Here are the facts...

1.) Concussions happen in sports
3.) Good News: Recovery is very favorable

70% of students with a concussion between the ages of 5 to 18 years will resolve their concussion in 4 weeks (Zemek, et al. 2016).

Staying home and "resting more" does not make a student with a concussion recover faster. Resting for 1 to 2 days followed by a gradual re-introduction of activity (school, social) showed a faster recovery (Thomas et al. 2015).

Bad News: Recovery takes time... typically up to 4 weeks
Students will feel well enough to be back at school (not "symptom-free" but well enough) within days, perhaps between the 1st and 2nd weeks. However, they will not feel 100% yet - they will still feel fatigued, dizzy, headache-y, trouble remembering/concentrating. They will be at school (good!) but they will be struggling in general education classrooms and will need help!
4.) Bad News: Symptoms suck

A concussion IS a brain injury. It impacts the functioning of the cells in the brain - that is why a concussion does not show up on an MRI or CT scan. If there has been a jolt to the head and evidence of a symptom, then a concussion is usually the diagnosis.

<table>
<thead>
<tr>
<th>Physical</th>
<th>Cognitive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headache</td>
<td>Trouble remembering</td>
</tr>
<tr>
<td>Dizziness/Nauseated</td>
<td>Trouble concentrating</td>
</tr>
<tr>
<td>Light sensitivity</td>
<td>Easily distracted</td>
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<tr>
<td>Noise sensitivity</td>
<td>Mentally Foggy</td>
</tr>
<tr>
<td>Blurry vision</td>
<td>Processing slower</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Emotional</th>
<th>Sleep/Energy</th>
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</thead>
<tbody>
<tr>
<td>More irritable</td>
<td>Fatigued</td>
</tr>
<tr>
<td>More sad</td>
<td>Drowsy</td>
</tr>
<tr>
<td>More anxious</td>
<td>Trouble sleeping</td>
</tr>
<tr>
<td></td>
<td>Sleeping too much</td>
</tr>
</tbody>
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Good News: However, symptoms generally get progressively better within days to weeks (up to 4 weeks) without long-term effects.

So what do these facts tell us about how to support RTP and RTL?

Medical Team: Rehabilitation of the Processing Dysfunction

- Oculomotor – eyes
- Limited computer screens/reading
- Large print
- Teacher/buddy notes
- Tinted overlays
- Preferential seating
- Audio books
- Corrective lenses

- Vestibular – ears/balance
- Auditory Processing
- Preferential seating
- Passing in halls early or late
- Extra time for locker
- Elevator key
- Headphones/ear buds

School Team/Physical:

- Support and management of the symptoms
- Support and progress-monitoring of the symptoms
- Modeling, teaching patience and time
- Above all else, keeping athlete safe from further hits to the head

Medical Team: Rehabilitation of the Processing Dysfunction

- Cervical Strain – increases headaches
- Second set of books
- Extra time for locker
- Head on desk

School Team/Physical:

- Support and management of the symptoms
- Support and progress-monitoring of the symptoms
- Modeling, teaching patience and time
- Above all else, keeping athlete safe from further hits to the head
Symptom Progress Monitoring

Athletic Trainer/Coach input is valuable!

Return to School
- Body in seat!
- There is no RTL until there is 1st Return to School!
- Symptoms have to be managed well enough to GET to school and STAY at school.
- We want to empower parents and educate doctors to support students being back at school when symptoms are “tolerable, short-lived and amenable to rest” AAP guidelines

Return to Learn/Think
- Balancing symptom “flare-ups” and levels of learning over (up to 4 weeks) of recovery
- Maximize learning with Minimal symptoms
- RTL is all about empowerment to the Teachers!

How do you differentiate your instruction to support your students with concussion?

Family Team and School Team/Academic:
#1 priority is teaching and supporting Symptom Management

Parents need to help children understand that 1.) symptoms are normal with a concussion and not to be scared 2.) Symptoms wax and wane with home activities – that means children can do SOME activities, just do the taxing activities in smaller increments and be mindful of what the symptoms are telling you about your levels of energy.

This leads to a reasonable and realistic (not overly restrictive) home recovery plan!

Teachers need to help students understand that 1.) symptoms are normal once back at school and not to be scared 2.) Symptoms wax and wane with various different cognitive demands – that means students can do SOME schoolwork, just do taxing schoolwork in smaller increments and be mindful of what symptoms are telling you about your levels of energy.

This leads to a reasonable and realistic (not overly restrictive) school RTL plan!

So YOU do the math...
If students with a concussion are back at school within days...
* But they do not feel physically, cognitively, emotionally 100%...
* But they do feel better every day, able to do more daily with less symptoms...
* And the majority of them are completely resolved from a concussion within 4 weeks...

Where does concussion management really happen?
YES! In the general education classroom!
(Fortunately) the majority of concussions are not a 504 issue or an IEP issue!
Good concussion management = quick, flexible, short-term
What to do in the classroom?
What to do about missed instruction?
What to do about make-up work?
What to do about quizzes/test?
What to do about extracurricular activities?

Are YOU Ready to Get Schooled On Concussions?

Ascending Levels Universal Level
Response to Intervention (RTI)

Academics Adjustments vs Accommodations vs Modifications

Energy Management
- iPhone 4, not iPhone X
- Car with small gas tank
Since symptoms are the manifestation of poor energy management...

Just focus on 3 things... 3 things you already know all about... For up to 4 weeks!

You don’t have to be an expert in concussion. You have to be an expert in teaching kids with fluctuating levels of brain energy. Guess what! You already are!

Don’t believe me? Do you have kids with learning disabilities? Kids with ADHD? They have fluctuating levels of brain energy all day, every day.

You don’t have to be an expert in concussion. You have to feel comfortable “differentiating” for each individual student. Guess what! You already do!

1. Mental Fatigue
   Symptom Management is KEY!

   Symptom Management is the #1 priority, especially in the beginning weeks of concussion management!

   It is acceptable to be at school with “annoying” symptoms!

   Strategies: Short breaks
   1. Memory: Take breaks. Down File away 5s to 10min. In the classroom, after periods of listening. Take 5 min breaks. Repetition is key. Take 5 min breaks. After the class, after periods of listening. Take 5 min breaks. After periods of listening. Take 5 min breaks. After periods of listening.
   2. Focus: Short breaks. Take 5 min breaks after periods of listening. Take 5 min breaks after periods of listening. Take 5 min breaks after periods of listening. Take 5 min breaks after periods of listening.
   3. Short breaks. Take 5 min breaks after periods of listening. Take 5 min breaks after periods of listening. Take 5 min breaks after periods of listening. Take 5 min breaks after periods of listening.

   2. Processing Speed

   Obviously, if students are missing in these areas, they fail to perform as much in class. This is why HAKKA, if we get enough work done, “the knowledge will be stored in our minds” at the end of the week. The goal of differentiation is to keep a student comfortable and comfortable with the work that they are doing. The goal of differentiation is to keep a student comfortable and comfortable with the work that they are doing.

   1. Mental Fatigue Symptom Management is KEY!
   2. Processing Speed
**Biggest Mistake with RTL Plans related to Slowed Processing Speed**

The biggest mistake we see educators make in a Return to Learn Plan is to offer "time extensions" and "postponements" of make-up work, current work and quizzes/tests.

The biggest mistake we see healthcare providers make is to "prescribe" absolute RTL recommendations like NO reading, NO computers, NO tests during recovery from a concussion.

These mistaken lead to the "Empty Grade Book" phenomenon. (New "Empty Grade Book" by Shen)

Let me start by letting you know that you are NOT alone in this battle. Parents and teachers are fighting the same battles, they are not alone either. And teachers, don't feel bad about this. Our students and their families want your help. They are not going to understand if you don't provide it.

There are several options you can choose from, let's look at them...

The "gift" of Incompletes OR I can "float" your grades. You can owe me this later... After you resolve from your concussion, you can make-up all this work and you can take all your finals ... In January or August.

- Our students with a concussion need winter/summer breaks for rest, recovery and rehab.
- If memory was compromised before the winter/summer break, teaching themselves during the break will likely not be helpful.

Try to LOCK down as many, if not all, grades before school vacations.

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**3. Difficulty Converting New Learning into Memory – Short-Term Memory**

**"Fair Testing"**

- Physically present?
- Cognitively present?
- Is it essential?
- Do I need to re-teach the content?
- Can they retain the material?

**"Alternative Appraisals"**

- If it is essential, has been taught and needs to be assessed ...
- Can an alternative appraisal suffice?
- If not, it has to be a test, can adjustments to the test be made?
- If not, can tests (finals) be spaced out and no more than 1 or 2 per day?
- Do-over's?

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**Empty Grade Book**

The "Empty Grade Book" phenomenon happens whenever a student:
- misses school completely or has spotty attendance
- has some in-class work or some homework completed but not all
- has been absent for quizzes/tests or has been allowed to "postpone" quizzes/tests

For any significant amount of time
- For any significant medical or psychological reason, including concussion.

The Empty Grade Book is one of the biggest sources of anxiety in high school students as they recover from a concussion.

Adjusted work in the Grade Book is better than an Empty Grade Book. Especially close to a grading period.
Academic Progress Monitoring

Your input is valuable and critical!
Timing Matters
Focus @ School during Phases of Recovery

What holds up recovery? 30%?
- Oculomotor
- Vestibular
- Auditory Processing
- Dysautonomia
- Convergence Insufficiency
- Neck/Headache

Pre-concussion issues exacerbated by concussion

Concussion Symptoms
- Headache
- LD
- ADHD
- Depression
- Anxiety

Misattribution of Symptoms
- Kid &/or Parent
- Parent anxiety
- Can’t bear the student struggling
- Parent need
- Secondary gain

Ascending Levels of Academic Support
Response to Intervention (RTI)

Tier 2 Concerns
- When to do a 504 Plan?
- How to write a 504 Plan?
- What a 504 Plan is NOT!
- Suggestions on how to continue to adjust academically for symptoms that go on into weeks to months
- What to do about finals and grades

Academic Adjustments vs Accommodations vs Modifications
Consensus Agreement with all 4 teams:

Family Team
No concerns at home
Back to baseline home behavior

School Team
No concerns at school
Back to baseline learning/behavior

Medical Team
No concerns in clinic
Discharged from PT at pre-concussion baseline

School Team/Physical
No concerns at school
Back to baseline symptoms on Checklist

Questions?

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