

## INOVA CONCUSSION PROGRAM

Pediatric Concussion Information and Plan Until Consultation with a Concussion Specialist or Primary Care Physician

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### WHAT IS A CONCUSSION?

Concussion is a process that affects the brain following direct or indirect forces to the head. The disturbance of normal brain function is related to dysfunction of brain metabolism rather than a structural brain injury (i.e., bruising, swelling). This disturbance is typically associated with normal imaging findings, which is one of the reasons CT scans are not always necessary as they do not reveal concussions.

### WHAT TO EXPECT AFTER CONCUSSION?

Concussion results in physical, cognitive, emotional and sleep symptoms. Typically, symptoms last 1-4 weeks though in some cases symptoms may be prolonged. Symptoms may be further exacerbated or provoked upon engaging in cognitive, physical or social activities. The symptoms should improve as they engage further in the activity during subsequent exposures. Symptoms generally improve in severity and frequency over time, especially after the initial 72 hours. Your child may experience mild symptoms and must work through them.

### COMMON SYMPTOMS

#### Physical

Headache  
Nausea/Vomiting  
Fatigue  
Dizziness  
Balance Problems  
Sensitivity to Light/Noise

#### Cognitive

Feeling "Foggy"  
Feeling Slowed Down  
Difficulty Remembering  
Difficulty Concentrating  
Visual Problems

#### Emotional

Irritability  
Anxious  
Feeling More Emotional  
Sadness  
Nervousness  
Rumination

#### Sleep

Sleeping More  
Sleeping Less  
Drowsiness  
Trouble Falling Asleep

### WHEN TO SEEK EMERGENCY MEDICAL CARE

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| <ul style="list-style-type: none"> <li>• Persistent or Worsening Headache</li> <li>• Seizures/Loss of Consciousness (LOC)</li> <li>• Neck Pain</li> <li>• Weakness/Numbness in Extremities</li> </ul> | <ul style="list-style-type: none"> <li>• Very Drowsy</li> <li>• Repeated Vomiting</li> <li>• Strange or Unusual Behavior</li> <li>• Significant Irritability</li> </ul> | <ul style="list-style-type: none"> <li>• Increasing Confusion or Irritability</li> <li>• Not Recognizing Familiar People/Places</li> <li>• Slurred Speech</li> <li>• Less Responsive than Usual</li> </ul> |
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### HOME MANAGEMENT TECHNIQUES FOLLOWING CONCUSSION

After the initial 24–48-hour period, it is recommended that your child begin to increase their activity. **Rest is no longer recommended as a treatment method for concussion after the initial 24-48 hours.** You will read and hear many mixed messages as far as concussion, but the guidance has changed significantly over time. Much of the information on the internet is outdated. **Continuing to rest for extended periods of time beyond the initial 24-48 hours can lead to increased symptoms and prolonged recovery.** It is also advised that patients limit over-the-counter medications to 2 to 3 doses per week after the first 72 hours to avoid the risk of overuse headaches. Until your child's appointment with our concussion specialists or primary care physician, your child should avoid activities that could pose risk for head injury. Focus on completing daily visual (e.g., reading a book, using the computer), social (e.g., going to a restaurant), and physical (e.g., walk) activities starting with short durations and progressing as tolerated. It is also recommended to keep a regulated schedule as far as:

**DIET:** Eating breakfast, lunch, and dinner each day is important even if three meals were not typically eaten before the injury.

**HYDRATION:** It is important to stay very well hydrated.



**SLEEP:** Stick to a strict sleep schedule, with regular bedtime/wake-up times and nap schedule (only if took naps prior to injury) after the first 24-48 hours.

**PHYSICAL ACTIVITY:** It is beneficial to take walks and/or engage in light non-contact physical activities, following the injury. Children can resume normal play but avoid any high-risk activity such as bike riding, high playground equipment or contact sports. Once you are seen by our team of concussion specialists or primary care physician, additional recommendation will be discussed.

**STRESS:** Try to reduce additional stress, nervousness, and anxiety by limiting focus on the injury and symptoms. Staying in a dark room or being overly withdrawn should also be avoided.

#### **EXPOSE-RECOVER METHOD**

After a concussion we recommend following the “Expose-Recover Method” when returning to physical, social and cognitive activities. It is acceptable to expose your child to normal, non-risk activities (i.e., those where the potential for contact or another head injury is low) when symptoms are rated between 0-4/10 severity levels. If symptoms increase to 5/10 severity or greater during activity, we recommend stopping activity and recovering with a stimulus break (i.e., time out) for approximately 10-15 minutes. This pattern of exposure and recovery should be utilized throughout the day. Activities should be limited until evaluated if greater than 5/10 severity symptoms are frequently being experienced and cannot be reduced with the stimulus breaks.

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#### **TO SCHEDULE:**

Call to schedule an appointment with the Inova Concussion Program for an evaluation with our multidisciplinary team specializing in concussion management. We generally recommend that patients wait until after the initial 72 hours to be seen, allowing time for the immediate symptom burden to decrease, so the best individualized treatment plan can be developed.

#### **FOR INJURIES THAT OCCURRED 4 MONTHS AGO OR LESS, PLEASE CALL:**

##### **Inova Concussion Clinic**

Inova Mount Vernon Hospital  
2501 Parkers Lane  
Alexandria, VA 22306  
703-664-7190

Inova Loudoun Hospital  
44035 Riverside Pkwy, #500C  
Leesburg, VA 20176  
703-858-6699

##### **Inova Sports Medicine Concussion Program**

Fairfax Location  
8100 Innovation Park Drive, Suite 110  
Fairfax, VA 22031  
703-970-6427

Sterling Location  
46000 Center Oak Pl, Ste 260  
Sterling, VA 20166  
703-970-6427

##### **Fairfax Family Practice Comprehensive Concussion Center**

3650 Joseph Siewick Drive, #400  
Fairfax, VA 22033  
703-391-2020

If your injury occurred 5 or more months ago and you have not been seen by a neurologist, please call PSV Neurology first and then it will be determined if care in one of our Concussion Program Locations is also appropriate: (703)876-2788

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