsening. A letter for the school specific to your child’s needs should be created by a health care provider.

**SPORTS**
There should be no return to play until the child has successfully returned to school without worsening symptoms. Children must not be returned to play the same day of injury. The child will follow the gradual Return to Play protocol. Allow about 24 hours (or longer) for each stage and the child should drop back to the previous level if any post-concussive symptoms reoccur. Medical clearance will be provided when able to follow the Return to Play protocol.

**RETURN TO PLAY PROTOCOL:**

<table>
<thead>
<tr>
<th>STEP</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>No activity</td>
</tr>
<tr>
<td>2</td>
<td>Light activity</td>
</tr>
<tr>
<td>3</td>
<td>Moderate activity</td>
</tr>
<tr>
<td>4</td>
<td>Non-contact drills</td>
</tr>
<tr>
<td>5</td>
<td>Full practice</td>
</tr>
<tr>
<td>6</td>
<td>Resume game play</td>
</tr>
</tbody>
</table>

**HEADACHES**
It is normal to have headaches after a concussion. Headaches are the most commonly reported symptom. For mild headaches, we recommend to “let them be” to prevent frequent usage of pain medications that can make the pain worse. Have your child take a break, drink water and know that it will get better. For headaches that are more severe, administer an age/weight appropriate dose of Tylenol or ibuprofen. Do not use pain medication to prevent a headache. Avoid cognitive fatigue headaches by decreasing stimulation throughout the day, which can tire the brain and cause headaches.

**REDUCING CONCUSSION RISK**
1. Follow the rules of the sport.
2. Practice good sportsmanship.
3. Minimize unnecessary aggression.
4. Wear proper protective gear. Wearing a helmet is a must to reduce the risk of serious brain injury or skull fracture. Be aware that there is no “concussion proof” helmet.
5. Follow the gradual Return to Play protocol when cleared.

“It is better to miss one game than the whole season. *When in doubt, get checked out.*”