



# GROWTH AND DEVELOPMENT

## GROWTH AND DEVELOPMENT

Having a positive and effective relationship with your players is necessary to ensure that they receive the most out of their hockey participation. Understanding your players' levels of physical, mental, social, and emotional development, and designing guidelines to meet your athletes' developmental needs, will help to establish a satisfying relationship with your players.

### Chapter Overview

- describe and understand the four main areas of development;
  - physical,
  - mental,
  - social,
  - emotional,
- recognize that there are differences in the levels of physical, mental, social and emotional development between and within players,
- identify the key characteristics of the four growth and development stages of athletes;
  - pre-adolescence,
  - early adolescence,
  - middle adolescence,
  - late adolescence,
- develop guidelines to meet the players' needs during the four developmental stages.

### Areas of Development

To understand the growth and development of a young hockey player it is helpful to understand the four main areas of development:

- Physical: height, strength and weight
- Mental: thinking and understanding
- Social: interacting with others
- Emotional: feelings and attitudes

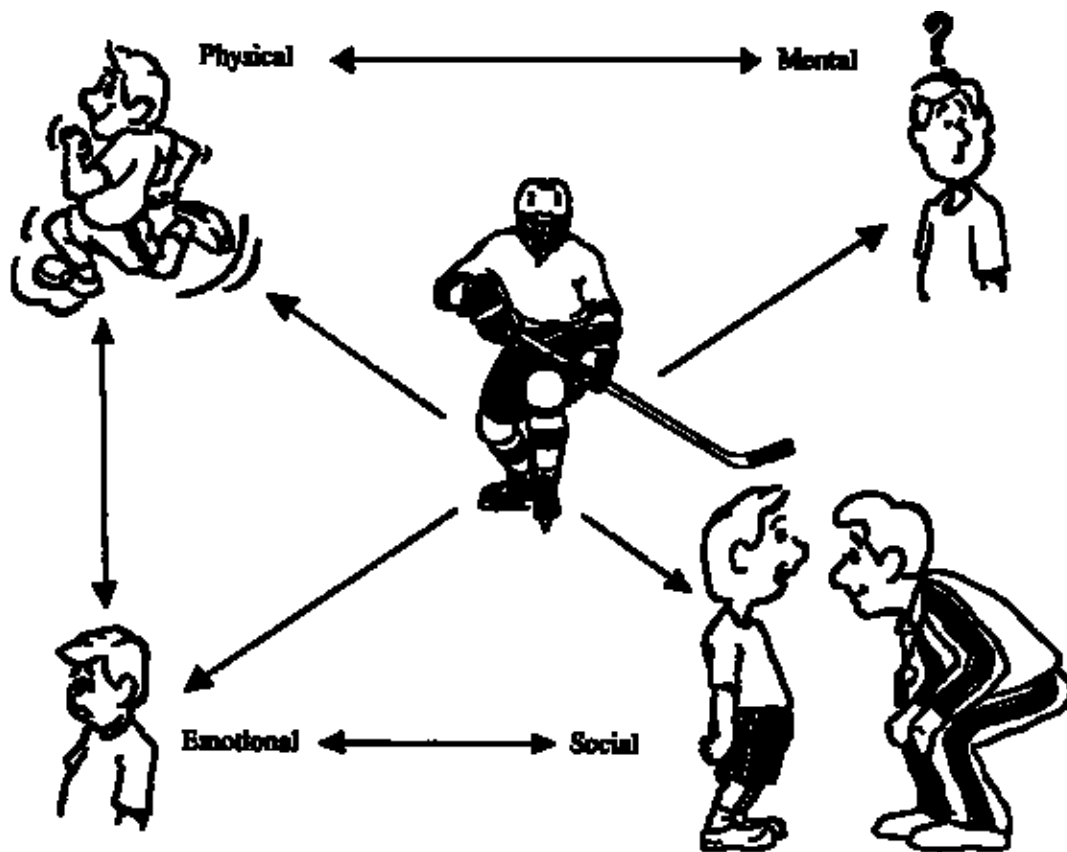


Figure 1: Schematic illustration of the interaction between the four main areas of development.

As is illustrated in Figure 1, the overall development of each player is influenced by a constant interaction between the four areas of development.

### What is physical development?

Physical development describes the changes which take place in the physiological makeup of an individual. Physical development is measured by such factors as height, weight, body build, strength, endurance, flexibility, rate of physical maturation, motor skill coordination (eye-hand, eye-foot), physical health, and body composition.

### What is mental development?

Mental development consists of memory, perception, language, information processing, and thinking abilities which influence decision-making and the understanding of the rules of play and team concepts.

## What is social development?

Social development refers to the ability to interact effectively and get along with others. Appropriate social behaviour consists of being able to get along with teammates, coaches, and parents, as well as showing respect for team and league rules. In a team sport such as hockey, athletes must understand their roles on the team.

## What is emotional development?

Emotional development is part of a person's personality development and it refers to the ability to express and control one's emotions. For example, before a big game it is important for players to control their level of anxiety or nervousness. Also, in frustrating situations, such as after an unintentional penalty or rough play by the opposition, it is important for players to keep their cool and display disciplined behaviour.

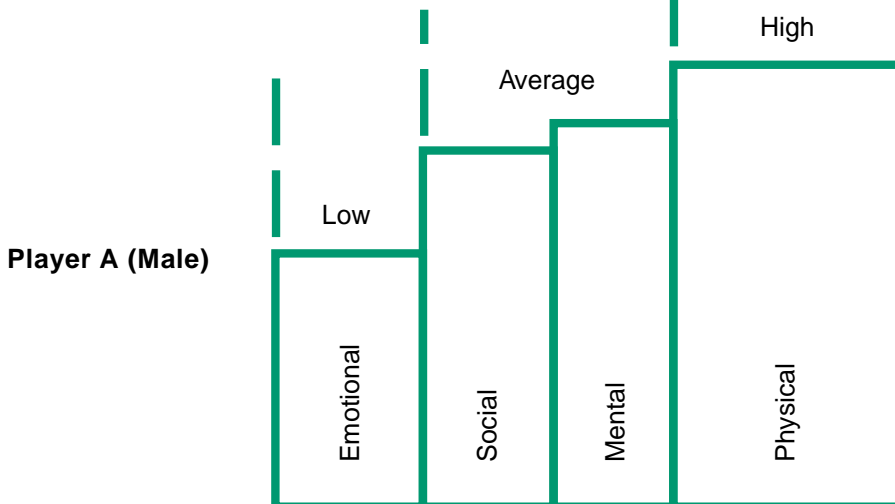
## Differences in Development

It is important to remember that even though the four main areas of development are highly interrelated, there may be different rates of development in each of these areas for each player.

As a result:

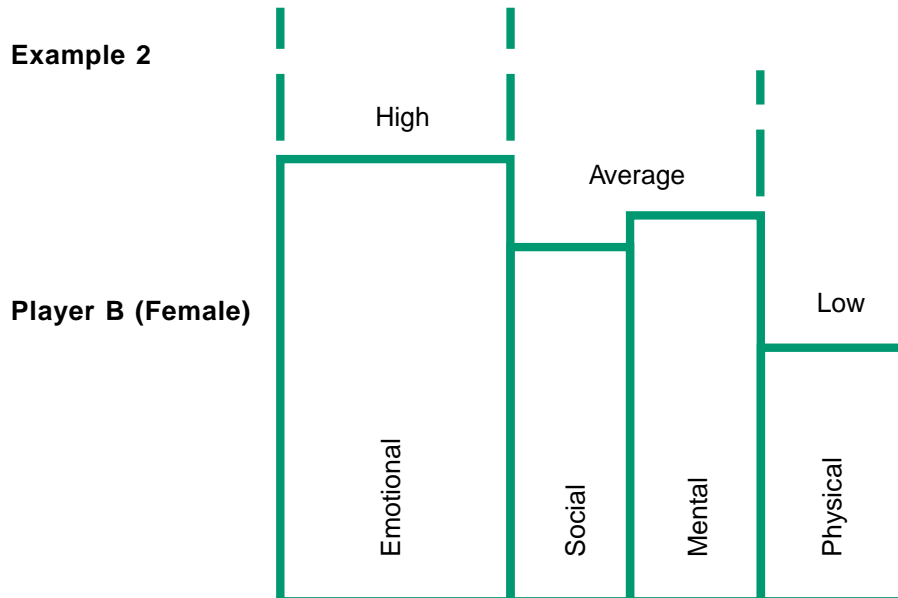
- There may be substantial differences between athletes in terms of the levels of their physical, mental, social, and emotional development.
- There may be differences within athletes in terms of the levels of their physical, mental, social, and emotional development.
- It may be useful for coaches to create developmental profiles for each player. Each athlete is unique and, therefore, each grows and matures at a different rate. The following two examples will highlight differences between and within players in terms of their stages of development in each area.

### Example 1



For this player, we can see that his level of physical development is more advanced than his levels of mental, social, and emotional development. The behavioural implications of this developmental profile may be the following:

- This athlete will be bigger and stronger than most of his teammates and he may possess excellent hockey skills.
- Due to the lag in the level of mental development, this athlete may tend to play as an individual without regard for the team strategy which the coach is trying to implement.
- Teammates may begin to reject this player because he is a “puck hog” and he may become a “loner” and his social development may suffer as a result.
- The lack of emotional maturity may cause this player to become easily frustrated when things do not go well and he may exhibit emotional outbursts, such as temper tantrums or arguments with teammates or coaches. During early adolescence, these tantrums may result from frustration and are typical of low emotional maturity.



For this player, we can see that her level of physical development is not as far advanced as her levels of mental, social, and emotional development. The behavioral implications of such a developmental profile may be the following:

- This player will be smaller and physically weaker than many of her teammates; however, she may possess excellent timing and coordination.
- This athlete’s level of mental or intellectual development will enable her to grasp quickly the concepts of her team’s offensive and defensive strategies.
- The level of social development may lead to this player being very popular with her teammates.



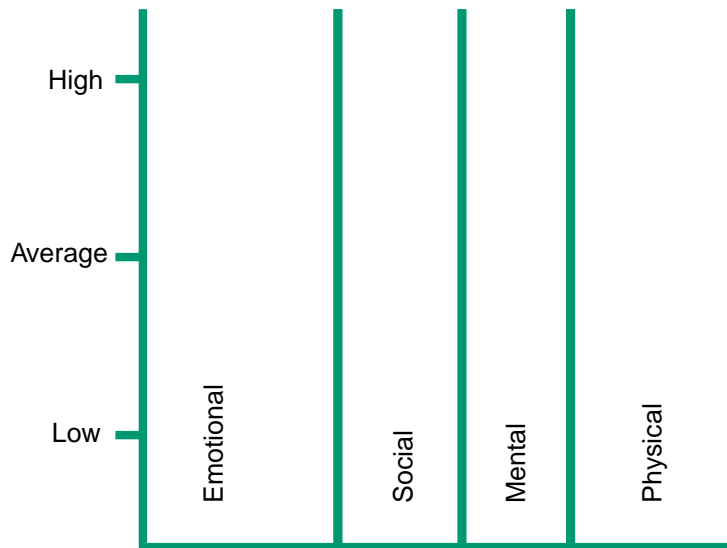
- This athlete’s advanced level of emotional maturity will help her to control her emotions and thereby allow her to refrain from undesirable actions such as taking unnecessary retaliation penalties.

**For the Coach**

Think of one of your players. What is this athlete’s level of development in the physical, mental, social, and emotional areas as compared to the other athletes on your team? What are the behavioral implications of the developmental profile you presented for your player?

Player: \_\_\_\_\_

Level of Development:



Behavioral Implications:

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## Stages of Growth and Development

The growth and development stages of athletes can be grouped into four categories:

- Pre-Adolescence (up to 11 years)
- Early Adolescence (11-13 years)
- Middle Adolescence (14-16 years)
- Late Adolescence (17-19 years)

By identifying and understanding the main characteristics of each of these developmental stages, you will be better able to meet the needs of your athletes.

### Pre-Adolescence (Up to 11 years)

#### *Key Features*

- *This period differs slightly between males and females as females tend to mature more quickly than males, thus reaching adolescence at an earlier age.*
- *Significant changes occur in body structure, perceptual motor learning skills, and character development.*
- *As pre-adolescence is the most formative period, coaches should pay special attention to the needs of the athletes in this category.*

**Early Adolescence (11-13 years)**

Key Features

- There is a rapid growth spurt which occurs earlier for females than for males (Figure 2).

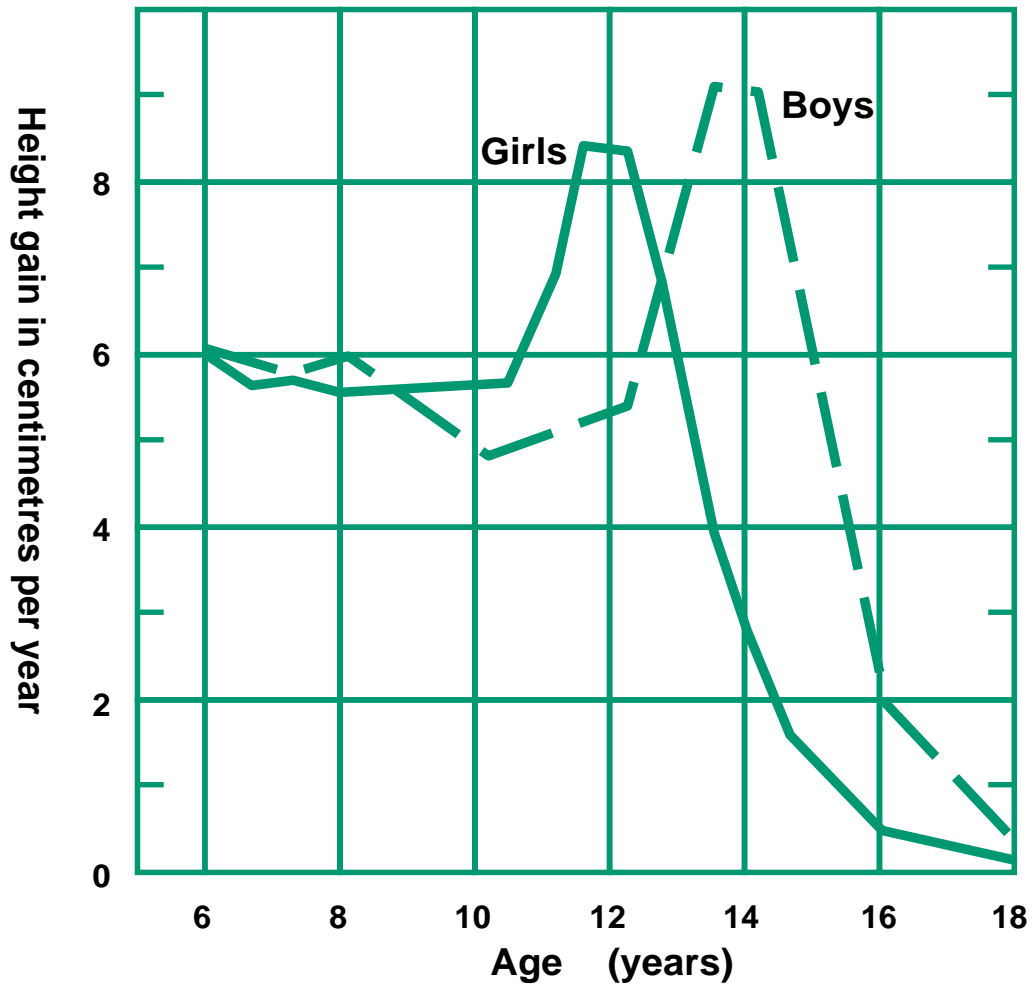


Figure 2: Velocity or Rate of Physical Growth  
 (Rate of growth refers to increments in height from year to year)  
 (From Tanner, J.M. Growth at Adolescence. Oxford: Blackwell Scientific Publications, 1962)

- The growth spurt may have a negative effect on the athlete's motor development, leading to awkwardness and a loss of fine motor skill coordination.
- The early adolescent may experience difficulties in learning new skills which require timing and coordination. For example, the player may have difficulty in giving a soft accurate pass, receiving a pass, or executing a snap pass.
- A rapid growth spurt may cause a lack of upper leg strength (quadriceps) which may negatively affect the skating stride if the player is unable to carry one's weight on the front leg in a flexed bent-knee position. To compensate for this, a player may skate in an upright position and exhibit a skating stride characterized by a high "heel kick" instead of a full leg extension.



Figure 3: Flexed Bent Knee Position

- Due to the rapid growth spurt, early adolescents become more aware of their physique and, through self-appraisal and appraisal received from others, they develop body images which in turn influence their self-images.
- Athletes develop the ability to reason and think in a logical manner. However, their attention is focused on the present with little thought of the future and long-term goals.
- Mood fluctuations and emotional outbursts, short in duration, are typical behaviours of early adolescents. Thus, tears may be seen after losing an important game, however, shortly after leaving the arena the athletes may be seen laughing and enjoying themselves, having apparently forgotten all about the loss.
- Frustration may be seen if the player has difficulty learning a new skill which teammates already have acquired (e.g., use of an outside edge for stopping). Fear of failure creates anxiety while the inability to perform a skill that others are performing causes frustration.

### Coaching Implications

Empathize with your athletes. Put yourself in their place and viewing events from the players' point of view.

- Remember that your actions and comments have a significant influence on the psycho-social development of these young athletes.
- Use positive reinforcement and demonstrate appropriate behavior (e.g., good sportsmanship).
- Do not “fly off the handle” if a player displays an inappropriate behavior out of frustration. Try to understand that the athlete is passing through a stage of rapid physical and psychological development and certain outbursts due to frustration should be expected.
- Provide clear and meaningful explanations of your decisions as early adolescents are developing the ability to reason and may question certain requests.
- Goal-setting should be limited primarily to short-term goals (e.g., learning to stop or to turn).
- Players in the early adolescent period will respond well if they are given some responsibility and the opportunity to participate in goal-setting.

### Middle Adolescence (14-16 years)

#### Key Features

- *The rate of physical growth is much less dramatic than in early adolescence.*
- *Body systems are beginning to mature and the athletes are acquiring greater strength, endurance, and coordination.*
- *Thinking abilities are more sophisticated and the middle adolescent is able to think in both an abstract and an analytical manner.*
- *Middle adolescents become more willing to understand and even accept another individual's point of view.*
- *Athletes become more aware of their physical potential and limitations.*
- *Players pass through a period of self-analysis which may lead to self-criticism and self-doubt. As a result, many 14, 15 and 16 year olds drop out of hockey.*
- *This period is difficult for young athletes as the heightened awareness of the gap between “who they are” (real selves) and “who they would like to be” (ideal selves) may cause feelings of frustration and failure.*
- *Middle adolescence is also marked by the desire to experience new events in life (e.g., drugs, alcohol, cars, other sports, choosing close friends, and establishing meaningful relationships).*

- *Conflicts with authority figures, (e.g., coaches, referees, and parents) may occur during this period.*
- *Actions and comments of coaches, parents, and significant others can have a major influence on the types of attitudes, values, and dispositions athletes acquire with respect to these individuals and sport in general.*

## Coaching Implications

Since middle adolescents are passing through a period of self-analysis, you can be helpful by attentively listening to each player's concerns.

- Regular informal conversations with athletes should be used to help them identify realistic future goals and the means to attain them. In so doing, athletes become more aware of their "real" selves. This avoids problems which can arise due to an "ideal" self conceptualization.
- Be aware of the social influences on your athletes (e.g., drugs, and alcohol).
- Provide players with more detailed explanations and rationales when teaching skills, tactics, and systems.

## Late Adolescence (17-19 years)

### Key Features

- *Except for the late maturers, there is limited physical growth.*
- *Strength and endurance will increase significantly for athletes who follow intensive training programs.*
- *The late adolescent spends a lot of time establishing a value system with norms, values, and beliefs that they intend to live by.*
- *The athlete's personality is now quite firmly developed and strong feelings of independence exist.*
- *In the players' attempts to fulfil their needs for independence, certain confrontations may occur with significant others (e.g., parents, coaches, and teachers).*

## Coaching Implications

- Recognize the importance of your athletes' needs for independence and personal responsibility.
- As some athletes become heavily involved in weight training programs to increase their strength, you should remind them of the importance of flexibility exercises. Also, reinforce the need for a thorough nutritional plan.
- Ask players to run part of the practice sessions, participate in establishing team policies, and, in general, experience various types of independent and responsible activities.



- Ensure that all players understand the significant roles they play on the team.
- For late adolescents you can become a respected counsellor who assists the athletes in establishing their value systems.
- Work together with your players to develop challenging goals which can be achieved through highly specialized training programs.

**For the Coach**

In what growth and development stage are your present athletes in? List what you consider to be the three most important characteristics of their development. Design specific guidelines to meet the needs of your players.

Stage of development: \_\_\_\_\_

Three most important characteristics:

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\_\_\_\_\_  
\_\_\_\_\_

Specific guideline:

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