

# Dove and hawk: Rethinking how we help youth recover from concussion



## Why was this theory developed?

Research shows that each youth concussion and recovery is unique from person to person. Most studies address questions that are medical in nature, such as how particular symptoms affect recovery time and how concussions develop in the first place.

This article takes an entirely separate focus. It asks: can we help youth with **persistent concussion symptoms** recover by understanding their *behaviour*? Here, the focus falls on the person: what it is about each child that makes them respond to stress in the way they do? And how does that behaviour impact recovery?

This work encourages those who research and manage concussion to consider persistent symptoms and recovery from the standpoint of behavioral profiles.

## What are 'persistent concussion symptoms'?

Persistent symptoms last beyond four weeks. Concussions can trigger physical, cognitive, and emotional symptoms that may evolve over time. Anxiety, nervousness and irritability are emotional symptoms, the type most likely to persist and impact recovery.



Researchers developed a theory that groups children along a spectrum of behavioural profiles. At one end are "passive doves" and, at the other, "active hawks". The ideal spot on this scale is near the middle, where youth understand and try to keep a safe balance between activity and rest. To lean too far in either direction could hurt or delay a youth's recovery from persistent concussion symptoms.

## What is 'theoretical research'?

In research, a theory develops from observations made over time by an expert on the subject. By investigating a theory, we aim to predict an outcome based on a new way of thinking such that others may further test and validate this new approach.

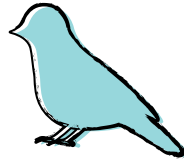


## What does this theory suggest?

This theory explores whether we can see where someone experiencing persistent concussion symptoms sits on the dove-hawk spectrum – and then help them manage their behaviour to get closer to the middle and a balanced recovery.

After a concussion, passive doves tend to fear harm: "If I go to school, I'll get a headache.

If I try to play sports, I'll get dizzy again." By avoiding activities they once liked and retreating from social life, they risk ongoing emotional symptoms.



Active hawks, on the other hand, want to resume their regular activities as soon as possible after a concussion: "I'll be fine, the team needs me for this week's game!"

This full-throttle mentality risks them ignoring problems like headaches and fatigue -- and experiencing more concussion symptoms.

The theory suggests that if we take a dove-hawk lens to each child, we may uncover new approaches to rehabilitation. Rather than just saying each concussion is different, we can target what each child needs to safely return to his or her life.



- **Passive doves** have a strong fear response and are very cautious individuals. They are anxious and consumed by the potential danger of concussion symptoms.
- **Active hawks** are high-performers with high expectations of themselves. They lack caution and want to dive back into activities, rarely anticipating concussion symptoms that could result.



## What this means for caregivers

Understanding a youth's behavioural profile can help caregivers (refers to parents and others caring for the child) and clinicians figure out when and how that child should return to meaningful activities safely after a concussion – and thus protect against persistent symptoms.

For passive doves, it's about persuading them that light activity is safe and beneficial to their recovery. A care team could help implement new strategies to gradually ease them back into a particular activity. Perhaps it is two weeks of half-days at school. Or returning to the soccer team as a spectator for one week, with light jogging the next week.

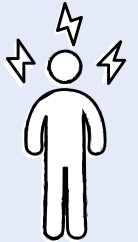
Caregivers and clinicians may need to set boundaries and realistic expectations for active hawks. "We know you want to go back fast, but how can we conserve your energy?" Or: "How can we rearrange your day so that you can give your best effort, but build in rest so you don't burn out?" Tactics such as flexible homework plans could curb a hawk's urge to over-work.

This theory may help everyone communicate effectively, and recognize the best steps to recovery for each child.



## From a caregiver who read this study:

*"After a concussion, it's tough for kids to know what activities they can get back to, what goals to set, and how to deal with setbacks. It's important to understand personal strengths and boundaries, going too hard or not doing enough -- what you can and can't do."*



## For more information

Find the [abstract here](#) or visit your local library:

Paniccia, M.J. & Reed, N. (2017). Dove and hawk profiles in youth concussion. Rethinking occupational performance. *Canadian Journal of Occupational Therapy*, 84(2), 111-118.

- To learn more about concussion, check out resources such as infographics and handbooks created by the [Concussion Centre](#) at Holland Bloorview

