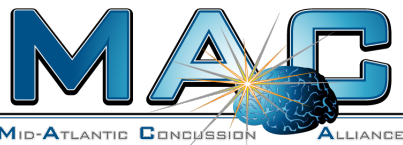
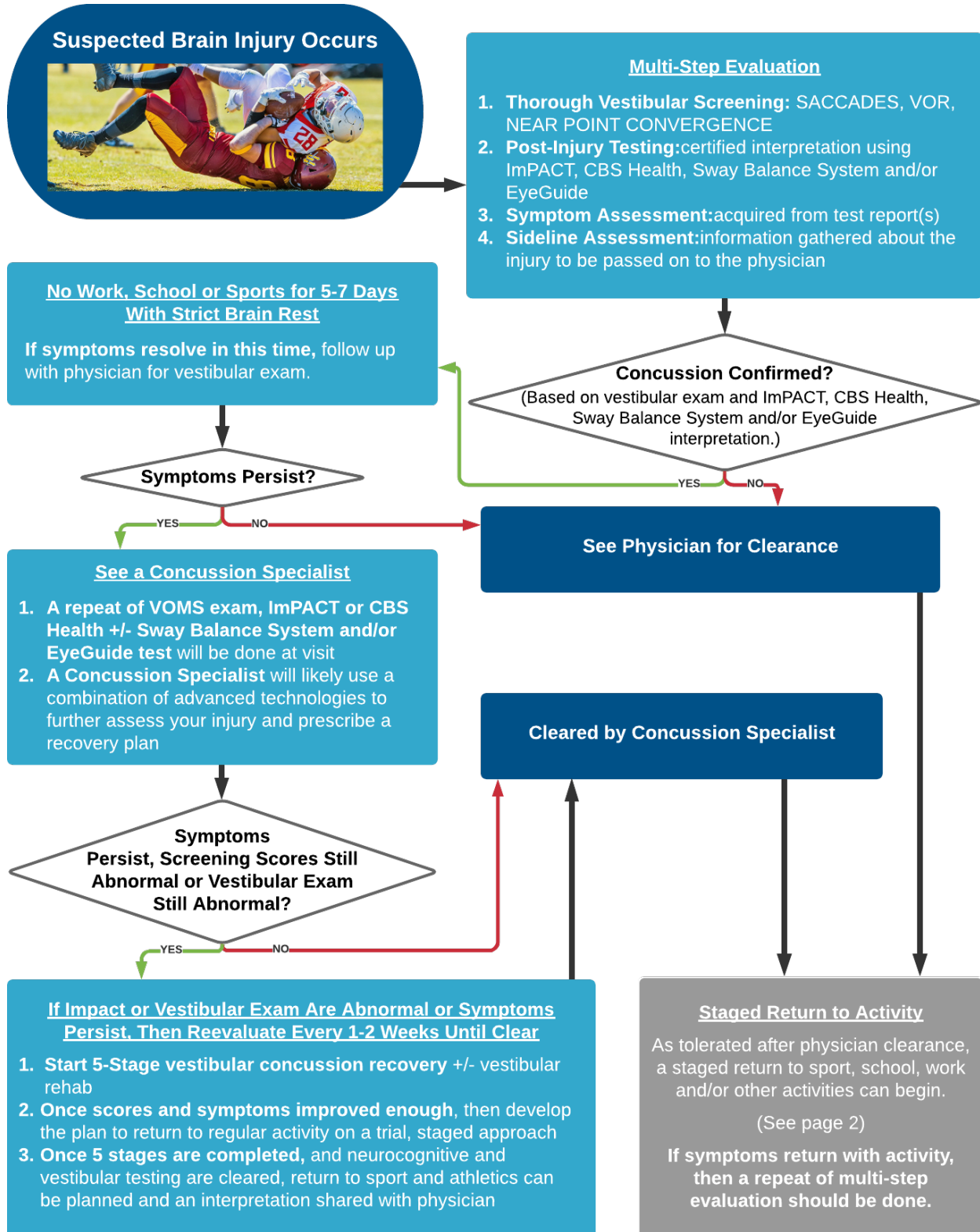


# MID-ATLANTIC CONCUSSION ALLIANCE CONCUSSION PROTOCOL



DIAGNOSIS & IMMEDIATE POST-INJURY  
TREATMENT STAGES

The MAC Alliance concussion protocol program is modeled after the “Five Stage UPMC Concussion Program” developed by University of Pittsburgh Medical Center, the CDC and other leading traumatic brain injury (TBI) programs. These guidelines for diagnosis and treatment of concussions also aim to help maintain strength and cardiovascular activity during recovery. The steps can also help improve balance and clear up vestibular deficits while promoting physical activity.



# MID-ATLANTIC CONCUSSION ALLIANCE CONCUSSION PROTOCOL

## Academic / Professional Recovery

### Total Brain Rest Protocol: No School, No Work

1. **No:** reading, computer, texting, travel, or crowded events
2. **Limited:** phone use, TV or large screen time
3. **Daily:** easy walks, lots of fluids / sports drinks

Improved / Diminished Symptoms?

### Evaluate Weekly by a Medical Professional

1. **One or more of the following exams:** ImPACT, CBS Health, Sway Balance System, BrainScope, RightEye, EyeGuide
2. **Vestibular screening**
3. **Discuss symptoms and next steps**

Improved / Diminished Symptoms?

### Advance to Slow Reintroduction to School / Work

- **School:** Audit classes only, no testing, homework optional, can start with half days, OK to go to nurse for headaches; No gym, no sports, no band
- **Work:** Start back with limited schedule; work from home to avoid commute: start with half days, half shifts, reduced hours or every other day; limit computer work or reading time
- **Recheck every 1-2 weeks with screenings**

Improved / Diminished Symptoms?

### Advance to Intermediate Activity Levels

- **School:** 1 test per day, extended schoolwork time, then advance computer and reading time
- **Work:** Add commute, then increase hours and days, then increase computer and reading time

Improved / Diminished Symptoms?

### Cleared by Concussion Specialist Once:

1. Tolerates full activities levels (per PT report for sports)
2. Completes 5-stage and vestibular rehab
3. Vestibular exam in office has been cleared
4. Cognitive testing has returned to normal.

## Athletic / Sports Recovery

### Physician Writes RX for Vestibular Therapy

- Starts within 2-3 days. No need to wait for symptoms to improve or resolve. Patient will get symptomatic (headaches, dizzy, fatigue) with vestibular therapy
- Includes **5-Stage Concussion Physical Recovery Program** weaved in with vestibular challenges and balance training

**STAGE 1:** Very light aerobic activities (smooth cardio: elliptical, stationary bike, etc.), ROM, stretch, heart rate = 30-40% exertion, low-level balance activities

Symptoms after Completing PT Session?

**STAGE 2:** Light-to-moderate aerobic activities (still smooth cardio), light weights, heart rate = 40-60% exertion, moderate balance activities

Symptoms after Completing PT Session?

**STAGE 3:** Moderate-to-aggressive aerobic activities, free weights, heart rate = 60-80% exertion, dynamic balance activities, jogging or other light impact cardio

Symptoms after Completing PT Session?

**STAGE 4:** Aggressive strength exercise, impact activities, heart rate = 80%, sport-specific training / drills

Symptoms after Completing PT Session?

**STAGE 5:** Resume full physical training activities with contact, heart rate = 100%, running on treadmill without neurological symptoms (dizziness, headache, nausea, etc.)

Symptoms after Completing PT Session?

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