



Coach Paul Gagné spotting Joe Rullier of the Boston Bruins.

The Science and Practice of Training NHL Players

How the best strength coaches train the best professional hockey players

BY **PAUL GAGNÉ**, STRENGTH COACH AND POSTUROLOGIST

I'm from Montreal, and we have a saying that the doctor has to watch their fingers when delivering a child because they can cut their fingers on the skates. We say this because Montreal is the mecca of hockey, and as a strength coach I'm fortunate to work with many of the best players in the world. And because I've been doing this for over 25 years and have studied human physiology particularly in relation to sports, I have learned what these players respond

to the best. I'd like to share these ideas with you.

Some of the most challenging athletes for a strength coach to work with are hockey players. With many professional sports, such as football, usually a coach has six months off-season so that the in-season training doesn't have to be as intense. Not so with hockey. When you take the playoffs into consideration, a hockey season can last up to 10 months, giving players and coaches

only two months in the off-season.

Consider where the action is in hockey. Each hockey shift is 45 seconds, and out of those 45 seconds you have five or six seconds of all-out effort – the rest is pretty much positioning. So the major focus should be to work the anaerobic/alactic power energy system, which in lay terms is often called the short-term energy system. Every hockey player who comes to see me always asks if I can get them to be quicker in

their first five steps, because everything important pretty much happens in those five steps. If you are able to accelerate quickly in those first steps, then you are the first one getting to the puck and making a play and you will have a successful shift. I think in the past coaches considered that the entire team needed to train in one way: "Look, each guy is going to play 20 minutes; they all need to do running and jogging and just do legs." Now we know you need to do shorter-term training, as well as upper body and abdominals to balance out the body and prepare for physical contact. Aerobic endurance may involve

only about five percent of a game, and may help only in terms of recovery.

Therefore, it's a matter of balance. A good hockey player will have a V02 max of 60 and a minimum vertical jump of 25 inches. My best players usually are over 61 V02 max and over 30 inches in the vertical jump, which I will measure with the BFS Just Jump and Run Platform. These numbers tell me that a player has good endurance and is explosive; both of these qualities are required to play at the highest levels in hockey. If you watch the game closely, as I do, you'll see that the best players are able to produce bouts of

explosiveness several times in a 45-second shift.

As for weight training, the first areas we want to focus on are the most common injury sites. Most hockey players have a high risk of injury to the groin area, which is often caused by weakness in the abdominal region or by an emphasis on the wrong types of abdominal exercises. But the number-one injury site in hockey is the shoulder, and to help prevent dislocations and other common shoulder injuries you need to balance out the shoulder musculature with exercises that focus on the external rotators of the shoulder.



Rullier is one of the strongest and most powerful professional hockey players in the world. He has power snatched 231 pounds, power cleaned 319, front squatted 485, and bench pressed 450.

I also do a lot of grip work with my players – after all, what’s holding the hockey stick?

For the legs, I use a lot of high-intensity work with Olympic lifting movements such as the power snatch and the power clean. Joe Rullier of the Boston Bruins is one of the most physically impressive athletes I’ve trained, and is especially proficient in the Olympic lifting movements. He has power snatched 231 pounds and power cleaned 319 pounds. He has also front squatted 485 pounds and bench pressed 450 pounds.

I prefer the snatch because it’s easier for me to teach and places less strain on the wrists; hockey players often carry a lot of tension in the wrists, which makes their forearm muscles tight, and as such it can be difficult for them to rack the bar in the clean. I also like using hex bars for leg training, as they put less compressive forces on the spine, and I especially like the BFS Mega Hex Bar for my taller athletes so that they don’t have to bend down as far as with a regular hex bar.

I realize that being on the road as much as they are, my hockey players often do not have access to gyms with good Olympic barbells, bumper plates and platforms. They just have to do the best with what they’ve got. Regarding workouts, to adjust to their schedules in-season I give them two workouts: one that lasts 20 minutes and one that lasts 40 minutes. I also have my players lift before practice and before games, which I find makes them perform better because these workouts activate the nervous system, especially when they perform Olympic lifting movements.

As for auxiliary exercises, first consider that skating is an unnatural movement that creates many muscle imbalances, especially between the adductors and abductors of the legs.

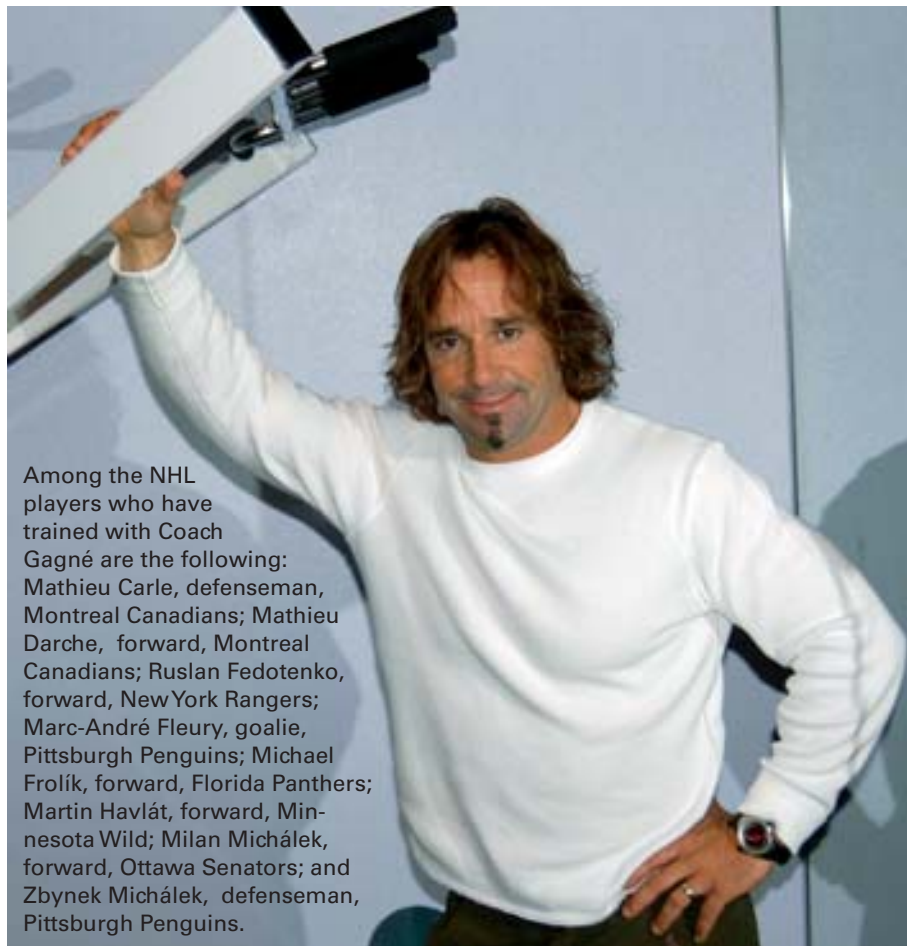
These imbalances have to be addressed. For the upper body, I prefer dumbbells, as they allow for more natural movements of the shoulder. Also, if athletes have access to them, I like standing pressing units such as the BFS Power Press, as they place minimal shearing forces on the joints and they train athletes to stabilize their lower body when they lift; as such, it will have a high transfer to hockey.

I would also like to add that I’m a big fan of BFS chains – I have several sets of them at my gym. Besides improving explosiveness, one benefit I’ve found with chains is that when you lift very fast, the chains will weave and the athlete has to adapt to this instability. This effect will improve joint stability and strengthen the muscles from several angles, which increases the transfer to hockey. This

sport is very fast and is characterized by instability – a skating blade is very, very thin.

Outside the weightroom, I use a lot of contrast training with pulleys. I have a special pulley apparatus I use that provides extra resistance, particularly when we’re running up hills, but I also like using push-pull sleds. Generally the protocol for contrast training is pulling or pushing for 30 yards, then running for 30 yards. That system seems to work best for hockey.

My athletes tend to perform very well and have minimal injuries during the year, and that is one reason my program attracts so many athletes. I also perform the same workouts I put them through. I’ll turn 50 next year, and yes, it’s tough to keep up with these athletes, but I believe in practicing what I preach. **BFS**



Among the NHL players who have trained with Coach Gagné are the following: Mathieu Carle, defenseman, Montreal Canadiens; Mathieu Darche, forward, Montreal Canadiens; Ruslan Fedotenko, forward, New York Rangers; Marc-André Fleury, goalie, Pittsburgh Penguins; Michael Frolík, forward, Florida Panthers; Martin Havlát, forward, Minnesota Wild; Milan Michálek, forward, Ottawa Senators; and Zbynek Michálek, defenseman, Pittsburgh Penguins.

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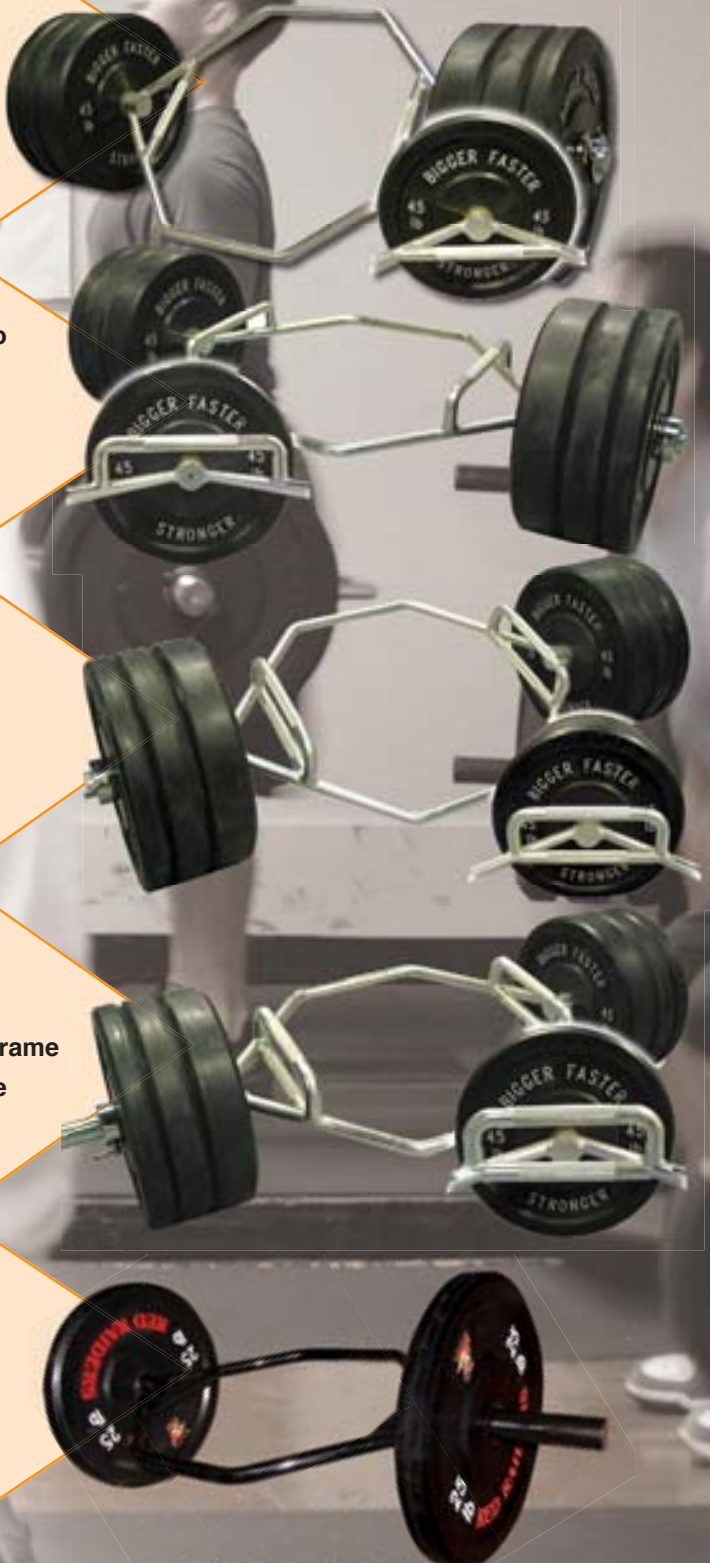
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