

Designing a workout program

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There are some basic things each athlete should do when designing a workout program:

- Evaluate the sport or activity in question. Determine what movement patterns and energy systems are used.
- Determine the amount of time that can be allocated for training on a daily, weekly, monthly, and yearly basis.
- Clear your mind of any preconceived notions, myths, or dogmas about training for hockey or any other sport for that matter.
- Do not forget about the big picture. Think of training, nutrition, and recovery as equal components when training to increase performance.
- Lack of planning and organization will lead to decreased results or failure. Keep records of what particular exercises and activities were completed, volume and intensity of exercises completed (i.e. percentage of 1-repetition maximum, sets, repetitions, and time under tension), and the length of rest durations and the date, time, duration of the particular training session.
- Make reachable goals and continually analyze your progress.
- Train all components of fitness and athletic performance.

Components of Athletic Performance

- Soft tissue mobilization: Think of your muscle and fascia (gives muscle form and connects muscle to other soft tissue such as skin) as clay. Work on changing tissue density prior to changing tissue length. This can be done manually by hand, by rolling on an object (i.e. ball or a foam roller), or rolling on object on oneself (i.e. The Stick). Mobilization of the soft tissue release trigger points (i.e. knots) and relaxes the nervous system.
- Optional pre-work out static stretch: Of areas that are tight such as hamstring, hip flexors, shoulders, etc...
- Activation and/or corrective exercises: Activation exercises are heavily debated area in the performance enhancement industry. This area is very dynamic; one must keep up with current trends and past successes and failures. It is commonly accepted that many individuals are not able to fire a particular muscle or group of muscles (i.e. deep stomach muscles and hip muscles) or simply put some individuals cannot use the correct muscles at the correct time to do the correct action. Think of activation exercises like turning a switch. The purposes of corrective exercises are to correct muscle imbalances or strengthen injured areas or areas prone to injury. Corrective exercise can be incorporated into the function strength training component of training.



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• **Dynamic Warm-up:** Dynamic movement patterns progressively increase heart rate, circulation, body temperature, and tissue pliability. Theoretically, static stretching prior to explosive activities such as sporting events and intense training, ultimately result in less explosive athletes. Dynamic warm-ups can progress from stationary to linear, lateral, and/or angular locomotion. Typically, dynamic warm-ups are supposed to mimic the movement of the task at hand. At the end of each dynamic warm-up training session can be linear or lateral locomotion or a combination of both.

Team sporting events are usually multidirectional so the dynamic warm-up should be adjusted accordingly. Also, dynamic warm-ups with a higher static stretching component are 10 yards in length, versus warm-ups that have a higher dynamic component, which is 20 yards in length. Dynamic warm-ups with a higher static stretching demands are usually used to train more advanced or experienced athletes or inflexible athletes. Dynamic warm-ups progress to slower movements through the full range of motion to faster movements through the full range of motion.

• **Plyometrics:** Are done with the entire body, including jumps, hops, bounds, pushes, and throws. Lower extremities categories include linear and lateral days. Plyometrics can be further divided into long response versus short response drills. The athlete must learn how to absorb force and then produce force, progressing from sticking the landing, to bouncing, to continuous jumps.

• **Movement skills:** Such as foot speed, explosive starts (i.e. first step quickness), linear and lateral acceleration, cross-overs, and rapid starting, stopping, and changing direction are critical to success in athletics. Team sports, such as hockey, have a much higher emphasis on acceleration involving frequent starts, stops, and rapid changes of direction versus top-end speed. Lateral and angular movement skills are often neglected; they can be done on alternating days with linear movement skills. Sled dragging has become popular recently as a method to improve acceleration, both linearly and laterally.

• **Conditioning or energy system develop-**

ment: Should be tailored to the demands and energy system of the particular sport or activity in question. The majority of team sports involve stopping, starting, and change of direction. Conditioning options include a mixture of tempo runs, shuttle runs, slide board interval sessions, and multi-directional cone drills. Conditioning for team sports should emphasize an interval format versus long slow distance training.

• **Functional strength training:** Involves multi-joint movement at various speeds and angles. As movements are mastered the limb involvement can change, two versus one. Typically lower extremity exercise should be done with feet against a fixed stage (closed chain) while standing. Exercise should be based on movements versus isolated muscles. The upper and lower body and core should be completed each session. A split I recommend is to have the athlete complete upper body pushing and lower pulling (dead lift variations and closed chain hamstring curls) on one day and on the following day have the athlete do lower body pushing (squat variation) and upper body pulling.

• **Core training:** Is often neglected but is very important. A great analogy would be to think of the body as a wheel. The body should be strongest and most stable from the center (core) out to the extremities. A stable core with flexible hips serves as a link to allow forced transmission from the ground up to the arms and vice versa. The core is often thought of as the stomach but involves the hips, buttock, torso, and shoulder girdle. Core stability is very important in athletes and everyday life. Stability in athletics and everyday function could be thought of as the ability to keep the torso stable, while the extremities move.

It is paramount that athletes move from the hip as opposed to compensating with core.

This can usually be attributed to weak, neurologically inhibited core and inflexible hips. Core strength involves movement such as flexion, extension, and rotation. Most athletes do little to strengthen rotation. Core training can be done on the ground and progressed to standing. A Medicine ball day can

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be altered with conventional core strengthening and stability work. Medicine ball work can be used to teach the core neuromuscular system to first absorb force, than to produce force from low speeds to higher speeds. Medicine balls are great for rotational training.

- Recovery and rest: Often neglected and very important. Acute recovery following a workout involves soft tissue mobilization like mentioned above to relax the neuromuscular system and remove trigger points prior to static stretching or some other types of more complex neuromuscular stretching (contract relax, active isolated stretching). Following each stretch the muscle should be returned to full resting length than stretch.

Recovery following higher intensity resistance training should be 48-72 hours. I prefer 72 hours. For example off-season training splits using similar movement could be on Mondays and Thursdays and opposing



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movements on Tuesdays and Fridays. Active rest would be on Wednesdays and Saturdays, with complete rest on Sundays. Power, speed, agility, and even heavy strength training have a high nervous system demand. Overtraining the nervous system must be avoided at all cost. Nutrition and rest are very important to recovery and should not be

neglected. Remember the body only repairs itself when at rest.

Program design and planning are a requirement if a hockey player hopes to reach a high level of performance. At CORE we are trained to take the guess work out of program design. We take pride in helping athletes to make their dreams a reality.