



Let's Talk Agility... Dry Land Training

Dry Land Training Program for Youth Hockey Players

Why is this important? *"Youth hockey is becoming increasingly more competitive and physically demanding. Studies have shown that a majority of hockey injuries occur without any physical contact, but rather simple muscle pulls due to poorly trained or warmed up individuals."*

Can't I just play all year round to get in shape? *"The consensus is that in the summer months, hockey players definitely need a break from the rink. However, a break from the rink should not excuse an athlete from being physically active."*

Components of a proper dry land "off-season" training program:

1. Warm-up: The warm-up portion of the program is most often ignored, but can be the most important in preventing injuries and getting your muscles ready to work. Recommended: 5-10 minute light jog or bike ride
2. Flexibility
A stretching program should focus on the whole body. It is important to perform low load (only a stretch felt), prolonged static stretch (no bouncing) for a hold time of 30 seconds. Repeat 2-3 times each.
Recommended stretches:

Calf / Achilles tendon	Hamstrings
Quadriceps	Hip flexors
Groin	Trunk
Shoulders	
3. Strengthening
A good strengthening program will address and improve the athlete's strength, power, balance and coordination both on and off the ice. It is important to focus on upper body, trunk, and lower body strengthening. **This is an area that can lead to the most improvements in an athlete, but can also cause the most injuries if done improperly.** For pre-high school athletes, gravity-assisted (no weights, just your body weight) exercises are recommended. All exercises should be performed at 3 sets of 10-15 repetitions, 3-4 times/week.

Recommended strengthening exercises:

- | | |
|----------------------|---------------------|
| Push-ups | Chin-ups (pull-ups) |
| Sit-ups (crunches) | Lunges |
| Wall slides or sits | Bridges |
| Leg raises – outward | Leg raises – inward |

4. Cardiovascular

This portion of the program is one area that should not be ignored when it comes to improving your on-ice game. Remember...**Endurance in the third period!**

There are two forms of cardiovascular exercise are recommended: Aerobic and anaerobic. Aerobic training will target your endurance, while the anaerobic (interval) training will target the quick explosion and speed. Both of these systems are used though out practice and game situations.

Aerobic/Endurance Training: "General rule of thumb"

- Duration: Minimum of 20 minutes per bout
- Intensity: 70-80% of maximum heart rate*
- Frequency: 3 to 4 days per week

Calculating Intensity:

Step 1: Determine Maximum Heart Rate (MHR)*

$$\text{MHR} = 220 \text{ minus Age}$$

Example: 15 y.o.

$$\text{MHR} = 220 - 15 = \mathbf{205}$$

Step 2: Determine Target Intensity Range

Aerobic: 70-80%

$$\text{MHR} \times 0.7 = \text{Low end range} \quad (205 \times 0.7 = 143)$$

$$\text{MHR} \times 0.8 = \text{High end range} \quad (205 \times 0.8 = 164)$$

Interval/Speed training: Once a strong aerobic base has been developed, (approximately 4-6 weeks), incorporating interval training can improve speed and power

- Short, intense exercise bout
- Brief recovery period
- Example: Running steps or stairs
 - Each repetition = 20-30 second burst running up and down the steps
 - Rest 45 seconds between repetitions
 - Perform 2-4 sets; 1-2 times/week
 - Intensity: 100% of maximum heart rate*

5. Sports Specific Exercises

Some sports specific exercises can be beneficial and safe. For example, in-line skating, jumping rope or slide board (*Euroglide*) training are all excellent forms of exercise to help develop power and speed.

Plyometric exercises (e.g., box depth jumps) are later developments within a training program. This form of training can lead to injuries and poor playing

performance if done without first establishing a good strength base and without proper supervision and technique.

6. Warm-down

The warm down portion of the program is similar to the warm-up. A light 5-10 minute jog or bike ride is recommended.

Do I need to keep doing these exercises during the season?

It is important to maintain the fitness level that you worked so hard to achieve. Continuing to stretching prior to practice and games (after a warm-up) is extremely important. Continuing with a cardiovascular and weight training program will also be important, just not as often. We recommend decreasing the endurance and strength training to one time/week, but progress the speed training to 2-3 times/week.

For specific questions regarding specialty services, including dry land training for hockey players, please feel free to contact us at 269.329.0934 or via our website at www.agilitysportsmedicine.com.

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