



CLEAN SWEEP

Practicing Brain Hygiene Can Help You Maximize Your Sports Performance

By ROSEMARIE SCOLARO MOSER

THE DEFENSEMAN PICKS UP THE PUCK AT THE BLUE LINE.

An opposing forward quickly closes in. The D-man makes his way to the net, but doesn't have a clear shot. She holds back a few seconds, then takes a step to the right to find an open shooting lane. This allows time for her center to get open at the top of the slot. She shoots low and hard, giving her teammate time to get her stick in the path of the shot and deflect puck over the goalie's shoulder. Score!

A successful athlete knows that great skills on the ice start with your head... or more specifically what is inside your head: your brain. Your brain allows you to plan, organize, execute and sense all that is around you. How you set up a play, visually spot the puck, quickly

dodge a check, or make a deflection depends on your brain function.

Your brain is the master conductor of everything your body does. When you keep your brain healthy, you maximize your reaction time, your visual-motor coordination, your balance and reflexes, and your split second decision-making skills. All of these traits are necessary to perform at your peak.

We know about the importance of practicing Dental Hygiene, but what about Brain Hygiene? I believe that just as we make sure our children get their teeth cleaned regularly and undergo routine physical exams, we can take steps to protect their most vital organ, the brain, before an injury occurs. So how can you take care of

your brain on a daily basis to make it work its best and keep it healthy?

Here are some Brain Hygiene tips to help you maximize your sports performance.

1. FEED YOUR BRAIN

Cynthia Lair, a certified health and nutrition counselor, MomsTEAM health expert, and author of *Feeding the Young Athlete: Sports Nutrition Made Easy for Players, Parents and Coaches* summarizes the importance of breakfast to stay alert: "If your child skips breakfast, they may hit a slump mid-morning where thinking goes blurry, muscles droop and they need to play catch-up all day with frequent snacking and end up overeating."

Missing meals, trying in fad diets or fasting, especially for athletes who burn many calories, can result in a state of hypoglycemia, or low blood sugar, with the effects of feeling mentally foggy, poor attention, headache, blurred vision, dizziness, and physical weakness.

CONCUSSION FACT & FICTION

FICTION:

I wasn't knocked out cold, therefore I didn't suffer a concussion.

Sitting out a shift after a big hit will allow a player time to shake it off and be ready to play.

Concussions are less likely in younger players because they weigh less and don't hit as hard.

Boys are more likely to sustain a concussion than girls are because girls play no-check hockey.

Wearing a HECC approved helmet and properly fitted mouth guard will protect a player from a concussion.

Brain injuries in kids are not as serious as in adults because the developing brain is more resistant to injury.

I feel fine, therefore I should be allowed to play.

Delaying the start of checking to the Bantam level will not prevent concussions from happening.

Kids are more honest when reporting concussion symptoms than adults.

Hockey has become a much more violent game as the rise in the number of concussions continue to rise.

FACT:

You can get a concussion even if you are not 'knocked out.'

A player who looks like he or she may have sustained a concussion should not return to play, no matter what he or she says, until being thoroughly checked out by a physician.

Because younger players tend to have slower reaction times they may be less prepared to see a hit coming and be prepared to brace for it.

Just because girls don't check doesn't mean they aren't at risk of a concussion. An NCAA study showed that women's ice hockey players had the highest rate of reported concussions among all collegiate sports.

While advancements in head protection and mouth guards have greatly improved, and companies continue to spend millions on research and development, there is no current scientific proof that a helmet and mouth guard can prevent a concussion.

The child's developing brain may actually be less able to tolerate injury than the adult brain.

The signs and symptoms of a concussion don't always appear right away. It's up to a coach and a parent to determine if a player may have sustained a concussion. The risk of sustaining even more traumatic head injuries is greater after a player has suffered his or her first concussion. The basic rule of thumb is: when in doubt, sit them out.

While concussions can happen at any age level, studies suggest that delaying body checking until Bantams would have a clear and measurable benefit.

Kids often under-report symptoms for fear of not being able to play, losing their position, having to be seen by a physician, and for fear of being seen by others as "weak."

There is no proof that more youth hockey players are sustaining concussions, but it's more likely that the rise in the number of reported concussions is tied to a better understanding of the signs and symptoms of a concussion and a change in the attitudes surrounding concussions.

Your brain is a complex mass of over one hundred billion neurons (nerve cells) that fire or send electrochemical messages throughout your body. Your brain runs on glucose (sugar), derived from the foods you eat. It is imperative that athletes consume a healthy diet with regular meals in order to continuously fuel the brain.

Healthy fats, such as Omega 3 fatty acids, have been shown to be good nutritional supplements for brain health and for improving brain function. This makes sense since neurons consist of myelin sheaths or fatty covers that insulate the neuron fibers. These sheaths help keep the electrochemical messages strong and on track so your reflexes and reaction time are sharp and quick.

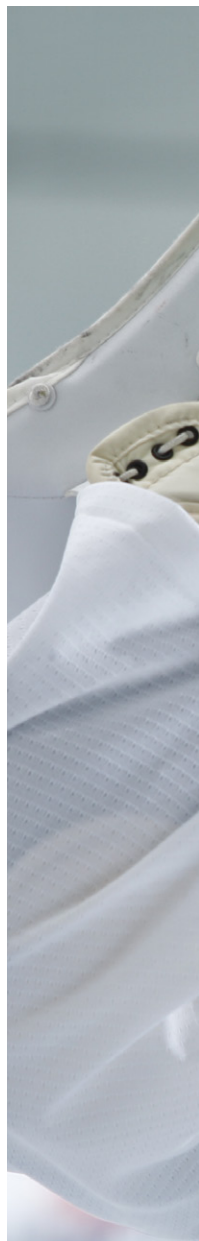
Make sure to consult your doctor, nutritionist or dietician about dietary supplements or vitamins and recommendations to optimize your brain fuel. And don't rely on vitamins or supplements to take the place of wholesome food.

2. HYDRATE YOUR BRAIN

"Dehydration effects cognition," reports Brooke de Lench, executive director of MomsTeam Institute of Youth Sports Safety. "A 3 percent decrease in body water can adversely affect cognitive function. In the sports context, this may affect a child's ability to pay attention to the coach or remember a play."

Practices and games result in significant fluid loss through perspiration. When the loss is greater than the intake, a state of dehydration occurs. Signs and symptoms of dehydration are similar to those found in the hypoglycemic state and in concussion.

So when actively training or competing, it is important to stay hydrated and to drink fluids that help balance the electro-



lytes in your brain. Electrolytes are chemical ions such as sodium, potassium, magnesium, and calcium and are needed by your brain to maintain its proper electrochemical balance. These electrolytes when correctly balanced provide the basis for those neurons to fire and signal your muscles to move and your organs to function.

That is why sports drinks were designed to help restore the fluid, glucose, and electrolyte balance to your body. Maintaining this balance can keep you energized and postpone the fatigue that would otherwise make you sluggish on the ice.

3. REST YOUR BRAIN

Generally, we need about eight hours of sleep per night. However, for adolescents, that number is higher, ranging from nine to 10 hours. Yet, few teens are actually able to obtain even seven hours of sleep on a regular basis.

Unfortunately, it is easy to become sleep deprived in today's society, with an abundance of activities and responsibilities and not enough hours in the day. And we know that the brain requires a good night's sleep in order to replenish itself and cleanse itself of any toxins. In fact, research suggests that

significant chronic sleep deprivation may even cause brain damage.

Healing occurs while in the deep sleep stage called the REM (Rapid Eye Movement) stage. We know that lack of sleep can impair judgement, reaction time, cognitive processing, and memory, as well as contribute to headaches, irritability, fatigue, and a host of other physical symptoms. The high performance athlete cannot afford to be sleep deprived but practices good sleep habits.

To help you sleep better, keep a routine sleep schedule, and before bed avoid exercise, bright computer/TV screens, and stimulating movies. Keep room lights dim and make the sleep environment quiet and soothing.

According to Keith J. Cronin, DPT, physical therapist, director of Sports and Healthcare Solutions, LLC, and MomsTEAM health expert, an important question to ask injured athletes is: "Is it still hurting while you sleep?" Be sure to consult an orthopedic or sports medicine doctor to manage that pain.

4. EXERCISE YOUR BRAIN

Learning new skills and information is what keeps our brains growing, developing and flexible. The key word is NEW.

You know that cross training is much more beneficial to an athlete's fitness than repeating the same exercise routine day in and day out. Likewise, if you like a particular computer or card game, playing it over and over again may not be helping to develop new brain pathways. So change it up by trying a new hobby, a new game, or a new puzzle. Challenge yourself and learn to play a musical instrument. For both youth and adults, learning new activities stimulates brain growth.

Exercising your brain can improve your planning, decision-making and organizational skills, all of which are necessary for strategic performance on the ice. Maybe that is why elite athletes tend to be fine students.

In recent years, the market has been flooded with online brain games that are aimed at keeping your brain sharp. Some of these brain products are specifically tailored for athletes and use virtual games or simulations to improve sport specific skills, such as reaction time and visual-motor speed.

Research on the effectiveness of these new products is still in the early stages although there is data to show improvement in older adults. Nevertheless, many elite, professional athletes regularly use them. No matter what activities you choose to exercise your brain, remember to challenge yourself.



5. PROTECT YOUR BRAIN

Brain Hygiene includes avoiding head injuries in the first place and seeking the most appropriate treatment if you do suspect a concussion.

Here are some steps you can take to protect your brain.

- Use properly fitted, up to date protective equipment to reduce injuries. Although helmet and mouth guard manufacturers cannot claim that their products will prevent concussion, there is research to indicate that these products can reduce the force of impacts and prevent more severe head injury. Remember that reconditioned/altered or old helmets may not meet HECC safety standards, so it is best to avoid hand-me downs.
- Insist on proper skill development and training in the latest techniques to help reduce risky or dangerous play.
- Avoid the Gladiator Syndrome. The equipment you use is to protect you from injury, and not to make you feel injury resistant.



→ DID YOU KNOW?

- Young children and teens are more likely to get a concussion, and take longer to recover than adults.
- Athletes who have ever had a concussion are at increased risk for another concussion.
- All concussions are serious.
- Recognition and proper response to concussions when they first occur can help prevent further injury or even death.

- Create an atmosphere of good sportsmanship, safe play, and zero tolerance for aggression. Dr. Michael Stuart, USA Hockey's chief medical officer explains, "...it's sportsmanship and mutual respect, which starts at home. We want to shape our athletes into responsible citizens who have a sense of sportsmanship and have respect for their opponents."
- Educate coaches, parents, referees, athletes, and all athletic personnel about the signs and symptoms of concussion. Know your state's youth concussion law. Access free concussion educational materials at USAHockey.com/Safety and CDC.gov/headsup/index.html.
- Practice "when in doubt, sit them out" if you suspect a concussion and never return any athlete to the sport unless medically cleared.
- Consider baseline neuropsychological concussion testing for your team. Baseline testing looks at those cognitive skills that are most susceptible to concussion. Test results at baseline, prior to an injury, can be compared to post-concussion test results to help determine and monitor recovery. Sports concussion health care personnel, such as sports neuropsychologists, administer and interpret

these tests. For more information go to sportsneuropsychology.com.

- Seek expert sports concussion health care services if you are diagnosed with a concussion for an individualized, appropriate treatment plan.
- Treat each concussion carefully and thoroughly, allowing the athlete to fully heal before exposure to contact/collision risk. Avoid re-injury while recovering from a concussion to prevent a Post-Concussion Syndrome, when symptoms continue on for months, or more serious neurological consequences.

Your brain is the most important organ in your body. It controls how you think, feel, sense, and coordinate all your body activity. Your sports performance is directly dependent on the health of your brain. Practice Brain Hygiene and keep your brain in great condition so that you can be at the top of your game. ★

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