Pediatric Concussion: Return To Learn

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At Risk Populations for Prolonged Recovery

Young children

History or family history of migraines

History of depression or anxiety

Learning disabilities

Attention Deficit Hyperactivity Disorder

Previous concussions

Return to Learn

Individualized
Age/Grade
Premorbid issues

Not on the same day as injury

Cognitive rest

Aware of the accommodations to support the student's re-entry to school

- school nurses
- teachers
- administrators
- guidance counselors

Rest - ?

How to Define Symptom Free?

How to define rest and not over-recommend

Physical Rest

Cognitive Rest

Not all or none
Complete inactivity or over-exertion – neither good

Need to consider the child, context, expectations

Generally should be symptom dictated

Accommodations for post-concussion effects affecting school

Post-concussion Effect	Functional School Problem	Accommodation/Management Strategy
Neuropsychological deficits		
Attention/concentration	Short focus on lecture, classwork, homework	Shorter assignments, break down tasks, lighter work load
Working memory	Holding instructions in mind, reading comprehension, mathematics calculation, writing	Repetition, written instructions, use of calculator, shorter reading passages
Memory consolidation/retrieval	Retaining new information, accessing learned information when needed	Smaller chunks to learn, recognition cues
Processing speed	Keep pace with work demand, process verbal information effectively	Extended time, slow down verbal information, comprehension checking
Fatigue	Decreased arousal/activation to engage basic attention, working memory	Rest breaks during classes, homework, and examinations

Maegan D. Sady, PhD, Christopher G. Vaughan, PsyD, Gerard A. Gioia, PhD
School and the Concussed Youth: Recommendations for Concussion Education and Management
Physical Medicine and Rehabilitation Clinics of North America, Volume 22, Issue 4, November 2011, Pages 701–719

Accommodations for post-concussion effects affecting school, cont'd

Post-concussion Effect	Functional School Problem	Accommodation/Management Strategy
Physical Symptoms		
Headaches	Interferes with concentration	Rest breaks
Light/noise sensitivity	Symptoms worsen in bright or loud environments	Wear sunglasses outside, seating away from bright sunlight or other light. Avoid noisy/crowded environments such as lunchroom, assemblies, and hallways
Dizziness/balance problems	Unsteadiness when walking	Elevator pass, class transition before bell
Sleep disturbance	Decreased arousal, shifted sleep schedule	Later start time, shortened day

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Accommodations for post-concussion effects affecting school, cont'd

Post-concussion Effect	Functional School Problem	Accommodation/Management Strategy
Psychological		
Anxiety	Can interfere with concentration, student may push through symptoms to prevent falling behind	Reassurance from teachers and team about accommodations, workload reduction, alternate forms of testing
Depression/withdrawal	Withdrawal from school or friends because of stigma or activity restrictions	Time built in for socialization
Symptom sensitivity	Symptoms worsen with overactivity, resulting in any of the earlier-mentioned problems	Reduce cognitive or physical demands below symptom threshold, provide rest breaks, complete work in small increments until symptom threshold increases

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Team Members

Academic

- School Nurse
- Teacher
- Guidance Counselor
- School Psychologist
- PE Teacher
- Coach
- Student/Athlete
- Parents/Family

Medical Team

Physician

Neuropsychologist

Physical Therapist

Occupational Therapist

Athletic Trainer

How to Interact with Parents

Need balanced approach

Symptom presentation and immediate needs – need to take seriously

Expectation of resiliency and recovery

Premorbid issues need to be considered but do not negate new exacerbations

As always parents are key members of the team

Managing anxiety

Clear, consistent, and coordinated communication

Initial Course

Medical assessment and initial clearance

Rest and educate child and family regarding expectations

Return to school dependent on many factors:
Age/Grade expectation
Time of year
Ability of school to make accommodations if necessary

Initial Course cont'd

Should expect resolution of symptoms within days or weeks

Balance watchful assessment with family anxiety and inadvertent over-focus on role as patient

Need to assess and consider pre-injury context and history (past concussion, prior or concurrent learning or emotional issues)

Prior history of difficulties do not negate possible new difficulties/exacerbation

Return to Learn

Guideline for recovery – Need individualization

Cognitive rest is required until child has been "symptom-free for 24 hours". Monitor for symptoms

Light cognitive activity – depending on age, grade, many factors. Child may do activities that do not cause symptoms to reoccur. Start and monitor short periods of time and activity. Balance fun activities that are motivating as well as light work. Stop the activity if symptoms develop. Gradual increase and continued education regarding expectations that symptoms will lessen. Encourage breaks as needed and assess relief of symptoms.

Return to Learn – cont'd

Guideline for recovery – Need individualization

Increase school-specific activity gradually as tolerated and then work up to longer time periods.

Assess length of time child is able to work symptom free and as possible shift this time to school – i.e.: late arrival, early dismissal, "auditing" a course….

Educate child and school regarding need for rest.
Parameters for resting in nurses office; working in quiet spot as preferable to going home unless symptoms are not alleviated.

Increase time in school as tolerated.

School Re-entry

Educate the educators

Balance resilience, positive expectations with appropriate accommodations

Set-up safety mechanisms to promote success – i.e.: nurses office to rest, previewing work…

Depending on school can be implemented informally or 504 plan

If symptoms persist and/or exacerbate pre-morbid issues may need more comprehensive assessment and plan

Individuals with Disabilities Education Act

All children with disabilities receive a free appropriate public education (FAPE)

A school district must provide special education and related services (PT, OT, Speech, Special Education, Counseling, Health paraprofessional) at no cost to the child or his/her parents.

Only required to provide what's appropriate – not optimal or best

Classification

Section 504 of the American with Disabilities Act requires recipients to provide to students with disabilities appropriate educational services designed to meet the individual needs of such students to the same extent as the needs of students without disabilities are met. A 504 Accommodation does not require an IEP, but simply provides for classroom modifications and/or related services

IEP Classification

Autism

Deafness

Deaf/Blindness

Emotional Disturbance

Hearing Impairment

Learning Disability

Mental Retardation

Multiple Disabilities

Orthopedic Impairment

Other Health Impairment

Speech or Language Impairment

Traumatic Brain Injury

Visual Impairment including Blindness

*Can have very different implications for services and placement

Summary

- Team approach to include child, family and school
- Balance rest and monitoring of symptoms with conveying expectation for recovery
- Be aware of physical, cognitive, learning and emotional issues
- Develop and actively monitor plan