Off-Ice Work Reinforces On-Ice Program

Off-ice programs are vital to the success of a hockey club both during the season and in the off-season. Chalkboard talks can be beneficial for reinforcing concepts, attitudes and systems, therefore increasing the value of your ice time.

Players need to concentrate and work hard to get the most out of the on-ice sessions at practice. Most coaches agree that off-ice programs should be fun, have an element of relaxation, and compliment the on-ice instruction.

In addition, a dryland training program involving strength, conditioning, injury rehabilitation, nutrition and team building drills is designed to reinforce the concepts on the ice, improve team strength/conditioning and overall teamwork.

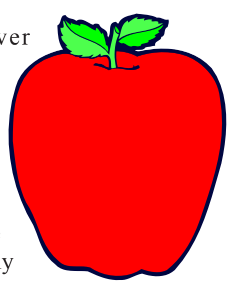
A dryland training program needs to be tailored for the skill level of the players involved. The following paragraphs will focus on the high school, travel, or junior team player. Players below these levels will primarily benefit from the previously noted activities.

Ideally, the dryland program is part of the continuum of the hockey team calendar year, being utilized during the season, post-season, off-season, and then again pre-season. Let's address three concepts of the dryland program:

Nutrition

Nutrition is listed first because it should be considered the most important of the three concepts. Without adequate fuel and energy sources, a player will not be capable of performing in the other areas of the dryland program, or on the ice for that matter.

Since the demands of the sport of hockey call for maximum intensity for short duration, the body requires adequate fuel storage in the working muscles and liver. The energy stored in the bloodstream is called glucose and glucose is found primarily in candies, sweetened soda, and other simple or refined carbohydrates. This form of fuel lasts only a few brief seconds and cannot be relied upon to carry the player through the game.



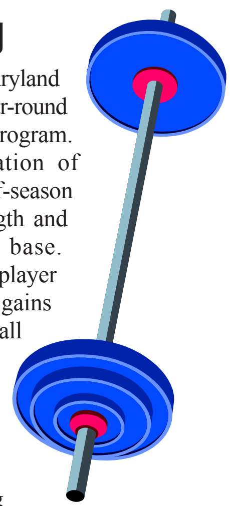
Muscle and liver glycogen are the two main sources of fuel or energy for a player during the game. These stores are built up two or three days prior to a game and are often depleted completely after an intense game or practice. The more complex carbohydrates like bread, cereals, pasta, vegetables and fruits are good sources of these necessary forms of energy. Long term energy requirements rely on fat as a major contribution and proteins are essential for muscle repair and recovery after exhaustive exercise.

Hydration of the athlete is crucial for maintaining performance levels on the ice and also for recovery afterwards. Levels of performance can drop with a loss of 2-3 pounds of bodyweight due to sweating during exercise. If not adequately replaced, these diminished fluid levels can impair performance even further, and compound the risk of more severe problems.

Fluid intake should be 8-10 ounces 15 minutes prior to exercise, 4-6 ounces every 10-15 minutes during exercise and during recovery consume 8-10 ounces per pound of bodyweight lost during exercise. (United Dairy Industry of Michigan, 8/98). Proper fluids include water, sport drinks like Gatorade and Powerade, water, water and more water.

Good eating habits need to take place each and every day regardless of whether a player is on the ice that day. This pattern of regular food intake helps to establish the muscle and liver stores of energy (glycogen) and keeps the body fully hydrated. A pre-event meal should be eaten approximately 3 hours prior to the event and consist of complex carbohydrates, some protein and minimal fat. Don't forget the water!

Strength & Conditioning



This portion of the dryland program is essential to year-round success of any hockey program. The valuable preparation of the body during the off-season helps to increase strength and maintain an aerobic base. This phase is where a player makes the noticeable gains in size, quickness, overall speed, and endurance—tangibles on the ice.

One needs to take into consideration the time of the training calendar, specific goals for the team and individual players, and overall objectives of the program before just showing up in the weight room and lifting three sets of 10 reps for every exercise known to mankind.

Sport specific exercises for hockey players include leg extensions for the large quadriceps muscle in the front of the leg, leg press to develop the hamstrings, gluteals, and quads. Upper body workouts can be fairly generalized to accommodate a number of different exercises and provide the athlete with variety. Chest press, shoulder raises, pull-ups, upper arm curls, pull downs, and upper back to name a few. Don't forget the important trunk strengthening too.

These exercises are best suited in the weight room but can also be performed using partners, hand weights, and good old-fashioned bodyweight as well. A certain amount of time should be allocated to agility, plyometrics, and other sport specific coordinated drills.

A strength and conditioning program should be carried out during the season in order to maintain the gains made during the off-season and provide continued support for the musculoskeletal system aiding in injury prevention. This is where the experience and knowledge of a Certified Athletic Trainer or exercise physiologist can be an asset. One must finely balance the rigors of practice/games with continued off-ice strength training and agility so as to not overwork the body and its systems.

Teambuilding

Finally, the importance of teamwork cannot be overlooked and can be easily incorporated into the schedule of team events, such as pre-game meals on the weekends, partner or group workouts off the ice, or even so far as a specific team building course like rope confidence track.

Trying to make players like all of their teammates is often a challenge that seems hopeless. Here are some helpful hints:

- Work out groups during off-ice training that rotate partners every drill.
- Have a couple of players host the weekend team meal, including planning and preparing the meal.
- Play unfamiliar games that force players to interact on several levels with others.
- Change the dressing stall assignment every so often. Rather than defensemen on one side, goalies in the middle and forwards over here, shuffle the players like the lineup card.
- Recognize who the leaders of the team are behind the scenes. Who do the younger players look up to? Are there cliques among the position players? Do your best to keep these groups and individuals from having their own way every time a team decision is required.

Hopefully with the inclusion of a proper dryland training program, your off-ice work will enhance the productivity on the ice as well as improve the quality of your practices. There are many shapes and forms a dryland program can assume, it just needs to be flexible for the team and the team of individuals participating.

Jeffrey A. Kline is a clinical manager of physical therapy and athletic training services for Oakwood Healthcare System. He is the athletic trainer for Dearborn Divine Child hockey and conducts dryland training programs. He can be reached at (734) 246-8125.