Decisions for Fast Hockey

Optimal performance in today's game is about speed. Speed in skating, quick hands, and a lightning release. These things are what we consider to be fast hockey. Speed in each of these elements of hockey is characterized by rapid but coordinated bodily segmental movements. A determinant is also physical fitness. Fitness cannot be undervalued. But speed demands originate from the control center of the body. The brain. Superior knowledge and the application of that know-how is really where speed comes from.

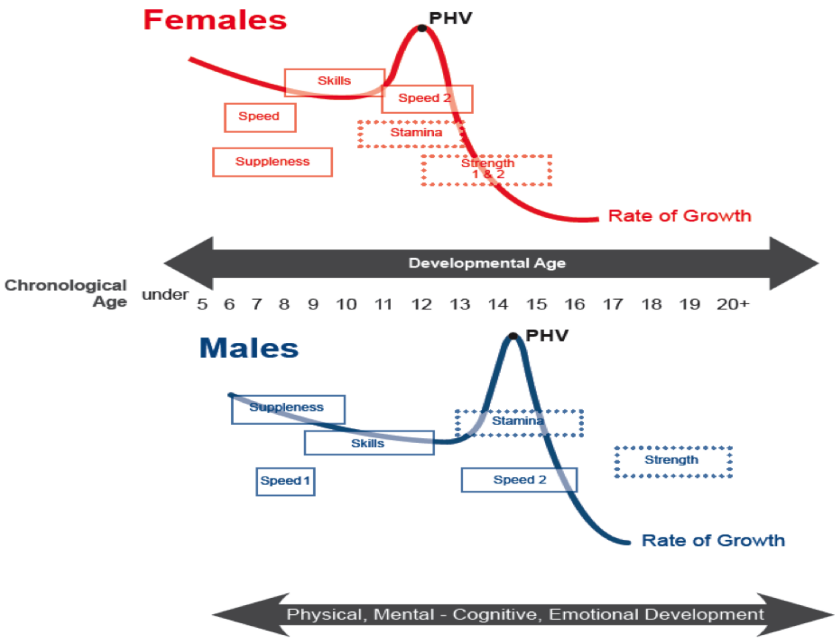
In sports, and with ice hockey specifically, playing at speed isn't an easy thing! To be fast with the skills of hockey each of the fundamental building blocks of athleticism must first be attended to and developed optimally. These building blocks are balance/stability, agility/dexterity and coordination.

In addition, to be a fast hockey player learning, shaping and refining the fundamental sport-specific skills of hockey is the next vital action. Each of the skating skills, each of the puck skills (stickhandling, passing and shooting), and each of the checking skills (including stick checks, body contact, and body checking) must be introduced, described for the athlete and then correctly conditioned. Individual, group and team tactics can be interwoven and shared with players. The building blocks, the fundamental skill sets, and the sport-specific requirements require a significant investment of time, effort and teaching to be brought to an acceptable level of competence, to be suitable and then to be a platform for playing fast.

In each zone quickness is essential. In the Offensive Zone (OZ) fast recall and lightning application creates immediate scoring chances. Analytics of scoring chances indicate rapid drives, fast penetrating passes and instantaneously released pucks create an offensive threat. Because of these facts individual and group tactics, quick tempo plays, and imposing rates of changes (changes of direction, changes of pace) are the constructors that should be earmarked for practice and training.

Similarly, defensive tactics executed with lightning quickness are trainable responses that benefit from simulated efficient practice. Coaches and instructors who use modalities like small-area sequences and games in practice and training are building focal points, understanding, and working memory. Post-practice reminders and other methods like off-ice/dryland, video, chalk talks etc. can then be applied to encode the information into long-term memory. Use these above-noted teaching tools because they will forget, and it is in the remembering that the player will truly learn.

As mentioned, physical capacity and ideal body mechanics go hand in hand and are also critical to the application of speed when playing but, especially vital is rapid cognition. In other words, the proper selection and the correct application of fundamental skills. Of course, we see this fact when watching the game. When players select skills and tactics correctly an immediate and significant advantage is cultivated.



As trainers, instructors, and coaches we therefore must also be aware that speed development in sports is linked to specific growth and development windows. Select ages, for example, are directly correlated with when the human body is optimally ready for the consequences of training and, in this instance, the development of speed. For boys, the first-speed training window occurs between the ages of 7 and 9 years. Fortunately, a second window opens between the ages of 13 and 16. For girls, speed training windows occur between 6 and 8 years and between 11 and 13 years. These optimal adaptation opportunitie correspond to U9 and U16 (for females U8 and U13) hockey. This evidence suggests that hockey curriculums at these ages should emphasize speed training and exercises. Doing skill work, drills and even off-ice work at speed is recommended. This upstream insight and prescription are important so that the product of this training can be demonstrated at older ages and in subsequent performance stages. Every training session, within the above specified age ranges should incorporate speed work.

The importance of the correct training prescription to maximize the athletic potential for speed cannot be over-emphasized but we as coaches and skill coaches must also look beyond just the physiological training of players when it comes to developing speed. The rapid execution of both simple and complex skills is mostly about which and when a motor decision is required. Or in other words a neuromuscular response ability. When it is laid and well routed, this neural network can be accessed by the players creating the "blink of an eye" instantaneous operation that really good players build reputations on. In other words, a player's perceptive and cognitive response/ability and proficiency in accessing what they have previously learned and stored in memory is the driving determinant of speed in gameplay. The truly fast players differentiate themselves from the slow in this main key decision accessibility specialization. It is conditioned and a necessity. Especially at elite, pro and high-performance levels of play.

To build these perceptive, cognitive and memory differences sports science research suggests that players need to rehearse, fail, re-rehearse, forget, train some more, fail some more, recall and apply and then refine a skill or cluster before they can get fast. In simplistic terms, players must go to their long-term memory (LTM) to be able to perform fast. LTM is where what to do, where to do it, when to use it, and how to accomplish it, information is stored. It is where previous successful rehearsals and frustrating faults are also stored.

As coaches, we do not want players to become on-ice problem-solvers, in games. Problem-solving is a slow and methodical process. The manufacturing of responses during game time or in performance stages is slow taking far too long to be practical or fast in any sense of the word. Problem-solving and piecing together physical solutions is a slow process meant for practice environments.

When players can instigate learned tactics and skills, including prescribed team strategies, speed will be realized. During games "reading" a play or situation is far too slow. We do not want our players to become problem solvers during games. Nor do we want them to use a FIO (figure it out) process when the expectation is performance in games. If we seek speed and performance, it demands the application of stored knowledge from long-term memory, explicit attention, pre-event readiness and sustained three-period focus. Have you ever heard a player say, "Coach, I didn't know what to do there so I..." This player cannot be expected to be fast; they don't have the skill required encoded. Or "Coach, we should try to...". These are indicators that players are trying to survive, adapt and use FIO problem-solving in games. For the coach, it is your cue that the players haven't yet learned, and therefore any of their responses (right or wrong) will be quite slow.

Doing the right things quickly in competition requires a very large knowledge base, a good understanding of principles and an even better grasp of many on-ice situations. It is what we hockey people like to call "game sense" or "hockey IQ". This quality is the player's ability to select and/or react to on-ice opportunities, gaps or openings. They are about a player's recognition and recall of what they have learned and stored in memory. The "I've seen this before...I've done this before...I know this...this will work..." are all thoughts fast players have. Usually, unconsciously. These types of thoughts stream through the player's neural network and fire quickly into that neuro-muscular response roadmap-built years prior. Any doubt or question by the same player results in errors and/or drastically slows response time.

As coaches, we can assist players with becoming fast by ensuring that seasonal planning and chosen hockey curricula are aligned correctly with your players' and teams' needs. Of course, one needs to teach fundamental game-useful skills. This is done best when it is provided in a well-organized, progressing or scheduled manner. Seasonal or periodized planning, curriculum sets, and age-defined skill inventories are where these resources are available in this respect. In terms of additional citations or references, coaches should research youth motor growth and development materials and publications. A tremendous amount of valid and reliable information has been published on athletic readiness in the last decade. (See Long Term Player/Athlete Development Model (LTPD) and/or any writings on Physical Literacy (PL).

As a coach the design of optimal environments for players is a must. When creating this fertile ground advantages are realized. This is only done through periods of extended, but balanced training/practice. Practice is then followed by tests. These tests are competitions (games) during less(er) competitive time frames. Evidence from studies into athletic mastery and practice now proposes that varied methods of training are best. As such, it is prudent to challenge players by exposing them to numerous types of practice. So long as practice time is structured so that players can discover, shape and (begin to) understand. Where they (can) ask questions...recognize, clarify, stretch themselves physically and mentally, and experiment with what is being taught and apply it. When players see, feel, hear and experience skills, tactics, concepts, and strategies they will encode these into memory. This method is a cultivator of speed-response potential for hockey players.

Progress is often very slow when it comes to encoding learning experiences into Long Term Memory. But it is also because, in movement and sports domains, athletes must move through each of the (3) stages of learning methodically.
These stages include:

1. The cognitive (thinking) stage,
2. The associative (linking) stage and,
3. The autonomous (reflexive/automatic) stage.

Each of these stages can be considered as a condition of learning that is necessary to eventually be a fast hockey player. For example, when a player reaches automation of a skill it can be accessed and applied in the blink of an eye.

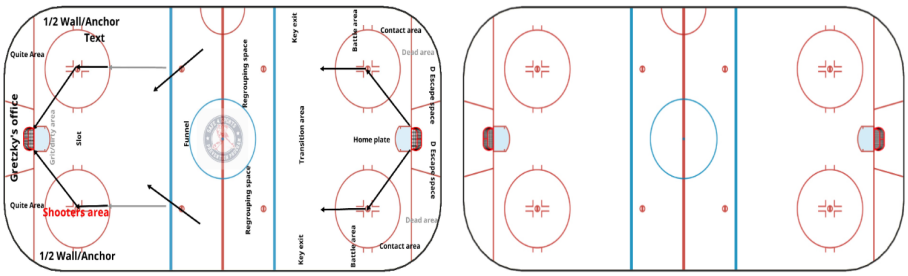
In the early stages, however, players are slow. They must think and concentrate on what and how they are accomplishing a skill. They need a tremendous amount of queuing, and feedback from coaches to confirm that they are doing things correctly. They have no context otherwise. Beginners also benefit greatly in the early stages of learning from visual information. This includes watching their peers. And, of course from copious amounts of encouragement and positively framed skill correction.

In the middle stages of learning a skill, players must invest a lot of time to "get in the reps". Unfortunately, competing against skill acquisition is the law of diminishing returns. This law reveals minor improvements with substantial amounts of effort and time. Major setbacks also characterize this stage. Players often understand more than they can do physically. Their rapid growth also makes them awkward and inefficient in their movements. But as they start to self-correct and self-cue during this stage results can suddenly come rapidly. Coaching is vital at this stage. Managing expectations, creating successes and selective, well-timed feedback and praise should be offered.

In the final stages, players find success kinesthetically. They begin to get good at things and show signs of mastering greater and greater skill levels. They can demonstrate the skill or task in a variety of situations under noteworthy constraints. In other words, the skill becomes stable for the player, predictable for the coach and most importantly, rapidly accessible so that performance can be performed at faster and faster rates.

It is important to note that at the later ages and stages of athletic performance "...all teaching is not learning". Regardless of the method chosen to teach skills and tactics, the skills and tactics take time to be sufficiently encoded so that recall and use in games are possible. This recall, however, is rarely guaranteed. Using mixed methods in training and strategies of practice and learning is therefore important. Mixed methods have been cited in motor development research as beneficial. Closed, deliberate, open and random practice/play types each have a place in the development of fast players.

Nevertheless, recent evidence has described shortcuts to speed. This method matches a player's needs to discover, feel, try (and fail), try (and forget) and then enjoy the success of the right choice, decision, and ideal execution. As a coach, adding challenges at the edge of the player's competency, variations to drills, and rule changes to small-area games suggest a way forward to building fast players. Don't worry too much about chasing perfection here. Move forward with the next thing in your curriculum using planned intervals and then go back, if needed. This see-saw approach suggests a (better) formula for building McDavid-like possibilities for speed.

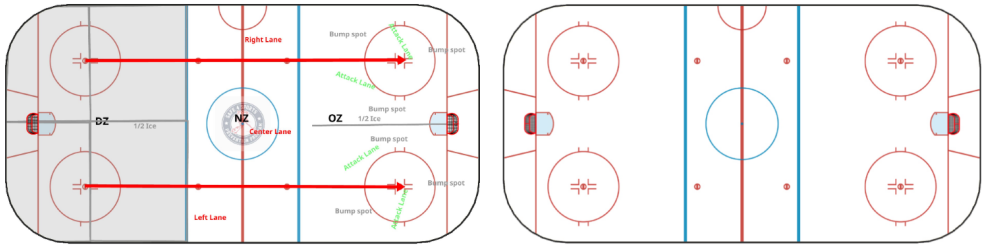


DESCRIPTION:
Player's actions are dependent on location, zone, area and point of attack.
Because of this landmarks on the ice are nescessary cues. Landmarks are descriptive terms that are quickly recognizable by players and that can be linked by players to specific preferred actions, tactics and game responses.

KEYPOINTS:
Effective cueing using landmarks, immediate feedback to allow players to recognize and access learned skills, tactics fast.

Coaches that uses landmark cues are communicating in a performance shorthand that drives quick and effective applications on ice.

Players, at the elite and end stages of development, also benefit if they are provided with shorthand to be used in competition. Coaches that use descriptive language best and those that use "attention and recognition coding" are allowing for quick memory retrieval. This shorthand, when used well, acts as a quick reference for players to use in competition. It is evident when coaches use precise (understood) cueing, and prompts (lingo) that draw a player's attention, focus and awareness that quick and correct things are accomplished on the ice. Cues like locational landmarks, predictable and repeating patterns of play and shape-like cues that players can notice and attend to work well.



DESCRIPTION:
Identification of lanes and zones allows players a conceptual appreciation of the ice.

KEYPOINTS:
Terminology to describe lanes and zones can situate players and connect them to roles and responsibilities by location.

Landmarks include zones, quadrants, lanes, and lines. Shapes include squares and boxes, rectangles, diamonds, and circles. While patterns include straight lines, arching approaches, angles and curved paths or directions. Similarly, verbiage that describes on-ice spacial cues like, "white ice", "quite zones", "dead zone" "open ice", "contact areas", "slot", "home plate" etc. each having incredible merit in building fast players.

Above all else speed and its antecedents are trainable. Do not assume that this vital component of the modern game will just happen. Take some time to evaluate your methods and ensure that speed is front and centre in your coaching considerations.