

INTERNATIONAL ICE HOCKEY FEDERATION



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Conditioning and skill consistency –  
followed up by on ice presentation

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## GAME-RELATED SKILL STRUCTURE

In today's ice hockey, a match accounts for perhaps too big a share of adaptive responses of the organism. Game-related skills and the ability of grouping and using them as necessary need a parallel individual development if a peak performance level is to be achieved. This requires a specialized coach. As a rule, practicing the above focuses on individual specific skills. If perceived as indicated above, the notion of techniques and skills lacks a greater level of emphasis on the term "game-related". Actually, the term "game-related" captures the match in its entirety, including the environment in which it is taking place. The analogy of the inner biological substance, relations of outer motoric manifestations and psychic reflections transposed into practice sessions lay the groundwork for being able to use the term "game-related".

The game-related skill structure expresses the technical stability/repeatability and game-like continuity of skills. The consistency of techniques in concatenated skills and couplings of movements of body segments are performance indicators. The game-related skill structure is an outcome of the specific neuro-muscular endowment of the player, cognitive sensitivity and organization of practice sessions. The neuro-muscular machinery of the body controls neuro-motorics. A repetition of differently structured motoric stimuli brings about an enhancement and reinforcement of playing habits. Recording and storage of events and their retrieval in specific analogous situations take place along connecting, central and peripheral neural routes of the body. The motorics of the game thus becomes automated. Practice session/training stimuli must constitute, or be representative of, sections of or situations occurring in an actual match.

The motorics of the game comprises two essential categories of movements, namely:

- dynamic component – sources imparting movement (strength, speed), made possible by a metabolic nutrition of muscle labor; and
- motoric component – an outer kinematic component, which can be objectively observed. This is brought about by the neuro-muscular machinery of the body, which initiates, associates and couples movements.

The motorics of the game requires acquiring a broad portfolio of associated skills and linked movements. Practice sessions must focus on exercising primary muscle groups, which initiate links between skills and skating. The objective is to achieve consistency in the technique of associated skills and skating. The association of game-related skills and skating (main mover) results in

standardized and linked motoric concatenations, associated with a particular segment of the game.

#### Configurations of Game-Related Concatenations

Associations of game-related skills show the flow of the motorics of the game. The term "association" as used herein denotes a movement-related involvement in an organized motoric grouping of skills. Concatenating or linking the movements denotes an optimized kinematic interaction and agonistic action. This concept of the motorics of the game is based on a kinematic involvement of somatic segments (legs, arms, torso) and coupling their movements. A game-related action of a somatic segment (skating) is a functionally linked kinematic member of other body segments (feinting, dodging, shooting). Insofar as motoric interaction is concerned, the interacting kinematic system referred to above regulates and controls somatic dynamic stability. The dynamic body balance implies a movement cooperation pattern and is the basis of technical skills (fast hands – calm footwork; fast footwork – slow hands). The body stability is determined by the following factors:

- load-bearing central motorics – SKATING
- connecting or linking actions – INERTIA, TURNS, CHANGES OF DIRECTION, CURVES, in other words INERTIA and DEXTERITY
- acute/urgent actions –FEINTING, SHOOTING, PASS, EVASION, DODGING

#### Training/Practice Exercises

The exercises should consist in linking game-related skills to skating. The relations of game-related skills and skating occur and are practiced along standardized advance routes and/or in localized centers of skating mobility. They may be organized with or without an opponent. In the former case, there is usually a time or "territory" handicap imposed upon one's own team.

The motorics of the game, cognitively and physically analyzed as outlined above, makes it possible to:

- form up and strengthen the neuro-motoric mechanism of the game;
- create and secure memory entries;
- develop habits of game fluency insofar as puck control is concerned;
- improve and enhance the flexibility of the system of use and replenishment of energy supplied to and consumed by the motorics of the game; and
- develop creativity.

Typically, an exercise developing the game-related skill structure should comprise the following characteristic features:

- originality of advance routes and localized centers of skating mobility;
- elements of skill skating;
- hierarchy of game-related skills (evasion, feinting, fakes, changes of direction);
- configurations of skills;
- possibilities of follow-up cooperation and coordination.

#### Agility

Agility is a term used to denote a motion component grouping movements of body segments. It comprises not only the strength/force, speed and flexibility of movements, but particularly the coordination of somatic segments, as the body is performing lateral changes of direction, turns and lunges, which are all present in an exercise aimed at developing skating and game-related skills together. Interactions resulting from links between game-related skills and skating imply a certain level of agility in the motoric performance. Agility is not measurable and quantifiable in exact terms. However, it is seen very much in motorics. An integral part of this motion component is the flexibility of muscles, joints and tendons.

#### Individual Training of the Game-Related Skill Structure

In terms of its importance, contents and organization, the training/practice is focused on an individual player or a small group of players. The objective is to improve in-game motoric techniques in a kinematic flow of concatenated and linked skills. The training/practice is heavily focused on kinematic links between puck-handling skills and skating. A practice session aimed at improving defense-related skills comprises skating (agility and mobility) and puck-control and -stealing activities. The practice session thus involves an opponent as well.

Spots of kinematic links and couplings of movements are activated by obstacles on advance routes or at localized centers of skating mobility and agility. The exercises thus simulate motoric structures of a match. In the course of the kinematic flow of skills, partial movements spontaneously and continuously manifest themselves in the motorics of the game. The principle of kinematic association of skills also implies a combination or coupling of kinetic energy. Just like in a match, it is the player himself who makes on-the-spot selections of skill associations. The association selection may also be provoked in some cases. The repetitive exercises bring about a step-by-step fixation and

automation of essential motoric habits. Skating and game-related skills assume a motoric consistency as a result of practicing the game-related skill structure.

#### Coach's Role in Training the Game-Related Skill Structure

Coaching a practice session aimed at developing the game-related skill structure requires a professionally educated coach who can lead individual training. He should be experienced in the selection of the contents and level of physical load intensity of the session. Another indispensable prerequisite of success is the coach's creative ability, so that he can put together an attractive and novel exercise package. The ability to teach means that the coach should be able to see details and correct mistakes, but also to identify the importance and role of the player. Additional necessary professional attributes are represented by recognizing the benefit of live demonstrations, accurate comments and an ability to modify the exercise on the spot if circumstances require so. The coach must be respected for his achievements and tutoring style. Gaining the authority as a specialized tutor is a very demanding job.