

# INSTITUTE FOR HOCKEY RESEARCH



## Dr. Mike Bracko - Sports Physiologist

Dr. Bracko's Top Shelf -  
YOUR Hockey Performance Newsletter.

January 2010

Greetings!

Happy New Year - 2010!!

"Heel click," "Pull the Rope," "Wide Tracking." What's up with the different ways to teach skating? Many instructional programs teach skating opposite of how elite players skate. These programs are making things up and confusing everyone.

We've known for 35 years how fast players skate. In 1975 Pierre Page did his Masters thesis in which he found 7 differences between fast & slow skaters. Four of the seven differences showed fast skaters having a wider stride. Faster skaters also had quick recovery after push-off, deep knee bend, and leaned forward a lot. Since 1975 there have been numerous studies finding the same things about fast skaters.

The arms have to move side-to-side because the legs are pushing to the side. For every action, there is an equal and opposite reaction (Sir Isaac Newton's 3rd Law of Motion).

Yet, we have skating programs that teach skating with a long recovery after push-off ("Heel Click") and forward-backward arm movement. If a player skates like this, he or she will be a slower skater.

You just have to watch good players skate to realize they push to the side (wide strides), they have a quick recovery (not bringing the skates under the mid-line of the body), and they move their arms side-to-side. This is how you skate fast!

[Research on Skating Treadmills](#)

In a recently published book; "Advances in Strength & Conditioning Research" ([www.novapublishers.com](http://www.novapublishers.com)) I was asked to review skating research and write a practical application. I found interesting information about skating treadmills. Skating on a treadmill uses only one of 27 game-related skating characteristics. The authors of some studies indicated that skating on an incline is similar to skating on ice. But there is no hockey rink in the world that is on an incline. Other researchers found that when young hockey players skated on a treadmill they decreased their stride rate (number of times the skates push-off) and increased their stride length. All studies done on ice show fast hockey players have a high stride rate and they maintain their stride length, but it doesn't get longer. The same researchers found that the players skated more upright as they became comfortable on the treadmill. This contradicts how fast players skate; they are more bent over as they skate faster. It appears that players who train on a treadmill have a long, narrow stride, which is a characteristic of a slow hockey player. Based on this research, training on a treadmill is not the best tool to improve skating performance.

### Tip of the Month

"KEEP YOUR STICK ON THE ICE!!" Ever heard that? All hockey players have. But, elite players do not keep their stick on the ice all the time. Watch Ovechkin or Crosby and you'll see them with 1-hand and 2-hands on the stick, the stick at waist height, ankle height, and on the ice. Practice skating with 1-hand and 2-hands on the stick, with the stick on the ice, close to the ice, and waist height holding it with 2-hands.

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Skate faster with less effort ... better pivots, agility, acceleration . . . Dr. Bracko's Skating DVD - available March 2010.

<http://www.hockeyinstitute.org/skating-instruction-dvd.htm>

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Sincerely,

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