

BY IAN TAYLOR,
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'TECHNOLOGY' & SKILL DEVELOPMENT

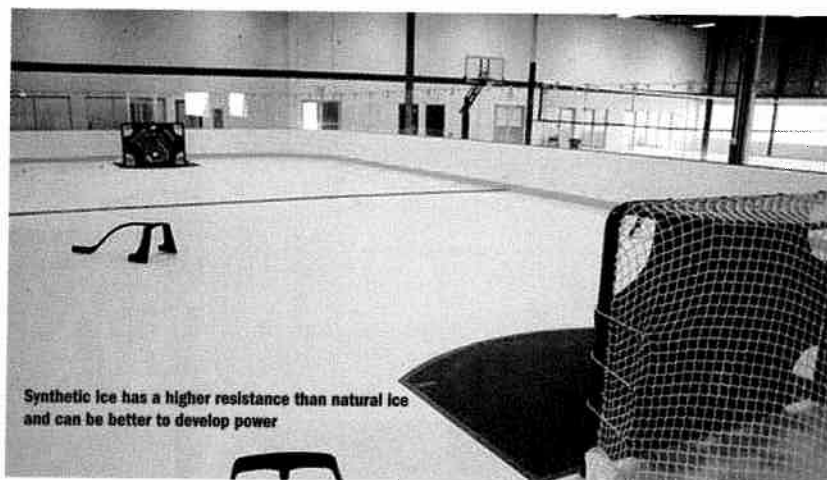
When considering the impact of technology on the game of hockey, there has been one area where we have experienced many advancements over the past few years. One of the things that jumps to mind immediately is equipment such as composite sticks. Within coaching, the use of video is an innovation that goes back to the 70's and "Captain Video", Roger Neilson. Today, coaches and teams have exposure to all types of skill development DVD's and CD's, not to mention YouTube.

What about skill development? How has technology affected this area for players? When discussing unique ice usage in an earlier edition this year, we touched on the demand for ice and the influx of training rinks that have been built recently across Ontario. Training Rinks can be anywhere from 1/3 to 2/3 of the size of a regular rink and have come about largely through a demand for additional ice time. In some new facilities, we are seeing 'Shooter' or 'Goalie' ice pads in addition to the full rink. The ability to provide 'real' ice training opportunities for a player to work on skating, shooting, and puck control in a confined space provides the player with additional skill development opportunities.

SYNTHETIC ICE

Since our Fall edition, I have been visited to a couple of new training facilities that included these smaller surfaces for players to access additional development opportunities. The difference is that these facilities do not use 'real' ice but rather synthetic ice. Synthetic ice has been around for twenty years in various forms. It is constructed from specially formulated plastic panels that are designed to achieve the balance between ultra-high abrasion resistance and a surface that is soft enough for edging and stopping.

Originally, synthetic ice was used more as a surface from which to shoot pucks or in studios used for goaltenders, who could stand or execute saves on a surface similar to ice. Perhaps the biggest advancement with synthetic ice is the improved installation process which makes the ice pad



virtually seamless, and this has provided the opportunity to create training rinks and to skate on the surface as you would ice.

Synthetic ice claims a ten percent higher resistance than natural ice,

providing athletes with the opportunity to develop power without the need for parachutes or resistance bands. I have to admit, I was skeptical when we visited two training centres featuring synthetic ice. We visited a newly

opened facility in Stouffville, The Hockey Lanes where we met owners, Kolya and Tamara Pelowich, who gave us a tutorial on the product.

We asked about the ten percent drag. What exactly does that mean and how does it compare to real ice? I was told that "It is the equivalent to second period ice. There definitely is a conditioning effect; you cannot glide as long, forcing you to work harder". Their facility features 'lanes' for shooting on targets or goaltender training and a 40' x 80' synthetic ice training rink suitable for providing the opportunity to work on skating and puck handling techniques.

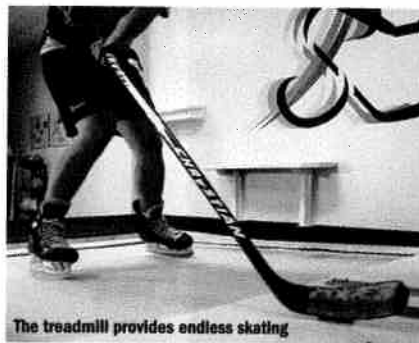
We also met with Paul Macey, who operates Endure Sports, a state of the art facility on the Oakville/Mississauga border. Aside from the training benefits, Paul explained that synthetic ice can be used anywhere, without the need for refrigeration units. It requires low maintenance, no electricity, can be used year-round and is environmentally friendly.

He also mentioned that more people are looking for residential use where you can create practice pads in your basement or backyard, which is coincidentally how both facilities started - looking for additional development opportunities for their kids. What was the result? The combination of synthetic ice with smaller size training rinks provides an efficient, low maintenance training resource for players.

SKATING TREADMILLS

Skating treadmills have also been around for a number of years but have become more commonplace recently. The skating treadmill has a skating surface area of 3.2 square metres, and is covered with a series of parallel polyethylene slats secured to a motor-driven belt system. The skating surface is prepared with silicone oil to simulate the surface friction of ice.

Treadmill training is scientifically designed and tested to provide participants in the program with an on-ice feel while trainers work to analyze each skater's mechanics and techniques. The treadmill provides the athlete with an endless ice surface, so that they may adapt to the stimulus provided as speed, elevation, and resistance are increased. Participants are placed into a modified climbing harness



The treadmill provides endless skating

and suspended from an overhead tracking system in order to ensure their complete safety.

Dr. Kelly Lockwood of the Skating Lab and an Associate Professor at Brock University has spent the last 15 years researching the best practices in athlete development - specifically in treadmill training. She identifies the following benefits to treadmill training:

- Promotes a longer, more powerful skating stride
- Enhances foot speed, as well as leg strength
- Improves both aerobic and anaerobic fitness
- Increases core strength
- Enhances shooting, passing and stick handling techniques

"TREADMILL TRAINING IS UNPARALLELED WHEN IT COMES TO: IMPROVING TECHNIQUE, ENHANCING ATHLETIC CONDITIONING, AND BOOSTING CONFIDENCE,"
EXPLAINED DR. LOCKWOOD.

As with most training tools, the treadmill is only truly effective when used properly. Dr. Lockwood reinforced this fact by explaining how players should be skating the treadmill in 'shifts', focusing on giving maximal efforts for 5-50 seconds at a time...mimicking the explosive movements of a game. Over-speed training is another aspect of the treadmill that permits players to skate at speeds impossible to reach on ice, building confidence and buoyancy that players will carry into a game or practices.

The minor hockey community continues to provide more new and exciting opportunities for players and volunteers - these are just a few new ways technology provides additional opportunities - let us know of any new and innovative programs in your area - Hometown Hockey provides us with a great opportunity to share ideas and best practices throughout the OMHA community.

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