

## Hockey Injury Prevention



The dynamic nature of hockey leaves players vulnerable to an assortment of overuse and traumatic injuries. Frequent collisions increase the risk of fractures and dislocations—the knees, shoulders and wrists are particularly susceptible. **Overuse or uncoordinated movements can cause back, groin or hip flexor strains, tendonitis and chronic shoulder or hip pain.**

Preventative programs reduce the incidence of strains, sprains, muscle tears and overuse injuries. While traumatic injuries cannot always be prevented, injury recovery time can be shortened with proper conditioning and rehabilitation. **Poor skating mechanics and muscle imbalances can exacerbate injuries; addressing these issues can reduce recovery time, prevent recurrence and improve performance.**

Studies have shown that the majority of injuries occur during games- typically in the later minutes of a period. Some studies estimate that **42% of injuries occur in the third period** –an indication that fatigue plays a role in injury occurrence. Higher levels of fitness help to prevent fatigue and improve the body's ability to respond to the physical stresses of the game; **in an NHL training camp study, players with low-level off season training were 3 times more likely to experience an injury than their more fit teammates.**

**WHAT IF YOU HAVE AN INJURY?** Seek treatment from a provider that has experience with hockey injuries; most soft-tissue injuries respond well to conservative treatment. **Eliminating scar tissue and restoring mobility, strength and flexibility to the area is essential**—this can be done with manual therapy such as ART, Massage or Graston Technique. Treatment should also include stretching education and therapeutic exercise to correct imbalances and reduce the risk of recurrence.

**HEED INJURY WARNING SIGNS!** Sharp pain, inflammation, tenderness and poor range of motion are all signs of injury that require immediate professional attention. **Continuing to train on an untreated injury will slow the recovery process and can cause the problem to worsen.** Ice, decreased training intensity and stretching can help. The following measures will help to prevent injury occurrence:

- **ALWAYS WARM UP** prior to play, ESPECIALLY before explosive training. **A dynamic warm-up is essential to prepare the body for increased physical demands.** Cold muscles are more prone to strains; a proper warm up will increase blood flow to the major muscle groups and improve muscle recruitment and performance.
- **CORE TRAINING.** The core is the foundation for all other movement. For example, the slap shot requires force and stabilization primarily generated by the core muscles. **A strong core reduces the risk of hip, groin or back injury, allows for more powerful movement of the hips and legs and increases speed and precision.** Technique is especially important during core work... many exercises can do more harm than good if done improperly.
- **DO SOME PREHAB.** Overuse causes imbalances that predispose players to injuries. **Prehab corrects these imbalances by incorporating injury-specific exercises** into your training regimen. An added bonus to prehab is improved performance; the same principles that prevent injury patterns can help you train more efficiently.
- **HYDRATE!** You need 2 liters per day (or enough that your urine is almost clear), plus another liter for every hour of general activity. Dehydrated muscles do not perform or recover properly and are prone to injury.
- **STRETCH** after every workout. Improving flexibility will allow the muscles to be stretched during play with less chance of tearing. **FOAM ROLLING is another effective way to improve flexibility.**
- **BALANCE YOUR TRAINING** with a mix of on-ice activity, strength, flexibility and endurance training, conditioning exercises and prehab. This helps prevent the muscular imbalances that can lead to injury.

Our Exercise Therapists can give you more information on the above strategies. Feel free to schedule a consultation to discuss **detailed training tips, appropriate prehab exercises or a personalized conditioning program.** Call (780) 430-9224 to set up a consultation.

**Warm Up** These exercises are great for Hockey and will help prevent strains by preparing the body for increased demands. Complete each exercise 4-8 times per side before any activity, ESPECIALLY explosive training.



**Instep Lunge to Hamstring Stretch:**

Lunge forward with your left leg. Lean forward, take your left elbow and place on the floor beside the instep of your forward leg. Hold for 2 seconds. Place both hands on the floor and push hips upward as you straighten the front leg, stretching the hamstring. Hold for 2 seconds. Engage core and repeat movement, this time lunging forward with the right leg. Repeat 4-8 times.



**Side Lunge:**

Stand with feet shoulder width apart then step to the left, keeping toes forward and feet flat. Squat through the left hip while keeping the right leg straight. Squat as low as possible (keep the bent knee behind the toes at all times) and hold for 2 seconds. Push back to the starting position (keep the leg straight, back flat and chest up). Repeat on the right.



**Hip Crossover:**

Lie face up with core engaged, arms to the side and knees bent. Bring feet up to 90° and let knees fall to the left, close to the ground but not touching. Use the core to bring knees back to the starting position. Repeat on the right.

**Foam Rolling** is a useful way to get the benefits of myofascial release at home. The results are similar to that of a deep tissue massage. Follow the same rules listed above for stretching.



**Quads:**

Balance on elbows, face down with quads resting on roller. Slowly roll entire length of quad. Shift body weight to the side to place emphasis on one leg.



**IT Band:**

Lay on side with roller under hip bone. Balance on forearm keeping body perpendicular to the ground. Slowly roll length of IT Band, changing angle of body for emphasis.



**Hamstrings/Calves:**

Rest hamstrings on roller with hands on floor behind you. Slowly roll entire length of hamstring and calf. Place one leg over the other for more emphasis on one leg.



**Glutes:**

Sit on roller with ankle of right leg across the left quad. Shift weight onto the right glute, balance on right hand and roll slowly back and forth from top of the glute to the middle until pain subsides. Shift weight as needed for emphasis.

**Stretching** increases the range though which a joint can be taken without injury occurring to the surrounding muscles and ligaments. Stretching reduces recovery time, improves coordination and decreases injury risk.

- **ALWAYS WARM UP** before stretching. Stretching muscles when they're cold increases your risk of injury
- **HOLD EACH STRETCH FOR AT LEAST 30 SECONDS** Holding a stretch for less than the recommended amount of time produces no benefit. Don't bounce while holding a stretch—this can cause small tears in the muscle that actually hinder flexibility.
- **PRACTICE EQUALITY** Stretch both sides of your body equally, even if you are focusing on stretching an injured site.
- **BE SAFE** Improper stretching technique can do more harm than good. Use safe, proven methods of stretching, get instruction from a trainer if you are unsure about technique, and don't rush the stretches. Focus on technique and body position.

We recommend that you do **AT LEAST these basic stretches** after every workout. There are more advanced versions of these stretches—talk to our Exercise Therapists if the basic stretches don't work for you. We suggest incorporating more advanced flexibility training whenever



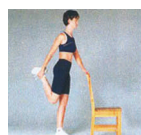
**Hip Flexor Lunge Stretch:**

Step forward into a lunge. Keep back straight and pelvis square, bend the back knee and tuck pelvis under to feel a stretch in the front of the thigh and hip. Reach overhead with the left arm to deepen the stretch.



**Hamstring Stretch:**

Stand facing a chair, feet shoulder width apart. Place right heel on the chair with leg straight and toes pulled back. Slightly bend left leg and sit back to feel a stretch in the back of the right thigh.



**Quad Stretch:**

Stand tall, raise the right heel back toward the buttocks and grasp it above the ankle joint. Tilt the pelvis forward and pull the ankle toward the buttocks to feel a stretch in the front of the thigh.



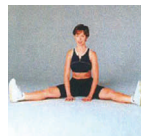
**Piriformis/Glute Stretch:**

Lie on back with knees bent and feet flat on the floor. Cross one ankle onto opposite knee. Reach through and grab behind the knee that the ankle is resting on, pulling toward the body to feel a stretch in the glutes.



**Pectorals Stretch:**

Stand in a doorway, bend arm and place forearm along the door jamb, elbow at shoulder height. Step forward with knee bent. Gently lean straight forward until you feel a stretch in the chest.



**Inner Thigh Stretch:**

In a seated splits position, use hands to rock forward until you are sitting tall on your 'sits bones'. Keeping toes pointed up and upper body tall, widen splits position until you feel a gentle stretch.