

WESTFIELD STATE UNIVERSITY CLUB HOCKEY



STRENGTH & CONDITIONING

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Project # 4

Dear Players,

As you may know, playing in any contact sport can result in being injured. However, some injuries are preventable with a strong strength and conditioning program. We want our athletes to build muscular strength, endurance and improve their movement skills. We are in the process of working with the Woodward Center to reserve the gym for team activities to help you with this program.

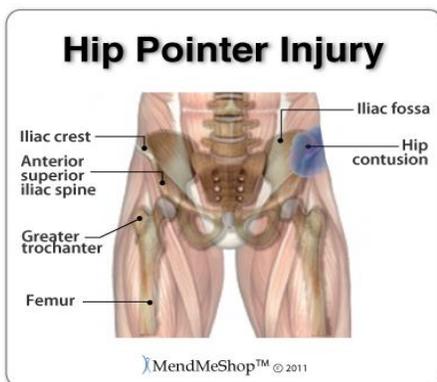
First, we are going to look at the top five preventable injuries in hockey and what steps we can take to ensure that we stay healthy. Unfortunately, we see these types of injuries every season. Injuries effect the win-loss column and every year a good team doesn't qualify for playoffs because of key injuries. Because of the nature of the game, common hockey injuries such as broken bones, cuts and concussions are hard to prevent.

Next, we will have ten laminated cards that can be left in the dorm room and will be located around the gym when we have our team lifts and stretches. You'll see the purpose of the exercise, what muscles it works and directions on how to perform the task. Please note, that any strength and conditioning plan should be individualized and that what works for one player might not work for another. The following are exercises that we would like to see you incorporate into your own plan.

Sincerely,
Coach Lachance

5 MOST COMMON INJURIES IN HOCKEY

HIP POINTERS



Hip pointers can be a very painful hockey injury that causes swelling in the hip abductors. This can cause pain when trying to lift your leg to walk. This can be caused by a big hit into the boards. Players who suffer from a hip pointer should use RICE to help heal the injury. It is typically not a long term injury with proper care. Sometimes players will have to walk around with crutches until it heals.

EXERCISES: Spider Crawl, Laying Leg Curls

MUSCLES: Psoas Major, Iliacus Muscle, Hip Abductors,

HIGH ANKLE SPRAINS



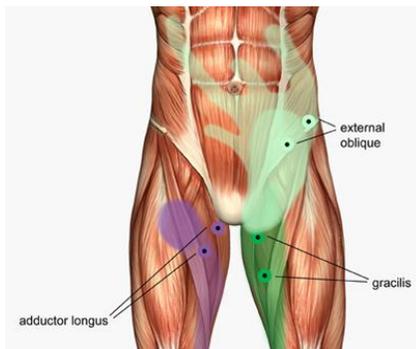
An ankle sprain is an injury to one of the ligaments in the ankle. Ankle sprains can happen with a quick turn of the ankle and can be painful for hockey players. Toronto Maple Leaf's forward Colby Armstrong suffered from this injury. It typically takes hockey players 46 days to return from a high ankle sprain. According to the article "A high ankle sprain (Syndesmosis sprain) is caused in hockey when the skate blade is caught on the ice and the body is twisted on top of it, which effectively

turns the foot outward relative to the leg.” It is most common in defensemen because of the pivoting from skating forward to backwards. Use Rest, Ice, Compression and Elevation if the injury occurs.

EXERCISES: Frog Hop, Lateral Step, Lateral Round

MUSCLES: Medial Malleolus, Flex Hall Longus, Flex Digit Longus

GROIN PULLS

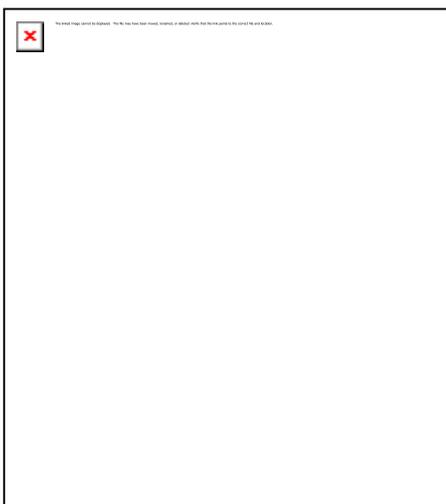


Groin pulls are often caused when there is too much stress on the thigh and groin. They are the over stretching of the muscle. According to webMD, 10% of all injuries to hockey players are groin pulls. They come with three degrees of severity. Symptoms include: pain and tenderness of the inner thigh. You should ice and compress the inner thigh to help manage the pain.

EXERCISES: Groin Stretch, Spider Crawl

MUSCLES: Adductor longus, adductor brevis, adductor magnus, pectineus and gracilis

LOWER BACK STRAIN



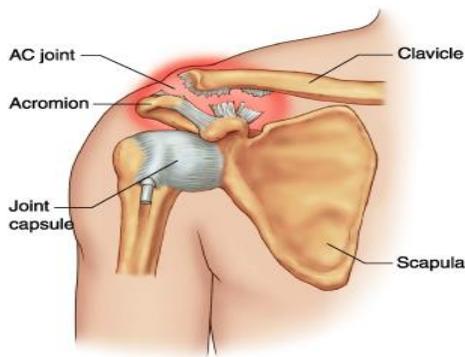
A lower back sprain could be caused by physical exertion, falling or bending repeatedly. Most common symptoms are pain and stiffness in the back and it gets worse when moving about. Players should ice their back at first to reduce the pain and swelling. After a few days, switch to putting heat on the pain area. Heating pads and hot baths work great. Players should take it easy right after the injury but then should resume regular daily activities. Hockey players are notorious for playing

through pain but they should take care of it right away so that it does not flare up later.

EXERCISES: Back Extensions, Trunk Curl

MUSCLES: Internal & External Obliques, Rectus Abdominis, Erector Spinae

SHOULDER SEPARATION



A lot of shoulder separations that occur in hockey are around the Acromioclavicular (AC) joint. This is where the shoulder and the collarbone meet. In this injury, the ligaments are either partially or completely torn. This happens when either being checked into the boards or an awkward fall on the ice. There are several symptoms with an AC joint injury including: pain right away, swelling, tenderness, limited movement with the shoulder, and could even look

“displaced”. Treatment for this type of injury usually involves having your arm in a sling. This is a painful injury that will take awhile to heal. We've had a few players suffer this over the past few seasons. Players need to work on their upper body strength and conditioning to help prevent this injury.

EXERCISES: External Shoulder Rotation, Standing Shoulder Press

MUSCLES: Pectoralis Major, Sternocleidomastoid, Deltoid, Trapezius

LYING LEG CURLS

MUSCLES WORKED: Hamstrings, Calves, Hip Flexors

PURPOSE: To build strength and prevent injuries in your lower leg muscles.

EQUIPMENT: Leg Curl Machine

DIRECTIONS:

- Lay down on your stomach
- Have the pad on the back of your legs near your calves
- Keep your stomach flat and legs stretched
- Curl your legs up, hold for two to three seconds
- Return your legs to the starting position
- Repeat until done with your set

STANDING SHOULDER PRESS

MUSCLES WORKED: Anterior Deltoid, Triceps, Trapezius, Latissimus Dorsi

PURPOSE: The purpose of this exercise is to build muscle strength in the shoulders. When standing, it involves the whole body and builds a more complete workout. They stabilize the muscles building bigger shoulders.

EQUIPMENT: Shoulder Press Machine With Cables

DIRECTIONS:

- Select the correct weight by putting the pin in the weights
- Grab the cables at shoulder height
- Have your palms facing up
- Push the cables up above your head
- Hold and slowly return to your starting position
- Repeat until you reach your goals

GROIN STRETCH

MUSCLES WORKED: Adductor longus, adductor brevis, adductor magnus, pectineus and gracilis

PURPOSE: Groin pulls are very common with hockey players. This exercise will help stretch out your groin. Because of all the pivots that are involved in skating it is really important to make sure that you protect yourself from a groin pull. This helps with your range of motion on the ice.

EQUIPMENT: None

DIRECTIONS:

- Start this exercise in a squatted position with your knees bent
- Keep your feet flat
- Move your left leg out and bend it as you stretch your right groin
- Move your arms out in front of your body to maintain balance
- After stretching for a second, move your right leg back into a squatting position
- Continue to repeat until you get to your goal
- After, reverse your direction and repeat stretching your left groin

EXTERNAL SHOULDER ROTATION

MUSCLES WORKED: Infraspinatus, Supraspinatus, Teres Minor

PURPOSE: The purpose of this exercise is to strengthen your rotator

cuff and help prevent injuries to the shoulders.

EQUIPMENT: Shoulder Press Machine With Cable

DIRECTIONS:

- Adjust the cable to the height of your mid section
- Grab the cable handle
- Keep your elbow close to your body
- Starting position will have the cable in front of your body
- Rotate your arm backwards and hold
- Return to the starting position
- Continue until you reach your goals
- Switch Shoulders and repeat

BACK EXTENSIONS

MUSCLES WORKED: Multifidus, Erector Spinae, Gluteus Maximus

PURPOSE: This exercise is a great core strengthening exercise. It also helps stabilizing the lower back and prevents injuries.

EQUIPMENT: Back Extension Bench

DIRECTIONS:

- Lay face down on the bench with your arms crossed
- Keep your legs attached to the foot pad
- Bend forward slowly at your mid section
- Bend until you feel a slight “stretch”
- SLOWLY, raise your upper body back to the starting position
- Continue until you meet your goal

UPRIGHT CABLE ROW

MUSCLES WORKED: Biceps, Trapezius, Deltoids

PURPOSE: This exercise works the upper body with little stress on joints such as ankles and knees. It helps prevent injuries to the shoulders by strengthening the muscles.

EQUIPMENT: Workout Station With Cable

DIRECTIONS:

- Grab the bar with your hands shoulder length apart
- Rest the bar on your thighs
- Lift the bar up slowly towards your head
- Exhale while lifting
- Hold for a few seconds
- Slowly return the bar back to the starting position
- Continue and repeat until you reach your goal

SPIDER CRAWL

MUSCLES WORKED: External & internal obliques, rectus abdominus

PURPOSE: The purpose of this exercise is to help your hips loosen up while working your body's core. This increases the hips flexibility which is key for hockey players. It also helps the groin and muscles in the legs.

EQUIPMENT: None

DIRECTIONS:

- Get into a push up position
- Step up with your left leg and drop your left shoulder
- Crawl and drag your feet, extend and crouch with your right leg
- You'll be walking on your hands
- Each step will come out to the outside of your hands
- Hold each stretch for 1 or 2 seconds before switching legs

LEG PRESS

MUSCLES WORKED: Quadriceps, Hamstrings, Gluteus Maximus, Calves

PURPOSE: The purpose of the leg press exercise is to build muscular legs. It does not put as much pressure on your back because you are lifting through your legs. It is an alternative to squats.

EQUIPMENT: Leg Press Machine, Weights

DIRECTIONS:

- Select the desire amount of weight
- Have a seat and put your feet on the board
- Release the safety pin
- Extend your legs but DO NOT lock your legs
- Lift with your heels
- Slowly return the board back to the starting position
- Continue and repeat until you meet your goal

FROG HOP

MUSCLES WORKED: Thighs, Hips, Butt, Quadriceps, Hamstrings

PURPOSE: It's a great way to build and strengthen your lower leg muscles such as quadriceps, calves and hamstrings. Strengthening your leg muscles will help you be a more powerful skater.

EQUIPMENT: None

DIRECTIONS:

- Crouch with your heads behind your head
- Keep your body and head straight
- Jump a couple feet and absorb the landing with your feet
- Continue and repeat several times

FIGURE 8 DRILL

MUSCLES/AREAS WORKED: Speed, footwork, movement

PURPOSE: The purpose of this exercise is to work on forward, backward and lateral movement.

EQUIPMENT: two hockey gloves, a stick, ball/puck, passer (optional)

DIRECTIONS:

- Players will start beside one of the gloves
- Players will always be facing the front
- They will move around the gloves in a figure eight pattern working on switching directions quickly.

This exercise is good both in the gym and on the ice. Once comfortable with the pattern, have someone pass a ball to the player every time they reach the middle of the eight.