

# INTRODUCTION TO APPROPRIATE ATHLETE DEVELOPMENT 2020











## ACKNOWLEDGEMENTS

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# APPROPRIATE ATHLETE DEVELOPMENT

Swimming Canada first published its Long-Term Athlete Development Strategy (LTADS) in 2008. At that time, key deliverables and objectives were created, along with key activities for each stage of athlete development. Four strategies were identified to help Swimming Canada achieve those key objectives.

Those strategies included:

- LTADS – Competition Review;
- LTADS – Stage Skills Checklists;
- LTADS – Implications for Clubs and Parents; and
- LTADS – NCCP Integration.

Over the past 10 years, many of these strategies have been implemented. In 2016, the Competition Improvement Plan – National Events was introduced. This improvement plan resulted in major changes to the Swimming Canada national events program, which included the addition of Peak Performance Windows, a change in placement of national events, and alignment of appropriate ages for competition. The review also included the Open Water and Para Swimming programs.

In the Spring of 2018, the second phase of the Competition Review was completed, which included recommendations for Provincial and Developmental level competitions. The phase 2 review was created using the Athlete Development Matrix (ADM) detailed in this document within the Technical/Tactical/Strategic Pillar.

Following the introduction of the 2008 LTADS, NCCP coaching education was updated and continues to be updated as the work on the Athlete Development Matrix evolves. Appropriate Athlete Development continues to be a strategic priority of Swimming Canada. While this work will never really end, the creation of the Athlete Development Matrix will assist coaches, swimmers, parents, clubs, Integrated Support Team (IST) members, officials, Provincial Sport Organizations, and local communities to develop and deliver stage-appropriate programs.

Upon the delivery of Swimming Canada's Athlete Development Matrix, additional key deliverables will be developed to further support Appropriate Athlete Development (AAD) across all stages. This will include the development of resources and materials that will impact:

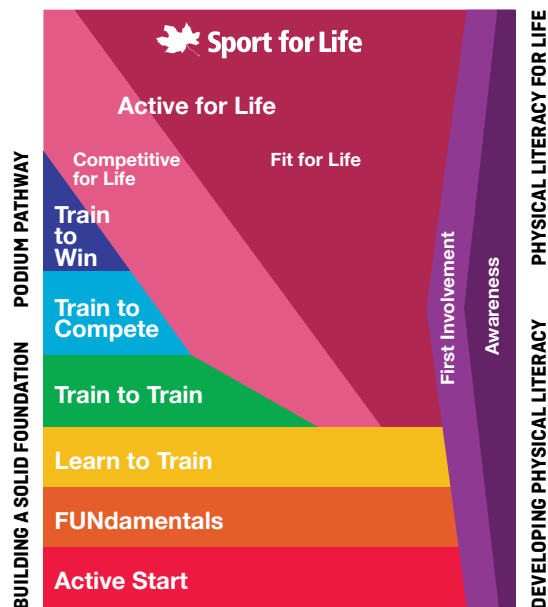
- coach education and development
- Integrated Support Team (IST) education and development
- parent engagement
- athlete responsibility
- athlete selection and progression
- club management
- communication strategies
- governance and leadership

# LONG-TERM DEVELOPMENT IN SPORT AND PHYSICAL ACTIVITY

## INTRODUCTION

In order to understand the athlete development matrix, one must have an understanding of the Long-Term Development in Sport and Physical Activity Model, formerly referred to as Long-Term Athlete Development Model (LTAD). In the current version of the model, Higgs, Way, and Harber (2019) state, “Long-Term Development in Sport and Physical Activity is a framework for the development of every child, youth, and adult to enable optimal participation in sport and physical activity. It takes into account growth, maturation and development, trainability, and sport system alignment” (p. 7).

## LONG-TERM DEVELOPMENT IN SPORT AND PHYSICAL ACTIVITY



## FIRST INVOLVEMENT & AWARENESS

“First Involvement and Awareness are integral components of everyone’s initial experiences in sport and physical activity. Physical literacy, while vital during the early stages, is not confined to the early stages—it can and should continue to be developed throughout the life course. The Podium Pathway describes the sport-defined excellence stages of Long-Term Development in Sport and Physical Activity and specifically applies to athletes on a trajectory toward podium results at the highest level of their sport. The updated rectangle reflects these changes.” (Long-Term Development in Sport and Physical Activity 3.0, Sport for Life, January 2019; page 13)

## ACTIVE START

Swimming is unique in that it is the only sport that does not have direct responsibility for first involvement and awareness at the Active Start phase of development.

Compared to other sports found in the Canadian sport system, Swimming Canada is the only Canadian sport that does not have direct responsibility for teaching the fundamentals of the sport to young children. Basic teaching is undertaken by organizations with a primary mandate of child safety, and learn to swim programs are mostly operated by Red Cross of the Royal Lifesaving Society. Swimming Canada has partnered with the Red Cross and Lifesaving Society in program design and development, but leaves delivery to them. Children identified as having swimming potential are frequently encouraged to join a swim club – often operating out of the same facility – in order to advance in their sport. Children learn to swim during the Active Start or FUNdamentals stages of athlete development and most often enter swim clubs at the upper end of FUNdamentals, around 8 or 9 years of age.

## FUNDAMENTALS (FUN) AND LEARN TO TRAIN (L2T)

Most clubs across Canada offer programs that provide swimming to children covered by these 2 stages of Athlete Development. The FUNdamentals stage is an important introduction to the sport. This stage will introduce basic movement skills, agility, balance and coordination. The Learn to Train stage will provide increasingly challenging and progressive experiences.

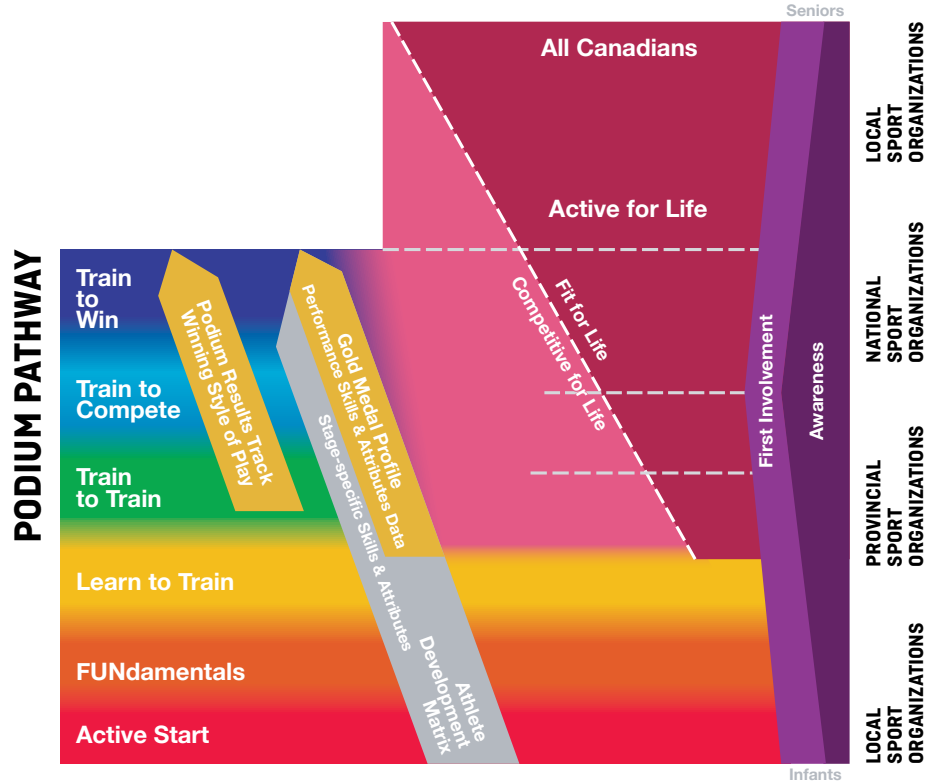
## TRAIN TO TRAIN (T2T), TRAIN TO COMPETE (T2C), AND TRAIN TO WIN (T2W)

The work of the National Program in Swimming Canada is focused around these 3 main stages of athlete development. Particular attention is placed on the Train to Compete and the Train to Win stages of the process, which we refer to as the Podium Pathway.

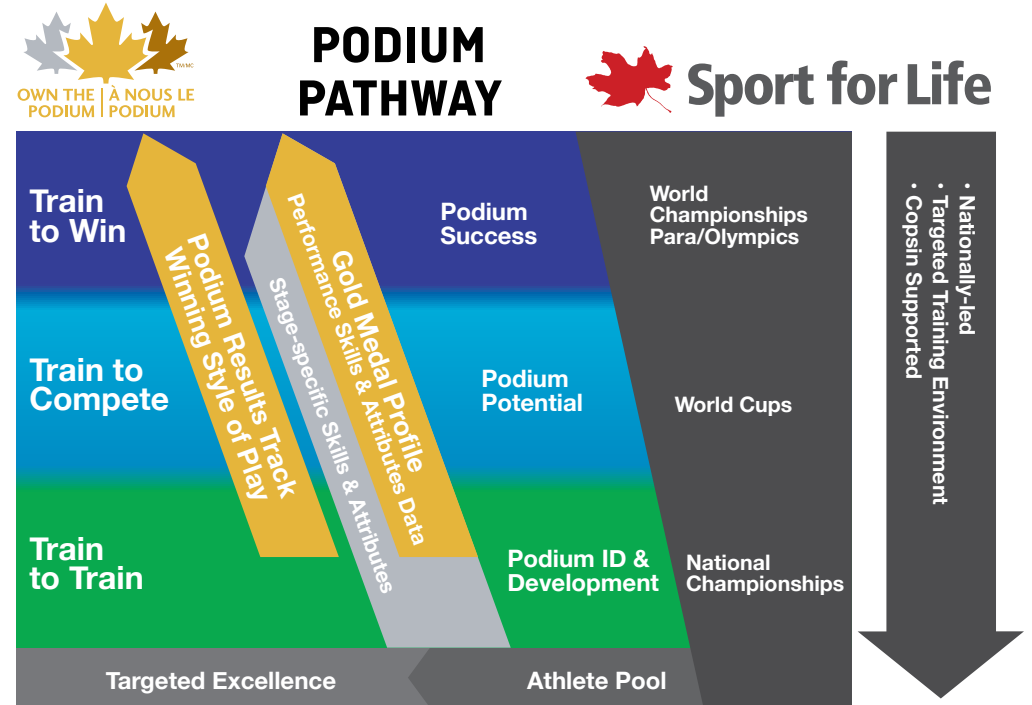
## PODIUM PATHWAY

“The Podium Pathway is about developing high performance athletes capable of winning at the highest levels of international competition, and bringing home medals from Olympic Games, Paralympic Games or World Championships,” (Way et al., 2019, p. 30).

## LONG-TERM DEVELOPMENT IN SPORT AND PHYSICAL ACTIVITY FRAMEWORK



(Long-Term Development in Sport and Physical Activity 3.0, Sport for Life, January 2019; page 31)



(Long-Term Development in Sport and Physical Activity 3.0, Sport for Life, January 2019; page 31)



## SWIMMING CANADA – WHAT IS HIGH PERFORMANCE?

For the Olympic Program, Swimming Canada defines High Performance as:

- “Top 8 World ranking with continual progression towards, and the achievement of, Olympic podium performances.”

For the Paralympic Program, Swimming Canada defines High Performances as:

- “A dedicated training environment,
- professional coaching supported by science and medicine, in and out of the pool,
- full-time commitment to achieving life-time best performances when it matters (i.e. – International summer meet), and
- a Top 5 in the world trending to improvement”

Swimming Canada recognizes that the pursuit of High Performance is a continuum, and that the above definition is broader than simply Olympic and Paralympic medal performances. Therefore, High Performance is viewed based off of three tiers of criteria in priority order (applies to both pool based and open water performances):

1. Podium performance at the Olympic and Paralympic Games
2. Podium performance at the FINA World Championships and World Para-swimming (WPS) World Championships (long course)
3. Swimming in the Final (top 8) at either the Olympic Games or FINA World Championships (long course) or top 5 at the WPS World Championships & Paralympics.

In no particular order, athletes may be identified or targeted as having potential to achieve High Performance if:

- They have achieved published ‘On Track Times’ (podium pathway), and show significant evidence of these ‘On Track Times’

- They demonstrate continued development of complimentary events that support their primary event focus,
- They have won a medal at either the FINA World Junior Championships and/or the Junior Pan Pacific Championships,
- They have finished Top 8 at the FINA World Junior Championships,
- Top 5 performance at WPS World Series event,
- They are a senior athlete who has made a Top 16 performance at the Olympic Games/FINA World Championships (50m) and continue to post performances that indicate improvement towards Top 8 in the world,
- They are athletes progressing from FINA World Junior Championships and/or the Junior Pan Pacific Championships top 8 toward top 16 in the world.

These criteria do not restrict athletes from achieving High Performance status through these more conventional routes. However, outside of achieving the aforementioned criteria, a significant performance (Top 8) at the Olympic Games or FINA World Championships (long course) or Top 5 at the Paralympics or equivalent would be required to be identified as such.

## Athlete Support

Sport Canada Carding is viewed as a way to support the continued development of targeted Canadian swimmers, and in itself is just one more step along the continuum of performance excellence.

## Training Season

As part of being identified as a High Performance swimmer, or targeted as having potential to achieve High Performance, there is an explicit requirement that the swimmer has a long course-focused training season; for most athletes, peaking only twice for the domestic trials meet and the targeted major summer meet. The swimmer would adhere to a 48+ week Yearly Training Plan, and most meets outside of the Spring Trials and Summer International meets, which are in-season and viewed as opportunities to rehearse long course racing strategies.

### Daily Training Environment

With respect to facility use and training space, High Performance training groups that conform to the outlined definitions and terms should be prioritized. Consideration should be given to an extended training group around any High Performance swimmers, provided that the High Performance program can justify alignment with its submitted High Performance Plan. Once the needs of the High Performance program and any extended training groups have been satisfied, the facility should then carefully consider limited access to any unused space and the potential detrimental impact this could have on the High Performance group.

### COMPETITIVE FOR LIFE

“Competitive for Life is the phase of Active for Life for those who compete within the formal structure of their sport. This could be U-14 or U-17 level in a house league, all the way to World Masters Competition. It differs from Fit for Life because competitive athletes are striving to improve and to win, and they train accordingly.” (Long-Term Development in Sport and Physical Activity 3.0, Sport for Life, January 2019; page 34)

Many age group, varsity, and masters programs will have a large number of Competitive for Life swimmers. Competitive for Life swimmers are swimmers who are not by definition found within the Podium Pathway of Train to Compete or Train to Win but will often train alongside those swimmers and be striving for medal performances themselves provincially and nationally at a variety of competitions, which may include U SPORTS Swimming Championships and the Canadian Swimming Championships.

Competitive for Life swimmers competing in Age Group and Varsity programs will be working toward and achieving the skills and behaviours identified in the Train to Compete and Train to Win stages of the ADM.

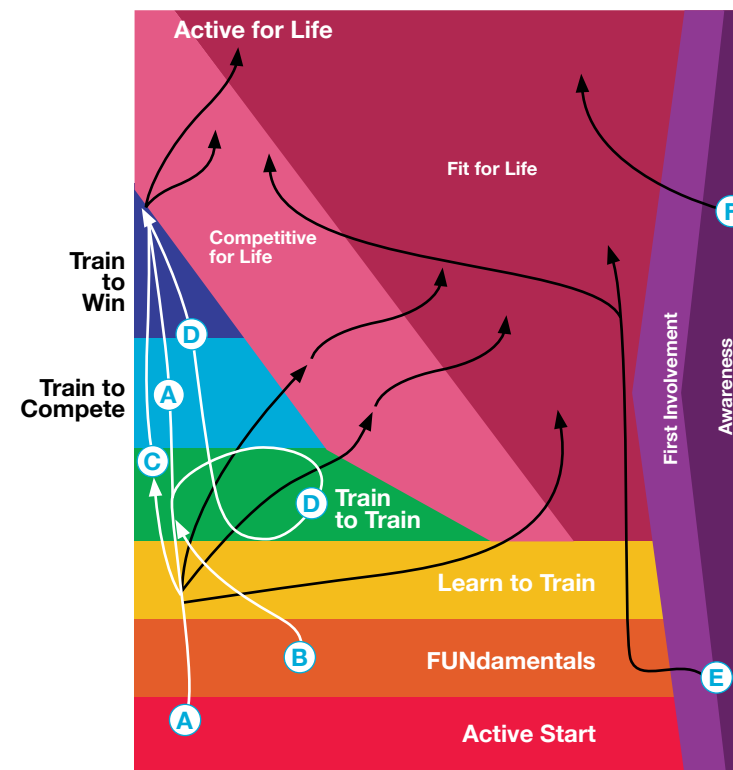
### DEVELOPMENT IS NOT LINEAR

Every athlete is different and their rate and tempo of development is highly variable. As a result, the development of their physical, technical/tactical, mental and life skills will be impacted. Well-informed coaches will appreciate this variability and be able to create developmentally-appropriate experiences for their athletes to ensure everyone is afforded the opportunity to progress.

### UNIQUE PATHWAYS

Individuals' journeys in sport and physical activity are unique and often vary greatly. While all begin with an awareness of an activity, which leads to being involved and learning the fundamentals, these individuals could take a variety of pathways depending on their characteristics and capabilities. Ideally, these pathways will lead the individual to achieving their potential, and then being active for life.

The “Top” can be varied from Olympic or World Championship Gold to World Masters Championships.



(Long-Term Development in Sport and Physical Activity 3.0, Sport for Life, January 2019; page 36)



### MANY PATHWAYS TO ACHIEVE...

There are many pathways for participants to take to achieve their potential; their path is rarely straight.

**Participant A** might stay in one of their first sports from entry right through to World Championships.

**Participant B** starts in a different sport or begins their journey later, then during adolescence finds the sport they pursue through to the Paralympics or Olympics.

**Participant C** starts with A having early success in one sport, then focuses on another sport before returning to focus on their first love.

**Participant D** achieves a high level of success in one sport but then transfers to another sport, which results in having to go back through stages of development before succeeding in their new sport.

**Participant E** becomes involved in many sports, never pursuing or advancing into the Train to Train stage, but has quality experiences and is active for life.

**Participant F** becomes aware of opportunities later in life, then through a positive first involvement becomes active for life.

There are many pathways in sport and physical activity. It is important to recognize that everyone's journey is unique and should always be in quality environments to allow for individuals to achieve their potential and be able to be active for life.

### Four things are important:

1. Participants are supported along their journey to find appropriate sport and physical activity in which they have the opportunity to achieve their potential.
2. There are multiple pathways for participants to achieve success, including changing focus then returning later to a sport.
3. Sports ensure that Long-Term Development pathways align from the early stages through to the Podium Pathway.
4. Regardless of the pathway, or at what stage they leave the competitive stream, all participants end up in Active for Life, either:
  - by being Competitive for Life, or
  - by taking part, to be Fit for Life, and
  - have a good experience so they want to “give back” as Sport and Physical Activity Leaders.

Balanced development in sport and physical activity means paying attention to more than just skills and physical capacities. Development across a range of domains including physical, technical, tactical, psychological, and life skills must be addressed for individuals' personal advancement throughout all stages of the Long-Term Development framework.

# SWIMMING CANADA ATHLETE DEVELOPMENT MATRIX (ADM)

What is the Athlete Development Matrix (ADM)?

The ADM is a broad roadmap for the development of swimmers and describes the observations, actions, and words we want them to portray, demonstrate, and display across each stage of development.

“A **complete** ADM covers much more than just the sport’s technical skills. The complete ADM describes in detail the optimal sequencing and timing of all learning and training activities required to ensure that each new skill or training stimulus is built on a solid foundation of previously acquired competencies, or previously developed physical capacity. It is a blueprint for the long-term development of the athlete **within** the sport – while recognizing that an athlete’s development is almost always based on skills developed and training accumulated in a range of different sports, in physical education classes, and in a multitude of recreational and life experiences. In general, individuals should be encouraged to engage in a wider range of activities during the earlier years of their development.” (The Athlete Development Matrix, Sport for Life Version 1.1 November 2016, page 3)

The ADM is not:

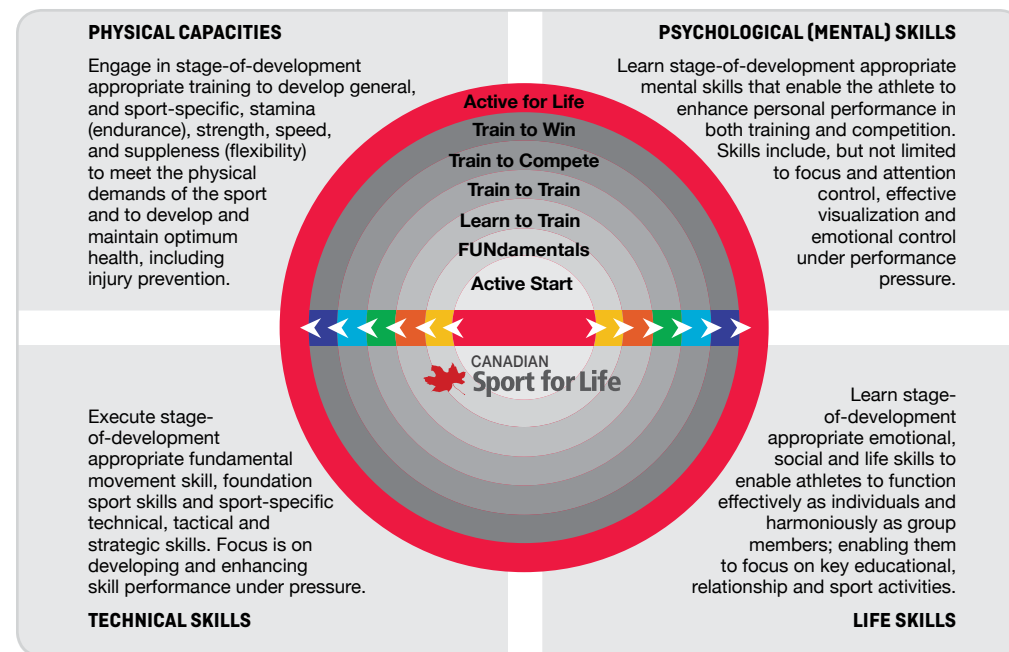
- a detailed prescription from which a training program should be built,
- a “how to” for coaches, yet it provides guidance for coaches to help them create environments, experiences, and developmentally-appropriate challenges for athletes to explore, test themselves, and progress in all areas of the ADM.
- a battery of tests to assess athlete development, but will ignite discussion to determine how best to determine athlete progression and how best to support athletes on their journey.

# THE 4 PILLARS OF THE ATHLETE DEVELOPMENT MATRIX

Swimming Canada's ADM is comprised of 4 pillars:

- physical capacities,
- technical/tactical/strategic competencies,
- mental or psychological skills, and
- life skills (cognitive, social, and emotional learning skills).

The mental and life skills sections are written from the swimmer’s perspective.



## WORKING DEFINITION OF EACH PILLAR

There are 4 separate but interconnected components of the Athlete Development Matrix. The following has been copied from The Athlete Development Matrix, Sport for Life Version 1.1 November 2016, page 4.

### Physical Development

The development of stamina, strength, speed, suppleness (flexibility) appropriate to the stage of development of the athlete, and undertaken when the body is best able to respond to the training stimulus. This also includes the development of ancillary skills, such as warm-up, cool-down, nutrition, hydration, rest, and recovery.

### Technical/Tactical/Strategic Skills Development

The learning of basic human movements, fundamental movement skills, foundation sport skills, and the whole range of sport-specific skills required to reach the highest level of performance. These are sometimes called psycho-motor or just sport skills. This component also includes the tactics and strategy of sports in general, and eventually the tactics and strategy specific to the sport of choice and event or position in which the athlete specializes. In developing their sport-specific ADM, sports may elect to separate the sport technical skills from tactics and strategy.

### Psychological (Mental) Skills Development

The development of sport psychology skills, appropriate to the stage of development of the athlete.

### Life Skills Development

Development of the skills required for successful growth to become a confident, self-sufficient individual capable of effective, independent, and harmonious group action, in the pursuit of individual or team sport participation and performance.

## SWIMMING CANADA HAS FURTHER EXPANDED THE DEFINITIONS ABOVE TO INCLUDE THE FOLLOWING ELEMENTS:

### Physical Capacities Development

While nutrition, hydration, rest, and recovery exist in this component, Swimming Canada also includes those items in Life Skills Development.

### Technical/Tactical Skills Development

Includes competition and training skills at each stage.

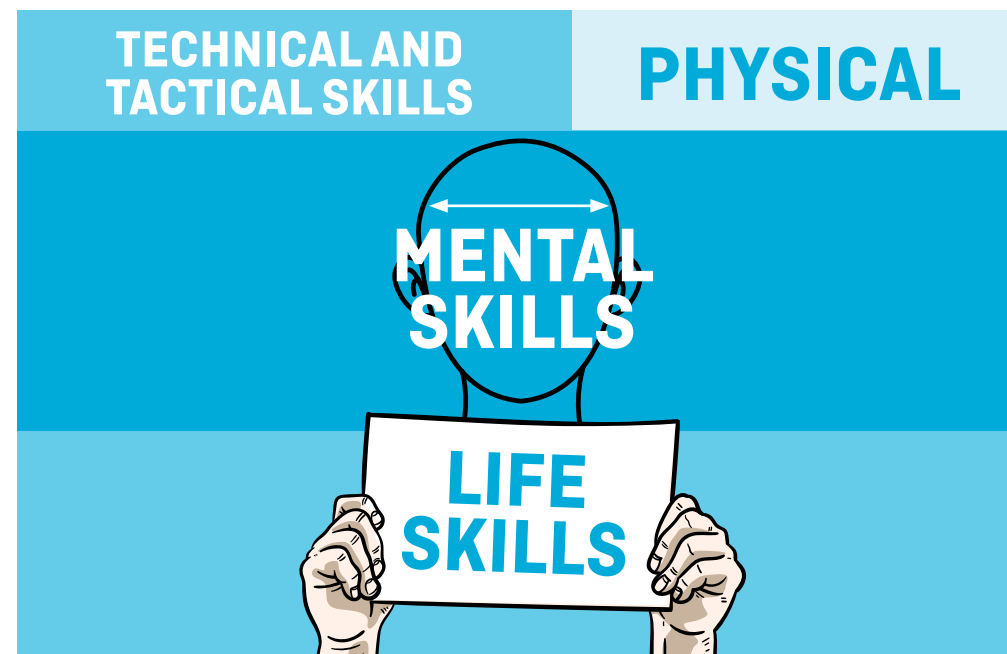
### Mental Skills Development

Swimming Canada has identified the following key elements in the development of mental skills:

- positive attitude,
- motivation,
- goal setting,
- emotion identification and control,
- attention/focus, and
- reducing errors.

### Life Skills Development

Social and Emotional Learning Skills (SEL) are highlighted in the development of Life Skills.





# GENERAL CONSIDERATIONS WHEN REVIEWING THE ADM

## 1. ATHLETE DEVELOPMENT IS ROOTED IN HUMAN DEVELOPMENT

Athlete development is rooted in human development. Exceptional technical execution combined with extraordinary physical prowess is not enough. Success in any area of life (sport, academics, business, relationships, career) requires creativity, flexibility, self-control, and discipline. We are not born with these attributes – they begin their development shortly after birth and continue into adolescence and early adulthood. Strong development and support of Life Skills will set the stage for acquiring appropriate Mental Skills and allow for optimal Technical/Tactical/Strategic Skills and Physical Capabilities.

## 2. DEVELOPMENT IS NOT LINEAR

Every athlete is different and their rate and tempo of development is highly variable. As a result, the development of their physical, technical/tactical/strategic, mental, and life skills will be impacted. Well-informed coaches will appreciate this variability and be able to create developmentally-appropriate experiences for their athletes to ensure everyone is afforded the opportunity to progress.

## 3. ATHLETE GROWTH, DEVELOPMENT, AND MATURATION (GDM)

Understanding an athlete's growth, development, and maturation (GDM) will help coaches and parents provide developmentally-appropriate supports for safe, healthy, human development. Athletes may also benefit by better understanding themselves and the associated changes that occur during their GDM years.

## 4. THE INTEGRATED SUPPORT TEAM (IST) – WHAT IS IT? WHEN DOES IT START?

The IST begins with the young swimmer and their family. The family supports and provides for the young swimmer's needs to progress. IST is not likely well-formed in early stages, but the young swimmer learns that their progress is supported by different people with different skill sets (coaches, physiotherapists, sport psychologists, exercise physiologists, sport nutritionists, medical staff, others).

## 5. NUTRITION/HYDRATION CONSIDERATIONS

The energetic and metabolic demands of training, competition, and recovery vary widely for each athlete and therefore require adequate matching with suitable food choices and energy intake.

Athletes that adopt positive fuelling practices are likely to experience effective adaptations to training, positive performance gains, strong bone health, and suffer fewer illnesses or injuries.

When younger athletes (Active Start, FUNdamentals, Learn to Train) establish a positive and comfortable relationship with food, they are more likely to make wise choices to support their training, competition, and recovery schedules.

## 6. CONSIDERATIONS FOR FEMALE ATHLETES

While training design and delivery are largely the same for all athletes, female athletes experience unique injuries and conditions that may interrupt their training or competition, interfere with their recovery and, for some, become career-ending.

Training environments that; a) adopt musculoskeletal injury prevention programs, b) promote and recognize positive fuelling practices and c) cultivate a climate of acceptance and social connection will note fewer injuries, higher retention rates, and elevated athlete satisfaction during and after their sporting career.

## 7. ATHLETES WITH AN IMPAIRMENT

Athletes with impairments are, first and foremost, athletes. This means that in almost every way they have far more in common with their non-impaired peers than they have differences, and virtually everything that applies to swimmers in the Olympic program applies to those in the Paralympic program.

- Two distinctly different types of athletes with impairments compete in swimming. They are:
  - Athletes with congenital impairments
    - Born with an impairment
  - Athletes with acquired impairments
    - Impairment due to injury or illness that occurs after birth, most often that occurs after adolescence.

## CONGENITAL IMPAIRMENT

By definition, a swimmer with a congenital impairment has had that impairment since birth, and as a consequence passes through the same developmental stages as able-bodied swimmers. Therefore, the same stage-of-development considerations apply.

The most important considerations are:

- Ensuring that athletes with impairments have developed fundamental movement skills, since heavy engagement in medical and educational appointments early in life can reduce the time for both play and the development of fundamental movement skills.
- The lower capacity for abstract thought in younger swimmers (both able-bodied and with an impairment) and the impact of this on learning stroke techniques.
- Utilizing windows of accelerated response to different types of training at different stages of development to maximize training effectiveness.

## ACQUIRED IMPAIRMENT

There is general consensus that few high level competitive swimmers come from the ranks of those **who could not swim** prior to acquiring the impairment. Recent data confirms that the peak age-groups for the acquisition of injury are the 15-19 year olds and the 20-29 year olds.

For athletes who acquire an impairment, there are several differences from those with congenital impairments, including:

- A greater need to make those with acquired impairments **AWARE** of the opportunities for sport participation and competition that swimming can provide. (Individuals with congenital impairments are often involved in some form of hydro-therapy early in life and are more likely to be aware of competitive swimming because of time spent in the pool.)
- A need to become physically active again following acquisition of an impairment. Impairment is often followed by medical procedures and rehabilitation and there is a need for the individual to become active again using the reduced capacity of their body. Learning to control their new body, and becoming physically active again, is called **Re-learning (or post- rehabilitation) Active Start**.

- A need to develop new fundamental movement skills – using their now impaired body means fundamental movements on land, in the water (relearning to swim), in the air as far as possible, and on ice/snow. This stage is not an introduction to competitive swimming. This stage is called **Re-Learning (or post rehabilitation) FUNdamentals**, and is unlikely to be the responsibility of Swimming Canada Clubs.
- The next stage for the swimmer with an acquired impaired is **Re-Learn to Swim or post-rehabilitation Learn to Swim** – and here the focus is on developing swimming stroke technique, making adjustments for the impairment. This is the responsibility of swim clubs, and it is critical that the swimmer's **First Involvement** with the swim program/club be positive. In general, this means ensuring four things:
  - That there are no physical (architectural) barriers to the swimmer entering the facility, using (private) changing areas, and entering and leaving the pool.
  - There are no communication barriers that prevent the swimmer from comprehending instructions or asking questions.
  - There are no programming barriers. This means making the right instruction available at the right time, and ensuring that necessary support is in place for the swimmer to take part.
  - No attitudinal barriers. This means a positive welcome not just by the coach, but also by the facility/pool staff and by other swimmers. Any sense of not being welcomed can have a serious detrimental impact on a potential swimmer with an impairment.

Increased **Awareness** and positive **First Involvement** are critical for both swimmers with a congenital impairment and able-bodied swimmers.

## 8. ADM STAGE-BY-STAGE TABLES

The Physical Capacities and Technical/Tactical/Strategic tables are written from the perspective of how a coach may implement various skills and elements into a program, whereas the Mental and Life Skills table are written from the perspective of the swimmer and what they can work on to achieve across each skill and level.



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