

## Local physiotherapy clinic a leader in athlete concussion management



**By Jake Courtepatte**

With the Ontario Minor Hockey Association season set to kick off next month, once again the topic of player safety becomes an issue.

Among the discussion is that of body checking, and where it belongs in the minor league system. With opinions varied between players, coaches, and parents alike, physiotherapist Efan Gonsalves finds there is no right or wrong answer.

From a therapist viewpoint, whatever we can do to minimize their risk of injury, the better it is. But there's a rationale for both sides, so we do what we can to diagnose the symptoms of a concussion and make sure that the athlete is ready to return to play.

Gonsalves is a certified athletic therapist at Honsberger Physiotherapy, a company specializing in injury management and sport science.

With facilities in Markham and Aurora, Honsberger Physiotherapy focuses much attention on concussion management in athletes and is holding a Concussion Symposium in King City next month.

While the facilities are equipped with a full in-house gym, treatment tables, and a SwimEx therapy and fitness pool, the baseline and post-concussion testing is done by a series of digital machines.

The athlete is first subjected to a focus-based digital test, done through a computer program called "Play Attention". Through an armband, the program measures brain activity in the user indicative of attention. Using only their brain power, the user must complete tasks such as driving a forklift or building a skyscraper. If they lose attention, the game stops.

Interestingly, the program was initially developed to help improve cognitive function in children with ADHD. However, Gonsalves says the program can also help improve focus in athletes experiencing concussion-like symptoms.

A similar test is conducted in which the athlete must concentrate on a number of balls bouncing across a screen in a larger group, selecting them once they stop.

While this test does not measure brain activity, it does show how well the user can focus on one goal in a more hectic situation.

"When you're on the ice, there's a lot more going on around you than what your eyes are focused on," said Gonsalves. "We want to know if this person's brain can process all that is happening on the ice."

The bulk of the testing, however, is performed by a wall-mounted light board called the 'Dynavision D2', similar to a large black television screen with an array of light-up buttons.

At a retail price of almost \$16,000, the D2 is different from the previous methods in that it is capable of putting the athlete through a series of visual and physical response tests.

In its basic form, the goal of the exercise is to press a button on the screen as fast as possible when it turns red. At higher levels, the user is asked to add numbers that appear on the screen while continuing to press buttons.

The D2 is extremely useful in conducting baseline testing, as a computer gives the user actual speed and success rate results. Physiotherapists like Gonsalves are then able to compare these results with that of the same athlete post-concussion, measuring the severity of the concussion or the progress made since.

According to Gonsalves, exercises like these 'test your ability to multitask in both a physical and cognitive manner.'

Gonsalves and the Honsberger Physiotherapy team hope to be able to raise funds and awareness for all minor athletes to use these tests for baseline concussion testing.

The Concussion Symposium will be held Sept. 27 at Country Day School in King City. For more information, visit [www.honsbergerphysio.com](http://www.honsbergerphysio.com).