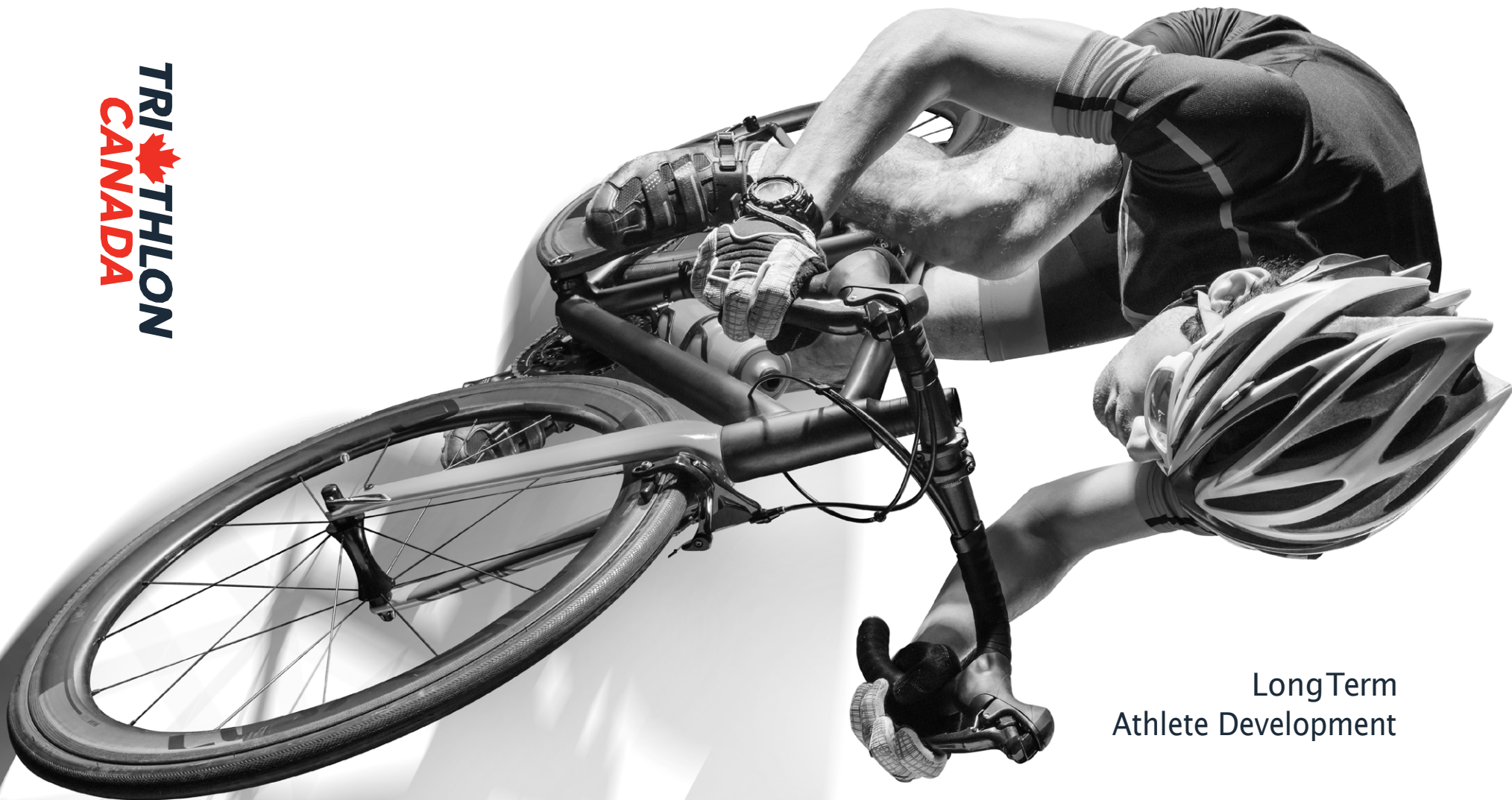


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TRIATHLON
CANADA



Long Term
Athlete Development

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2023

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A MESSAGE FROM TRIATHLON CANADA'S CEO



We would like to express our sincere appreciation and gratitude for the exceptional effort and dedication put forth by the various contributors involved in the development of Triathlon Canada's new Long-Term Athlete Development Model document. This comprehensive and visionary framework will undoubtedly shape the future of triathlon in our nation and reflects our commitment to the development and advancement of athletes at all levels.

The release of this comprehensive model not only demonstrates the organization's foresight but also signifies a significant milestone in the growth and success of triathlon in our country. This document serves as a vital tool for athletes, coaches, parents, and administrators, providing a roadmap for long-term success in the sport.

We would like to acknowledge the invaluable contributions of the coaches, athletes, staff, administrators, parents, and other stakeholders who shared their insights and experiences during the development of this model. Their perspectives have been instrumental in shaping the document and ensuring its relevance to the needs of the triathlon community. Their expertise, research, and commitment to excellence are evident throughout the comprehensive framework. It is through their hard work that this model has become a reality, providing valuable guidance to the Canadian triathlon community.

Furthermore, we extend our gratitude to the various experts and professionals from the fields of sports science, sports medicine, and athlete development who provided their expertise and guidance throughout the creation of this model. Their contributions have enriched the content, ensuring its scientific rigor and alignment with best practices in athlete development.

Triathlon Canada's Long-Term Athlete Development Model represents a significant milestone in the evolution of the sport in our nation. Its implementation will foster a supportive and structured pathway for athletes, nurturing their potential and promoting lifelong participation in our sport. By focusing on holistic athlete development, this model paves the way for the emergence of well-rounded, resilient, and successful triathletes. This document will serve as a guide for athletes, coaches, parents, and administrators alike, empowering them to make informed decisions and set realistic goals. It will undoubtedly contribute to the growth, development, and success of triathlon at all levels across the country.

Again, we would like to extend our sincerest appreciation to all the contributors who dedicated their time, expertise, and passion to the creation of Triathlon Canada's Long-Term Athlete Development Model document. Your collective efforts will shape the future of our sport, inspiring and guiding generations of triathletes to come. Together, let us continue to build a stronger and more vibrant triathlon community in Canada!

Triathlon Canada

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Triathlon Canada LTAD 3.0

- The LTAD 3.0 is a cohesive and comprehensive framework for athlete and coach development for triathlon in Canada.
- It is a National Sport Organization (NSO) led and collaborative document to guide the development of the sport from entry level to development, and retention.
- Scope: youth, age group and Podium Pathway Olympic/Paralympic athletes.
- Intended to inform National partners, Provincial Triathlon Organizations, coaches, athletes, parents, clubs, officials, and other parties.
- It is an overview of a linear triathlon development pathway, while allowing for variation in individual maturation and entry to the sport.
- The LTAD 3.0 integrates with Triathlon Canada's National Coaching Certification Program (NCCP).
- It provides an updated 'Triathlon Skills Matrix' that guides the coaching of skills.



<https://www.triathloncanada.com/publications/#ltad>

See also SFL LTD and SFL LTD for Athletes with a Disability.

"Long-Term Development in Sport and Physical Activity 3.0"



<https://sportforlife.ca/portfolio-view/long-term-development-in-sport-and-physical-activity-3-0/>

"No Accidental Champions: LTD for Athletes with a Disability"



<https://sportforlife.ca/portfolio-view/no-accidental-champions-ltad-athletes-disability/>





LONG TERM ATHLETE DEVELOPMENT

+ TRIATHLON CANADA

01

Long Term Athlete Development + Triathlon Canada

- Triathletes are supported along their journey primarily by their parents and coaches in collaboration with their Provincial Triathlon Organization (also referred to as the Provincial Sport Organization or PSO), and Triathlon Canada, so that they have the best opportunity to achieve their potential.
- We understand that there are multiple pathways to achieve success, including changing sport focus and returning later to triathlon.
- Balanced development in sport and physical activity means paying attention to more than just skills and physical capacities. Development occurs across a range of domains including physical, technical, tactical, psychological, and life skills.
- During development, we should take a holistic view of athlete development considering school, social system, and sport.

Regardless of the path that a triathlete takes, or at what stage a triathlete leaves the podium pathway, the goal is that all triathletes end up in the Sport for Life stage by taking one or more of three roles:

Racing competitively in local or regional events, long distance, and World Triathlon AG events.

Taking part in triathlon by becoming a coach, race official, race director, volunteer, or board member.

Training for triathlon for fun and fitness and remaining active for life.



<https://www.triathloncanada.com/publications/#ltad>

Triathlon Canada LTAD 3.0

At a Glance Table

Triathlon Canada Stage	Key Concepts	Age	Key Concepts
Active Start	Active Start	0-6 years	Awareness and fun
Swim, Bike, Run Essentials	Fundamentals	6-9 years	Whole body movements, intro to the sport for fun
Introduction	Learn to Train	9-12 years	Learning skills: physical mental, emotional aspects of sport, being coachable
Acquisition	Train to Train	12-16 years	Building the engine and building skills
Consolidation	Train to Compete	16-19 years	Learning how to race, developing self-mastery with intensity
Refinement	Train to Win	19-35 years	Consistently performs skills in highest level of competition
Integration	Active for Life	AG 16 +	Enjoyment at any level (of mastery or fitness) for personal goals and values



<https://www.triathloncanada.com/publications/#ltad>

In the new Sport For Life LTD 3.0 there is ... "Greater emphasis on stage of development versus chronological age: The important thing in development is not age, but how participants develop capabilities to move from stage to stage. In this revised framework, emphasis on chronological ages has been diminished while there is more emphasis on the biological markers". (Long-Term Development in Sport and Physical Activity 3.0, Sport for Life, page 12)

A Progression Toward Skill Mastery

To guide athletes, parents and coaches, each stage of the Triathlon Canada LTAD 3.0 is broken down into the essential skills and competencies observed in the technical, tactical, physical, mental and emotional domains of the sport. These skills and competencies apply to all participants within the sport of triathlon.

In the earliest stages, athletes may be developing some of these competencies and skills through sport sampling, and, as they mature, these skills can become more specific to the sport of triathlon. For example, a 15-year-old youth triathlete is expected to eat well, get adequate rest, and show up for practices on time; skills they can foster in soccer, swimming, or another sport they play. In developing as a triathlete, they will be learning triathlon specific skills such as how to pedal a bike efficiently and proper cornering technique. They are being taught how to complete a transition smoothly and without mistakes, how to take care of their bike, and other competencies specific to triathlon that they will need as they progress through the pathway.

Some of these competitive athletes will take the opportunity to enter the Podium Pathway to see how far they can go in the sport. As they progress in the Podium Pathway, these skills will be mastered. It is expected that at the highest level, the athlete can perform the mastered skills consistently, at competition speed, and while fatigued.

Podium Pathway

The phases of LTAD 3.0 are critical for supporting athletes through the Podium Pathway. The Podium Pathway in Triathlon generally starts when competitive athletes are around 16 years old, during the Consolidation stage, however, Triathlon Canada recognizes that progress may not be linear.

Exposing athletes early in their careers to a quality Daily Performance Environment (DPE) including coaching expertise and competitions, such as the National Development Series, is part of the Podium Pathway. Coach education and athlete development is built around the philosophy that bypassing earlier stages of technical, tactical, physical, or emotional development can result in athletes dropping out of the pathway before realizing their peak potential. The skills matrix shared in Appendix A provides details of this progression from Introduction, all the way through to Refinement. Within the Refinement stage, skill development is characterized by the following progressions:

- Mastery of skill.
- Mastery of skills at target speed.
- Mastery of skills at target speed under fatigue.
- Mastery of skills at target speed under fatigue in competition.
- Consistently perform and exhibits mastery in competition and under progressively more demanding conditions.

Triathlon Canada's Gold Medal Profile (GMP) is the collection of skills and attributes that underpin the performance of an athlete capable of stepping onto the Olympic or Paralympic podium. The GMP is based on validated metrics with clear benchmarks for each of the skills and attributes, scaled according to the stage the athlete is at along the Podium Pathway. The GMP is the excellence reference point for all the stage-based profiles in the Long-Term Athlete Development Framework.



<https://www.triathloncanada.com/publications/#talentidentification>

Athlete Skills And Competencies At Each Stage

Within each stage of the LTAD 3.0, the benchmark skills and competencies that are congruent with that stage are identified. Information about appropriate competitions and equipment is added here to add scope and clarity to the stage. Within each stage outlined in this document, the skills and competencies are categorized as such:

1. SWIM, BIKE, RUN, TRANSITION TECHNICAL SKILLS AND TACTICS
2. PHYSICAL TRAINING
3. ATHLETE CHARACTER
4. LIFESTYLE AND NUTRITION
5. EVENT FOCUS
(APPROPRIATE LEVEL OF COMPETITION)
6. EQUIPMENT





ENGAGEMENT IN LONG TERM

ATHLETE DEVELOPMENT

02

Engagement In Long Term Athlete Development

Athlete development is at the center of the system, with successive levels of support coming into play as they progress.

- Parents encourage and support.
- Coaches support, guide and teach skills.
- Clubs provide quality environments, coaches, and inclusive opportunities to participate.
- PSO/NSO provide organizational and programming support, competitions, and coach education.
- NSO provides Podium Pathway support, Daily Performance Environments (DPE), Integrated Support Teams (IST) and high-performance coaching, mentorship and development.



Parent Involvement

Understanding the role of a parent, and how athletes enter and stay in sport for life, is important as they support a developing athlete.

This LTAD 3.0 is also to help answer parent's questions about timing of training, equipment, and appropriate level of racing.

Engagement In Long Term Athlete Development

Parents play a significant role in the development of active children and our future champions. Parents provide opportunities for movement, encourage positive participation, and safeguard their children in their early years in sport.

Parents introduce their children to triathlon, either through their own involvement or through a club in their area. The coaches help them develop athletic skill and teach them techniques for enjoying swimming, biking, and running. This experience might propel them onto a Podium Pathway to become future champions or may simply give them the positive environment needed to enjoy sport and triathlon for life.

Because triathlon is a late development sport, at Triathlon Canada, we have evidence and knowledge that athletes come to the sport across a variety of tangents. We know that participation in sport creates meaningful experiences that teaches a wide variety of life skills. With the support of parents and coaches, athletes create friendship, competence, and a passion for a healthy life whether they enter the Podium Pathway or continue in the sport for recreation.

For more information about how to be a supportive parent see The CAC LTAD for parents' resource:



<https://sportforlife.ca/wp-content/uploads/2016/06/CAC-LTAD-for-Parents.pdf>



LTAD 3.0 STAGE 1
ACTIVE START

03

LTAD 3.0 Stage 1

— Active Start



Ages 0-6

From birth to about age 6, kids develop a foundation for lifelong physical activity, or physical literacy. This includes unstructured daily physical activity which helps individuals move through space and develop an inherent understanding of, and joy for, movement and active play. Focus is on developing locomotor, object manipulation and balance skills on land, water, ice/snow, and in the air in a variety of movements. Provide a series of challenges with both successes and failures to help develop better confidence.



Skills And Competencies:

Swim, Bike, Run, Transition Skills And Tactics

No formal triathlon skills are taught at this stage. Encourage exploration of risks and limits in a safe environment, including outdoor play in nature and open water swimming. Create mini challenges to extend children's comfort range. Ensure activities are fun and allow for social connectedness.



Physical Training

Kids can be in a variety of structured and unstructured play and activity at this stage and getting a start in swim lessons and other activities initiated by a parent/guardian..



Athlete Character

Kids start to understand that success means giving best effort and having fun. Parents should be supportive and be their children's biggest fan as well as love, support, and believe in them, regardless of how they perform. This positive support will allow them to separate personal value from success and failure in sport.

Lifestyle And Nutrition



Lifestyle And Nutrition

At this age, children learn healthy habits from their parents and other significant people in their lives.



Event Focus

No formal event focus at this stage.



Equipment

Run bikes (leg propelled bikes without cranks and pedals) offer the best start to early riders, as they teach balance and control and are a lot of fun! By ages 4-6 kids can progress to pedal bikes. Helmets must be worn to decrease risk of head injury and adults should always be role models for safety.



Top Tips for Coaches – Filling the Gaps

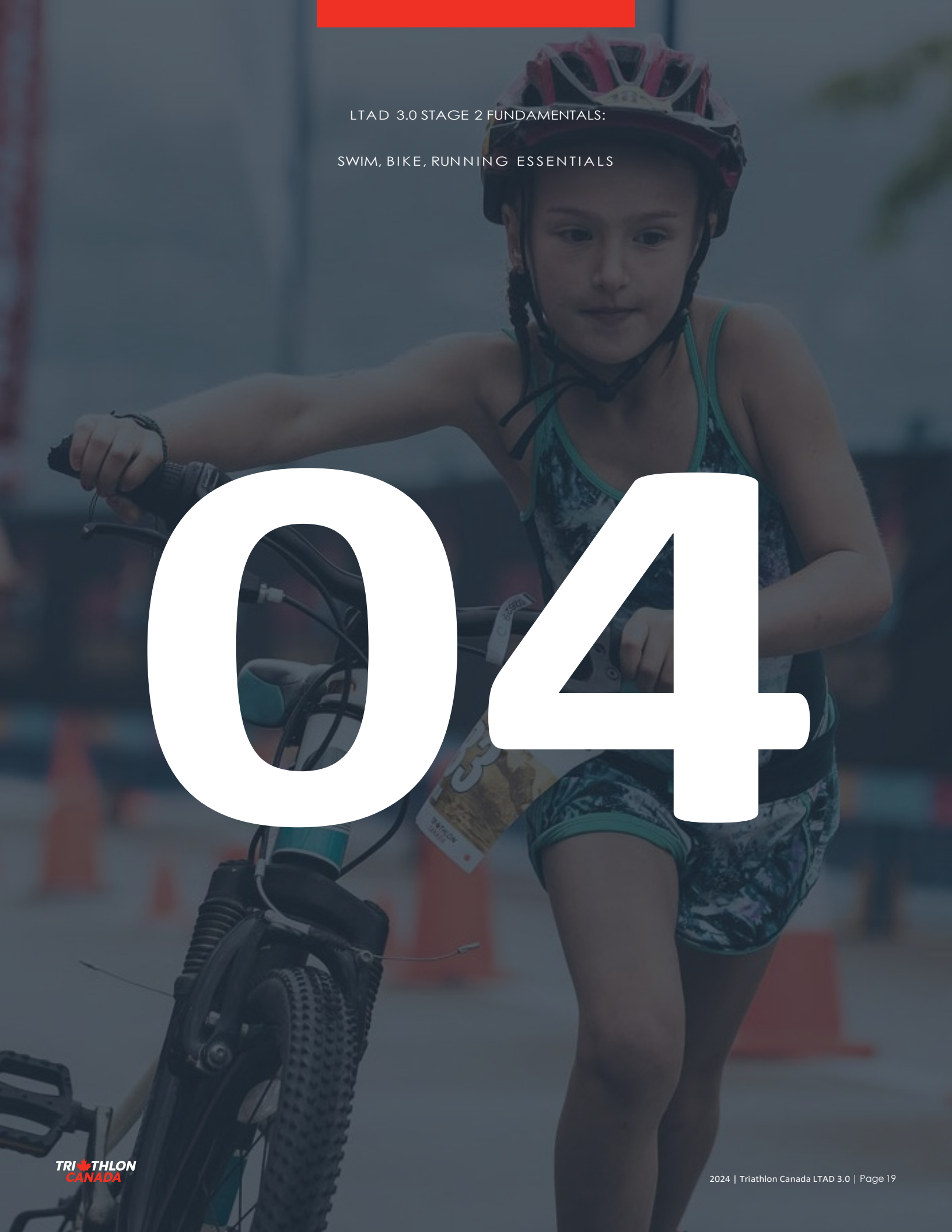
Kristine Chambers - Founder and Head Coach, Exceleration Triathlon and Multisport Club, Vancouver



"I encourage coaches to smile, give high 5's and have fun; we join the athletes whenever possible to role model health, fitness, and movement"

"Programs can be designed to build a large base of physical literacy because the ability to perform movements in a variety of ways and adapt movements to changes in the environment is important."





LTAD 3.0 STAGE 2 FUNDAMENTALS:

SWIM, BIKE, RUNNING ESSENTIALS

04

LTAD 3.0 Stage 2 Fundamentals: Swim, Bike, Run Essentials



Ages 6-9

In the Fundamentals stage, kids continue to develop fundamental movement and can be introduced to the sport of triathlon through fun, structured and unstructured environments. Providing fun, inclusive, and developmentally appropriate physical activity will promote the development of a child's confidence and desire to swim, bike and run. Triathlon can be one of a variety of sports that a child learns and plays over the course of a year. At this age, kids are usually exposed to triathlon through weeklong day camps or summer programs.



Skills And Competencies: Swim, Bike, Run, Transition Skills And Tactics

Youth triathlon programs and camps focus on teaching safety and basic technique to develop confidence in water, on bikes, and while running. There is a lot of play and game-based movement that introduces the sport through a sense of fun. The focus of this phase is fun through participation in activities that promote overall movement skills. This is a key phase for the development of physical literacy. This concept is extremely important, as physical literacy is the foundation of lifelong participation and enjoyment of physical activity. Tactics are not taught at this stage.



Physical Training

Training is informal with a variety of movements, letting kids develop natural speed through games and play. Emphasis is on developing physical literacy.

SECTION 4

LTAD 3.0 STAGE 2 FUNDAMENTALS SWIM, BIKE, RUN ESSENTIALS



Athlete Character

Coaching and programs support a positive attitude towards sport and others and provides for periods of structured and unstructured play so that kids can start to learn the roles that coaches play in their lives, while still being allowed to play and experience sport as fun. This fosters a positive relationship between sport, coaches, and being coachable.



Lifestyle And Nutrition

Parents are still the main influence for the support of healthy sleeping and eating habits and are the best role models in this area.



Event Focus (Appropriate Level Of Competition)

While some individuals might be excited to enter youth events, there is no formal event focus at this stage.



Equipment

Focus is on safety and essentials. Kids need a bicycle that is mechanically safe, and that fits them (not too large or too small) and can be any style. Helmets are required, but kids may be introduced to swim caps, goggles, and kick boards for swimming.



SECTION 4

LTAD 3.0 STAGE 2 FUNDAMENTALS SWIM, BIKE, RUN ESSENTIALS



Top Tips For Coaches – Filling The Gaps

Kristine Chambers-Founder and Head Coach, Exceleration Triathlon and Multisport Club, Vancouver



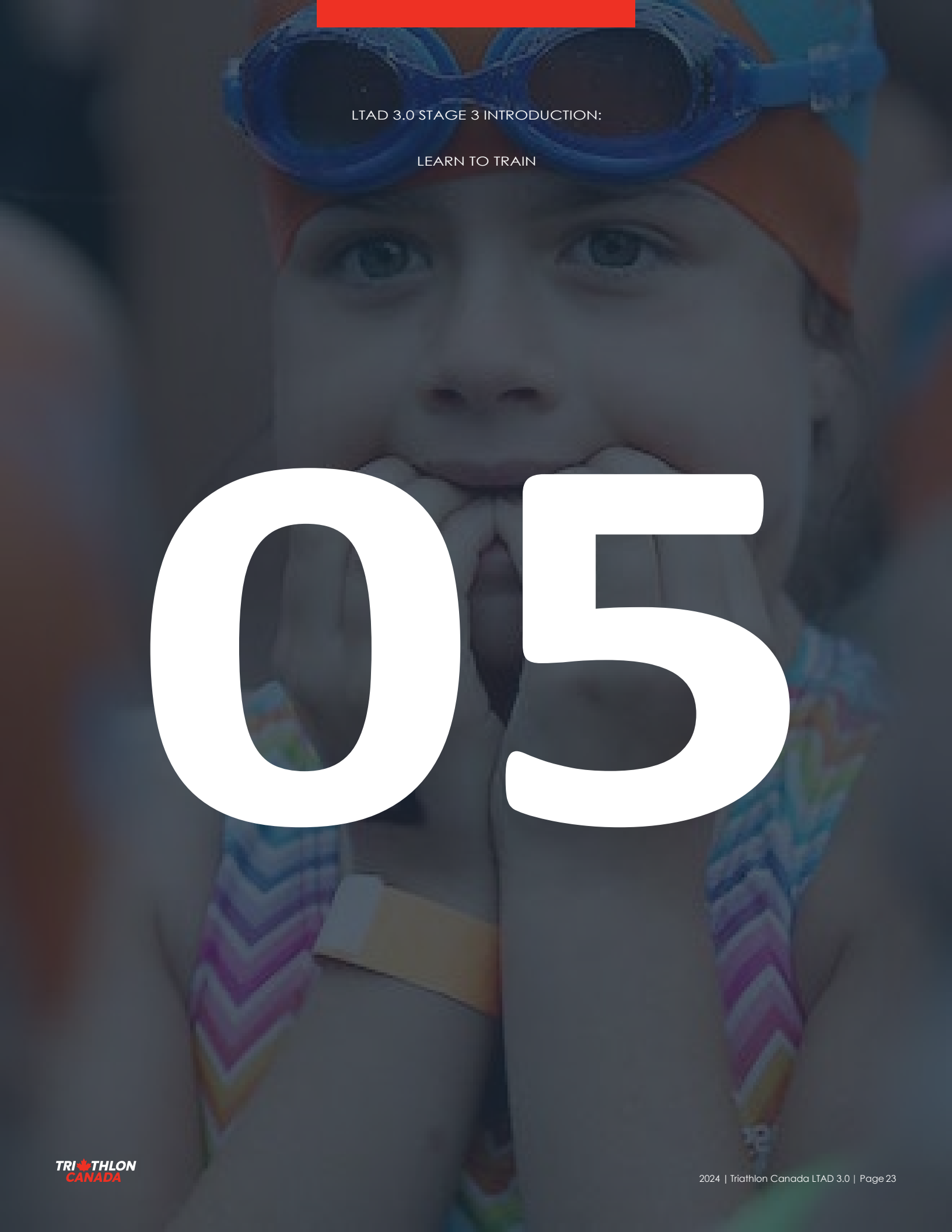
“Programs should integrate the values of Respect, Community and Personal Excellence at all ages, which includes things like celebrating everyone's superpowers, and teaching kids to ‘turn around at the finish and cheer the next person to the line’ from the outset.”

“Focus on developing basic safety skills in all three sports. Self-save swim skills, bike safety and bike handling skills, running variety in different terrain, using games, different speeds and directions.”

“Introduce transition skills and changing from one sport to another using fun games and challenges. You can get creative and incorporate triathlon-unique skills into all practices: open water swim to bike games, running barefoot and running after cycling are a few you can try.”

“Design activities that invite athletes to explore different ways to perform movements such as obstacle courses, games, and relays.”





LTAD 3.0 STAGE 3 INTRODUCTION:

LEARN TO TRAIN

05

LTAD 3.0 Stage 3 Introduction: Learn To Train



Ages 9-12

Athletes have acquired a wide range of fundamental movement skills and some basic triathlon skills by the time they enter this stage. The focus is to introduce specific triathlon skills while having fun participating in a variety of triathlon type activities, including camps, clubs, and some events.

Coaches at this stage should be focusing on introducing correct technique for swim, bike, run and transitions. It is important not to rush or skip over skills at this stage, as that will create gaps later when the athlete is learning to race. Skills based competitions, rather than triathlon races, are the preferred method to challenge young athletes,

It is also expected that young athletes will be sampling other sports and activities, and developing a range of skills outside of, but complimentary to, triathlon.

At this stage it is important to ensure environment continues to promote and support fun and friendship.



Skills And Competencies:

Swim, Bike, Run, Transition Skills And Tactics

Youth are learning the foundation skills for success in triathlon. The focus should be on introduction to the skills required in the sport of triathlon to swim, bike, run, and do transitions. Skills such as breathing and balance in the swim, position on bike and riding in a straight line, as well as stability and efficiency for running take precedence over training for fitness. For a full list of skills at this stage, and beyond, please review the skills matrix shared in Appendix A.

SECTION 5

LTAD 3.0 STAGE 3 INTRODUCTION: LEARN TO TRAIN



Physical Training

Structured and unstructured training, speed development, functional strength, balance, and movement patterns form the core of the training. Challenges and games still make up part of the training time.



Athlete Character

Triathletes are learning how to be coachable, accountable, and responsible for their energy and attention in training, and start to make connections between training and improved performance.



Lifestyle And Nutrition

Youth are learning how to contribute to their own success through proper nutrition, fueling, and hydrating for sessions, including bringing their own bottles and food to practice. They are encouraged to eat well, get lots of rest, and generally take care of themselves. Good, basic nutrition, sleep, and commitment to sessions are the foundation. The adults in their lives are still key role models to demonstrate healthy habits.



Event Focus

Youth triathlons, community events, and regional races for kids.



Equipment

A mechanically sound and safe bicycle that fits. Some kids can start to ride a smaller road bike frame with drop bars, flat pedals, and running shoes.

SECTION 5

LTAD 3.0 INTRODUCTION: LEARN TO TRAIN



Top Tips For Coaches – Filling The Gaps

Lucy Smith – Triathlon Canada Master Coach Developer (MCD) and Youth coach



“Plan for eight-to-twelve-week blocks of triathlon camp/club with a fun youth competition at the end. Instead of year-round programming, offer triathlon during the fall and spring seasons only.”

“Encourage athletes to continue to play soccer, do swim club and other winter sports, which enhances their athleticism, love for sport, coachability and physical development.”

“Avoid over focusing on competition, maintaining a strong focus on developing skills and competency across the three sports. This includes creating awareness for parents around supporting participation and competence over competition success.”



LTAD 3.0 STAGE 4 ACQUISITION:

TRAIN TO TRAIN

06

LTAD 3.0 Stage 4 Acquisition:

Train To Train



Ages 12-16

Train to Train coincides with the transition from childhood to adolescence, and because of growth spurts and differences in maturation, it is hard to define athletes at this stage, so coaches as well as parents need to be patient and understanding. Some individuals make the decision to strive for excellence and commit to being an athlete—in the full sense of the word; others may decide that they will no longer commit the time, energy, and resources to achieving excellence in their sport. Sometimes that decision is made for them, through injury, lack of opportunity, or inability to progress. It is common for a teenage triathlete to step away from sport for a period, and later come back.

This stage is also the gateway for several opportunities including the transfer of athletes into triathlon from other sports, entry into the Podium Pathway or transition into the Sport for Life stage. For example, youth may also be with school or club track and field and cross-country running programs and/or swim club. They may be in a cycling discipline such as track, BMX, or mountain bike at this stage, which contribute to skill acquisition.

Triathletes in this stage are focused on transferring fundamental technique and basic tactical skills into the competitive environment. Athletes begin formalized speed and endurance training progressions. While triathletes start competing more seriously, the primary focus during competition is on applying what they've learned in training, learning to master these skills during competition, and not on winning at all costs.



Skills And Competencies:

Swim, Bike, Run, Transition Skills And Tactics

The skills introduced in the previous stage are practiced and built upon, so the triathlete improves in competence on swim, bike and run. Athletes will develop proper movement patterns for each discipline. More sophisticated triathlon racing skills are acquired at this phase, such as mounts and dismounts on the bike, and running with the bike.

SECTION 6

LTAD 3.0 STAGE 4 ACQUISITION: TRAIN TO TRAIN



Physical Training

Structured training and yearly training plans are introduced, which coincide with increased training frequency and triathlon devoted scheduling. Anaerobic and aerobic conditioning is built into training, as is recovery and strength. Training will include developing top end speed (short pieces of work) like 60m sprints (run) and 50m repeats (swim).

During this phase of life and development, the physical, mental, and emotional maturity of individuals will develop at different rates, and athletes need holistic support from parents and coaches to help them adapt to and manage the adolescent period. There is an increased need for sleep and rest for both sexes, which may coincide with an increase in school and peer commitments, all of which needs to be considered when planning training and competitions. It is also during this phase that girls will be going through a significant physical and mental change due to the onset of their menstrual cycles, and the associated hormonal flux. Physical changes can include power to weight ratio, centre of mass, and distribution of body fat.

Awareness of these normal changes, and effective communication amongst parents, coaches, and athletes, will help guide training and competition planning during this period and for healthy long-term development.

The Triathlon Canada Competition coaching context is designed to support athletes at this stage and beyond. Competition coaches are important as they affect the development of athletes at critical stages of their lives and must also have a comprehensive understanding of high performance and the Podium Pathway in Triathlon Canada and at the international level.

SECTION 6

LTAD 3.0 STAGE 4 ACQUISITION: TRAIN TO TRAIN



Athlete Character

Work ethic, patience, resilience, and self-awareness are part of development at this stage. Athletes are learning about, and embracing, the daily habits that lead to success. Habits like managing hydration and fuel, as well as consistently bringing a water bottle and other necessary items to practice, are some of the competencies being developed.

They will be starting to identify as a performer as opposed to a participant in the sport.

During this phase there is a tremendous influence on behaviour from peer groups including the strong (often negative) impact that comparison with others can have. Coaches can promote good practices such as encouraging athletes to foster friendships and interests outside the sport, as well as introducing journaling and a logbook, where youth can take ownership of their thoughts and feelings around training and process some of the ups and downs that are a normal part of training and the athlete lifestyle. Developing an intrinsic love for sport and movement at this stage can provide a healthy balance to external reward and validation.

This is a critical stage for participants to learn and understand the rules of the sport, values around fair play and drug free sport, and consequences of one's actions, again highlighting where best practices in coaching will provide valuable mentoring. Awareness of and respect for officials is encouraged.



Lifestyle And Nutrition

Youth are learning how to prepare for practices by developing good nutrition and hydration practices. Understanding and planning how meals and calories contributes to energy before, during, and after practice. They can also be introduced to the concept of the organization of triathlon, awareness of their provincial triathlon organization, and provincial standards and criteria and how to look for information and resources.

SECTION 6

LTAD 3.0 STAGE 4 ACQUISITION: TRAIN TO TRAIN



Event Focus

Regional races, Provincial races, and games, Provincial Series.



Equipment

More specialized racing equipment is introduced as developmentally appropriate such as wetsuits for open water swimming, and heart rate monitors or Garmin devices. This will allow athletes to familiarize with data collection, perceived effort versus physiological training zones and to introduce pacing. Clipless pedals and bike shoes can come early in this stage or late in the Introduction phase.

Can introduce formal lab testing to increase their understanding of training goals, training targets, understanding of the process, and a beginning of a data collection history.



Top Tips For Coaches – Filling The Gaps

Lucy Smith – Triathlon Canada Master Coach Developer (MCD) and Youth coach



"Kids change a lot during this time of their lives. Being patient and understanding to their concerns and challenges can go a long way to retention."

"The overall goal is to develop a system that guides development, that athletes who decide to pursue high performance in triathlon will be faced with the challenge of competing in events over a 6-month period, in 5-6 different continents in events lasting up to 2hrs. We need to develop athletes who are PROBLEM SOLVERS and INDEPENDENT LEARNERS who can make INFORMED CHOICES about their training, racing, and life choices. To me that learning begins earlier rather than later. Resilience and perseverance are learned traits and can be implemented into a program."





LTAD 3.0 STAGE 5

THE PODIUM PATHWAY

07

The Podium Pathway

The Consolidation and Refinement stages are concurrent with The Podium Pathway, which 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. The Sport for Life (SFL) stages in the Podium Pathway are Train to Compete and Train to Win.

Athletes enter the Podium Pathway based on performance demonstrating the characteristics and attributes outlined in Triathlon Canada's Gold Medal Profile.



<https://www.triathloncanada.com/publications/#talentidentification>

The Gold Medal Profile defines the skills and abilities required to stand on the top of the Olympic Podium. All phases before the Podium Pathway stages of Consolidation and Refinement are building blocks that allow an athlete to consolidate and refine all the skills they have learned and practiced.

LTAD 3.0 Stage 5: Train To Compete



Ages 16-19

Triathletes enter this stage when they have progressed past the adolescent growth spurt, have acquired excellent triathlon skills and a high-level of physical fitness. The latter part of this stage sees triathletes progressing into adulthood so there will be a widerange of maturity and ability. Triathletes are refining their technique and tactics through training and competition in a variety of events. Training programs are individualized; even if a triathlete trains within a squad, and athletes will begin to develop consistency within the competitive athlete environment.

Train to Compete athletes may be on Provincial Canada Games teams, national development squads or other provincially targeted high performance athlete programs. These are outstanding athletes who, in the future, have a serious chance of qualifying for the National Team, achieving Sport Canada carding status, qualifying to go to World Championship, Olympics, Paralympics and other Major Games.

SECTION 7

LTAD 3.0 STAGE 5 CONSOLIDATION: TRAIN TO COMPETE

While competition performance becomes more of a focus at this stage, the emphasis still needs to rest on long term development over short-term performance and success.



Skills And Competencies: Swim, Bike, Run, Transition Skills And Tactics

The foundational skills taught at earlier stages are now used to hone competition skills, such as sighting, drafting (swim and bike), cornering at speed or going solo, and understanding pack and variable pacing on the run. The competitive tactics required in the of transition zone are honed at this phase.



Physical Training

Athletes will have a coach assisting with their yearly training plans (YTP) and overseeing their programs and racing schedules and will be learning what a quality Daily Performance Environment (DPE) looks and feels like, even if they don't have the full support of an Integrated Support Team (IST) at this point.

Training becomes more sophisticated, with the introduction to specific training power sessions to understand the relationship between power, heart rate and perceived effort, as well as the introduction or continuation of lactate testing and utilization as a base for future physiology testing.



Athlete Character

Triathletes begin to develop a greater sense of intrinsic motivation and confidence to compete. Resiliency deepens, as does a capacity for decision making and awareness of NSO standards and criteria.

At this stage it is recommended that coaches work with athletes in developing a regular practice to overcome anxiety and other stressors of training and racing.

SECTION 7

LTAD 3.0 STAGE 5 CONSOLIDATION: TRAIN TO COMPETE

Essential mental skills developed in this stage include pre-competition and competition planning, stress management, arousal, distraction control, focus, imagery, and post-competition evaluation.

Increased training volume and commitment levels make it necessary for athletes to stay well-rounded and maintain a healthy sport-life balance and keep success and failure in perspective.



Lifestyle And Nutrition

Athletes are following optimal sleep, nutrition, and recovery habits, and are encouraged to maintain good sport/life balance. Athletes may have PSO support for nutrition and lifestyle resources, can shop and prepare food, a requirement for a future a life on the road.

Aspects of high-performance sport and life balance start to emerge. An athlete enjoys activities outside triathlon and starts to prioritize training and sport performance appropriately.



Event Focus (Appropriate Level Of Competition)

Provincial Series, National Development Series, Junior National Championships, Canada Summer Games, Junior Continental Cup, Junior World Championships.



Equipment

Racing bike and competition equipment, power meter on bike, heartrate monitor and GPS, to become familiar with using data for training and reporting. Lactate utilization can be started at this stage to begin collecting data.

SECTION 7

LTAD 3.0 STAGE 5 CONSOLIDATION: TRAIN TO COMPETE



Top Tips For Coaches – Filling The Gaps

Kelly Guest – Triathlon British Columbia Provincial Head Coach



“At this stage it is important to maintain a strong focus on the appropriate level of competition and to avoid bypassing the critical learning that is gained from appropriate competition, in favour of points and outcomes.”

“Data usage can be introduced to help athletes start to understand how these metrics can enhance their ability to train and recover, to align perceived effort with power and speed.”

“Support an athlete's interest in post-secondary education, structuring training blocks around major exam periods etc. and understand the role that social interactions play in this age group.”



TRITHLON
CANADA

LTAD 3.0 STAGE 6 REFINEMENT:

COMPETE TO WIN

08

LTAD 3.0 Stage 6 Refinement: Compete To Win



Ages 20-35

Triathletes are competing at the highest levels of competition in the world: Olympics, Paralympics, WTCS and World Championships. They are the best of the very best of the Canadian triathletes and may be carded and on the National Team. Competitors at this level, have highly personalized training and competition plans designed by an Integrated Support Team (IST) of physiologists, physiotherapists, sports psychologists, sport physicians and their Triathlon Canada coaches to provide ongoing support for the pursuit of athletic excellence.

Athletes enter the Podium Pathway based on performance demonstrating their acquisition and development of skills (refer to Gold Medal Profile or Athlete Development Matrix).



Skills And Competencies:

Consistently perform on demand in competition, mastered skills at target speed and under fatigue.

See Triathlon Canada's Gold Medal Profile:



<https://www.triathloncanada.com/publications/#talentidentification>

Swim, Bike, Run, Transition Skills And Tactics

Mastery of pontoon starts; beach starts and exit/re-entry during swim. Performance through all terrain and surfaces and consistency of execution is inherent in this stage. Athletes consistently perform skills across courses, distances, and venues.

SECTION 8

LTAD 3.0 STAGE 6 REFINEMENT: COMPETE TO WIN

With reference to the Triathlon Canada Gold Medal Profile, the athlete can complete the swim with the lead pack while conserving the most energy possible, especially when the lead pack also contains top runners and cyclists capable of remaining in the lead into the run. The characteristics of the swim (saltwater vs fresh, rough vs calm, warm vs cold, current vs calm, number and spacing of turns, beach vs pontoon, etc.) will define a sub-set of interacting skills needed to succeed. The athlete should aim to leave T1 with the lead pack or with the ability to close the gap as soon as possible.



Physical Training

At this stage, athletes are working closely and consistently with a personal coach and IST. Yearly planning and constant adaptation to the stress of training and competition is expected, as is the addition of world class training environments that may include:

High altitude training. Introduce training at various altitudes through specific adaptation. Monitoring of athletes using various metrics such as oxygen saturation (SPO2), heart rate, lactate, urine specific gravity, pre and post-test of haemoglobin mass, ferritin, with the goal being an increase in haemoglobin mass and athlete adaptation to training at altitudes of 1600-2300m.

Heat acclimation. Using artificial or natural heat sources in preparation for racing in hot environments. Introduce specific protocols for training in heat (including hydration principles). Goal is to prepare for racing under heat stress and to induce plasma volume expansion.

Intensity Control. Using lactate, perform step tests for swim, bike and run at intervals throughout the season to establish individual lactate threshold. Have consistent field measurements during specific training sessions to ensure athletes train at appropriate intensities. The coach or physiologist takes lactate, speed, power, and heart rate data with the goal to develop aerobic capacity.

SECTION 8

LTAD 3.0 STAGE 6 REFINEMENT: COMPETE TO WIN



Athlete Character

Consistently high work ethic and embracing of the high-performance mindset including patience, resilience, and perseverance. Athletes are refining and practicing mental skills and adapting to their own unique styles (weaknesses and strengths), often with the support of a mental performance coach.

At this stage of development athletes should have developed a mental toolkit that matches their physical training and ability. Some of the traits of champions includes an ability to accept that failure is part of success, with an ability to analyze performances objectively and work with a coach to create a plan. These top athletes have a personalized performance readiness routine, that they use consistently. They understand their strengths and weaknesses and can develop race plans that consider course design, competitors, and personal capacity. It takes hitting the marks in all the previous stages, to arrive at this competency.



Lifestyle And Nutrition

All recovery principles are followed, and athletes take ownership of their recovery practices, including utilizing protocols and metrics for various modalities including sleep, hydration, nutrition, massage, and hot/cold therapies. Often away from home for training or racing, they have become expert travelers, adapting to various non home environments and problem solving to ensure success. The athlete is fully committed to the sport and prioritizes training and recovery and maintains positive relationships with friends and family.



Event Focus (Appropriate Level Of Competition)

World Cup, World Triathlon Championship Series (WTCS), World Paratriathlon Series (WPS,) Pan Am and Commonwealth Games, Olympic and Paralympic Games.



Equipment

Technically consistent with level of international competition. All technology for collection of key metrics i.e., power meter, heart rate, Garmin, and understanding of how to use such technology.

SECTION 8

LTAD 3.0 STAGE 6 REFINEMENT: COMPETE TO WIN



Long Distance

Athletes during this period may transfer to long distance and other professional racing opportunities such as 70.3, Ironman and PTO. They may periodize their training to include both long distance and Olympic distance to prolong their careers and enable a transition to fully professional racing when they exit the Podium Pathway.



Top Tips For Coaches – Filling The Gaps

Patrick Kelly – Coach Mentor

“It is important to prepare athletes for the experience of international competition, especially major championships, and games where the overload of new and different factors can be overwhelming to the unprepared. Coaches should be mentored at international competitions, so they can help their athletes plan for the details that travel invariably presents. Coaches can help athletes set high standards for success: the well-prepared travelling athlete makes a detailed pre-event and pre travel game plan for sleep and rest, food, hydration, equipment issues and their health while on the road. They make sure they are hydrated on flights, move around every few hours on long flights, and bring their own pillow and snacks. Upon arrival, they look for more water and snacks, in case travel to the hotel or venue is delayed. They troubleshoot for equipment failures, researching where they might get help (if not travelling with the National Team), and bring medications that can alleviate stomach issues. They know the rule of eating only bottled, packaged, and cooked food in some countries.”



“When looking at training and coaching, at the highest level, coaches need to become familiarized with high altitude training and camps, health acclimation and the ability to gather data on the status of an athlete's iron stores, which will be a predictor of training block success. A coach needs to be able to plan the introduction of altitude training, including how high and how long the athlete will be able to train, and how to gather and analyze biometric data. Each athlete will adapt and respond at a different rate, so understanding the optimal time to come down before competition is also critical.”





LTAD 3.0 STAGE 7 INTEGRATION:

ACTIVE FOR LIFE

09

LTAD 3.0 Stage 7

Integration: Active For Life

The overwhelming majority of people training for and competing in triathlons fall into the traditional Active for Life stage. Triathletes may have built a solid foundation in the first three stages of the framework, from different sports and they progress to competing in triathlon for enjoyment, satisfaction or for the health benefits they obtain. Some triathletes come to the sport later in life and rely on Community coaches to help them master the skills required for swimming, biking, and running.

In this phase triathletes may compete seriously as age group competitors at local, regional, national, and international competitions. Triathlon has a robust culture of competitive age group athletes who enjoy the challenge of striving to improve and win, and they train accordingly.

Other age group athletes will participate simply because they get satisfaction from sport or physical activity and enjoy the community.

Athletes in this stage have integrated the lifestyle of triathlon into the way they live their lives. The sport provides the catalyst and reason to live a healthy life, eat well, balance sport and careers and family, and to enjoy the social aspects of training, travel, and racing.

ENTRY INTO THE PATHWAY & TRANSFERS:
THE UNIQUE NATURE OF TRIATHLON

10

Entry Into The Pathway & Transfers: The Unique Nature Of Triathlon

The many ways that athletes come to triathlon.

- A child might start youth triathlon at an early age and can stay there from entry right through to World Championships and Olympic or Paralympic Summer Games.
- A youth comes from soccer, club swimming or track and field/cross country running, then during adolescence discovers triathlon, and develops into a provincial then national level athlete through to the Olympic or Paralympic Summer Games.
- Some kids start in youth triathlon programs, then leave to focus on success in a single sport, like running, eventually returning to triathlon because they love it, and know they may achieve higher levels in this sport.
- Some athletes achieve a high level of success in one sport and then transfer to triathlon as a young adult, often when the pathway to excellence ends or fades in their first sport. They have a high-performance mindset and many skills but need to progress through technical stages of development before succeeding in triathlon. They may need to learn how to swim, how to handle a bike, or how to run more efficiently. With the right coaching, transfer athletes can excel in triathlon.
- Common transfers into the Podium Pathways come from swimming and track and field, either during or after high school, or during or after university.
- Some kids play a lot of sports, depending on the season or time of year. They might not ever go beyond the Train-to-Train stage, and they have meaningful and quality sport experiences and are active for life. Many age group triathletes enter the sport later, after being active in various sports as children or youth.
- Some adults, who were never active past grade school, discover triathlon much later, and through a positive and fun first experience, develop a passion and love for the sport that keeps them active for life. In Canada the NCCP Community coach system is often a crucial part of this experience. Teaching adult triathletes how to swim, including how to be comfortable and proficient in open water, to ride safely on the road, and navigate transitions, is all part and parcel of this exciting sport.

SECTION 10

ENTRY INTO THE PATHWAY & TRANSFERS: THE UNIQUE NATURE OF TRIATHLON

Transfers And Implications For Coaching

Being able to identify gaps in skills, even with an experienced and 'skillful' athlete, is one of the unique challenges in triathlon coaching. Strong swimmers may need to be taught how to run safely without incurring lower limb injuries, while runners and soccer players will require some fine tuning with their swim stroke to avoid developing poor swim technique and habits that are hard to unlearn down the road. Many athletes can take to the bike and transfer power and fitness well but need extra time to learn bike technique and draft legal pack skills. Whether coaching age group athletes or those in the Podium Pathway, coaches of athletes who have transferred from other backgrounds need to take a holistic approach to development and watch for gaps in skill.

A triathlete in a red and white singlet is running on a paved road, carrying a bicycle. The singlet features logos for 'World Triathlon', 'PRIMEWOOD', 'BEAULIEU CAN', 'TRIATHLON CANADA', and 'CARBO CONSTRUCTION'. The athlete is wearing a black helmet and is barefoot. In the background, other athletes and spectators are visible, though blurred. A large white number '11' is overlaid on the center of the image.

PROGRAMMING AT EACH STAGE

11

Triathlon Canada LTAD 3.0

And Programming

Triathlon Canada Stage	Age	Key Concepts	Programming
Active Start	0-6	Awareness and fun	Parents, Community Recreation
Swim, Bike, Run Essentials	6-9	Whole body movements, intro to the sport for fun	After school programs, 'start' programs with swimming, cycling, athletics, clubs
Introduction	9-12	Learning skills: physical mental, emotional aspects of sport	Provincial triathlon programs, swim clubs, triathlon clubs, school and club sports, triathlon camps
Acquisition	12-16	Building the engine and building skills	Provincial training centres, triathlon clubs, swim clubs, school, and club sports, CSG teams
Consolidation	16-19	Learning how to race, developing self-mastery with intensity	National and Provincial training centres, provincial targeted athlete programs, triathlon clubs, CSG teams
Refinement	20-35	Consistently performs skills in highest level of competition	Nat Team, Nat Dev Team, National Performance Centre, HP squad training with, varsity swim or run (CAN), varsity triathlon (US NCAA)
Integration	AG 16 +	Enjoyment at any level for personal goals and values	Masters programming, Triathlon clubs, Provincial AG teams, Nat AG teams, Online coaching with professional coaches



<https://www.triathloncanada.com/publications/#ltad>

BEYOND OLYMPICS

PROFESSIONAL TRIATHLON CAREERS

12

Beyond Olympics — Professional Triathlon Careers

During the professional stage of triathlete development, there are many opportunities in triathlon beyond the Podium Pathway. Athletes can transition (and compete well into their 40's) in professional long-distance events, and manage their careers, with the help of coaches and agents, to continue full time in the sport. At this level, athletes transcend mastery of the sport, embracing the business and professional aspects of racing as a fully independent professional athlete. Professional Ironman and 70.3 athletes will need to apply for and purchase an Ironman Pro License through Triathlon Canada.

The move to professional racing can provide athletes with an opportunity to continue racing on their own terms and will culminate in a transition to retirement from the elite aspect of sport. During this phase, athletes are developing other career skills, such as building a brand, social media marketing, managing a business and budget, and creating relationships with various stakeholders.



PARATRIATHLON AND
THE PARALYMPIC PROGRAM

13

Paratriathlon And The Paralympic Program

While a para and able-bodied triathlete fall under the same athlete development framework and LTAD 3.0, paratriathlon has a set of classifications at the Podium Pathway stages and Triathlon Canada has developed one of the top parasport programs in the world over the last decade. One of the newest sports added to the Paralympic Games family, paratriathlon debuted at the 2016 Rio Games where Canada's Stefan Daniel celebrated a silver medal. Since that breakthrough day on Copacabana Beach, the sport has not lost sight of its two major goals: introduce more Canadians with a disability to triathlon; and develop more Canadian medal winners.

People with various types of impairments take part in the sport, including wheelchair users, amputees, and visually impaired athletes. They are classified according to their capabilities and may use adapted equipment to assist their movement such as handcycles, tandem bicycles, and a wide variety of prosthetics.

Classification is not required for athletes who wish to compete in paratriathlon within the community sport system. The most common community paratriathlon events run as "open" categories. This means that paratriathletes all race together in a single wave.

High Performance Competition Classes And Classification

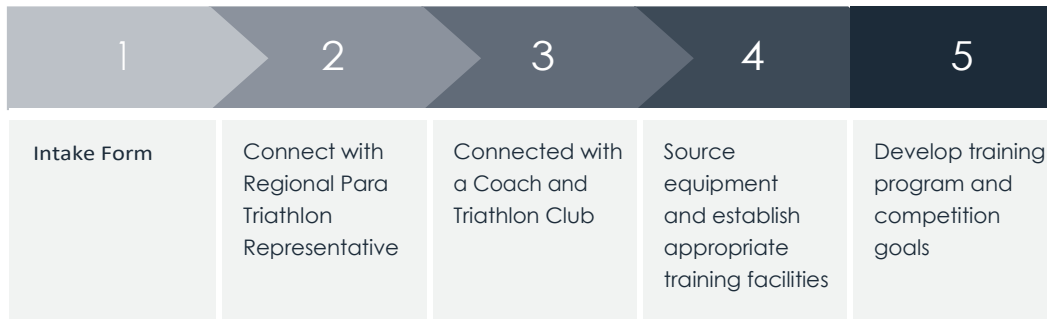
There are 6 medal events representing sport classes in para triathlon defined as follows; there are detailed descriptions for each provided in the sections below:

- PTWC – Wheelchair users (2 subclasses – PTWC1 & PTWC2)
- PTS2 – Severe impairments*
- PTS3 – Significant impairments*
- PTS4 – Moderate impairments*
- PTS5 – Mild impairments*
- PTVI – Total or partial visual impairments (3 subclasses – PTVI1, PTVI2, & PTVI3)

Para Triathlon Pathway



Community Sport



→ Triathlon Canada is currently working to develop more regional para triathlon representatives and coaches to better support this program



High Performance Sport



All Para athletes should begin by connecting with Para Sport organizations within their community, as this will provide a strong foundation for competition in any para sport. The first point of entry for the para triathlon program, regardless of pathway, is completion of an intake form. This form is used to collect basic information to determine the best route forward for any athlete looking to join the sport.

The Community and High-Performance streams are two unique pathways with different participation and competition goals. However, athletes can move between the two streams at any time by following the stages outlined above. Classification is only required once an athlete has been identified for High Performance competition. This is done at a World Triathlon event.



COACH DEVELOPMENT

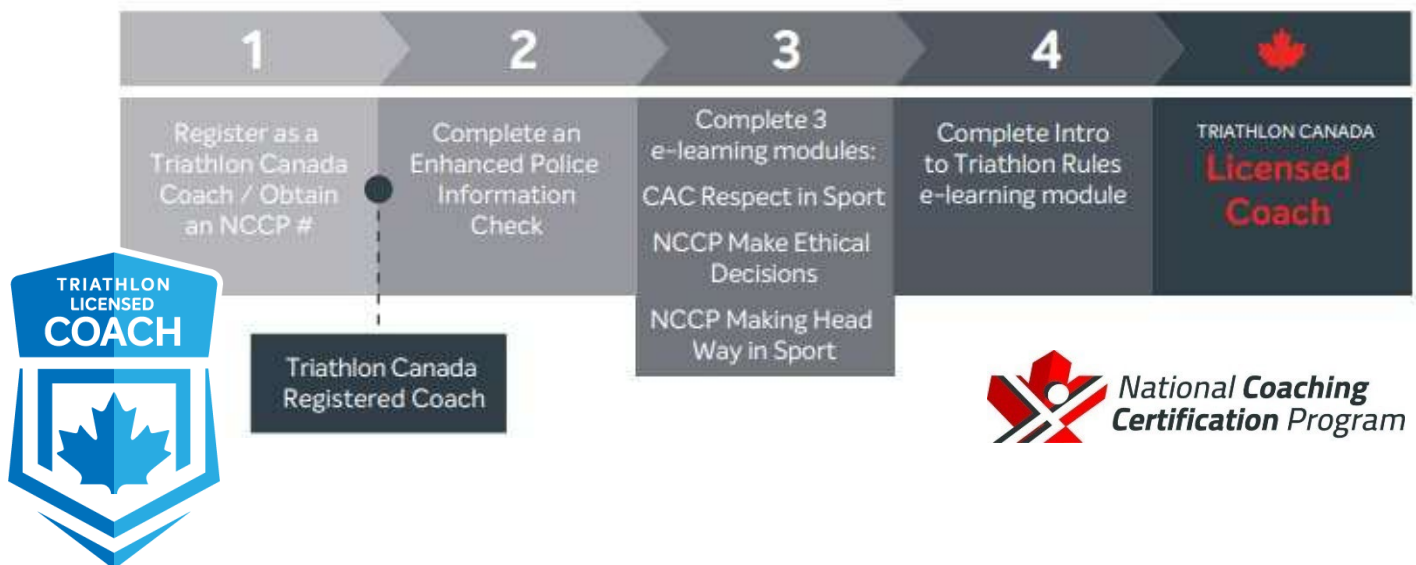
AND THE NCCP

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Triathlon Canada NCCP Pathways for Coaching

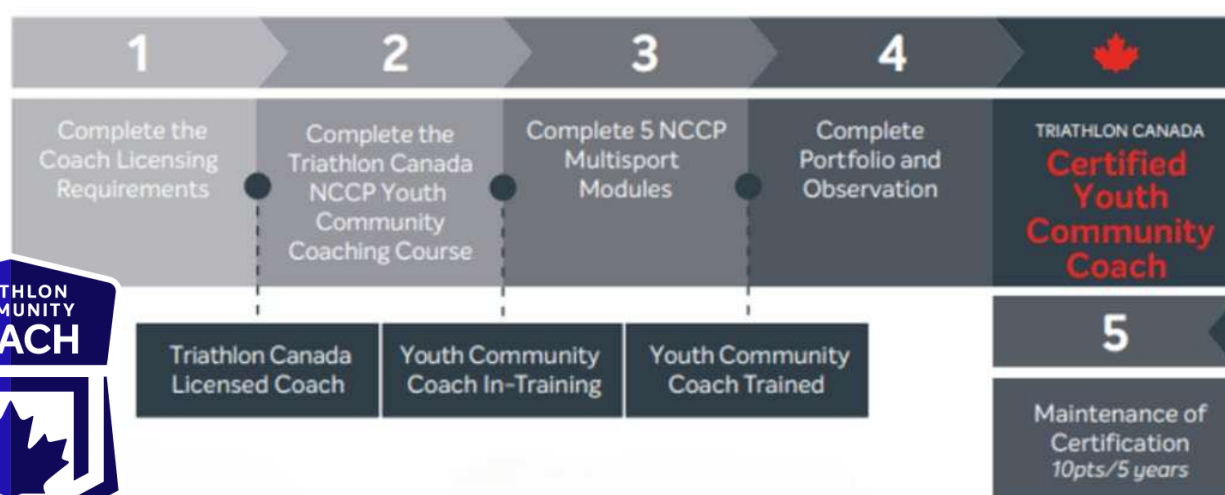
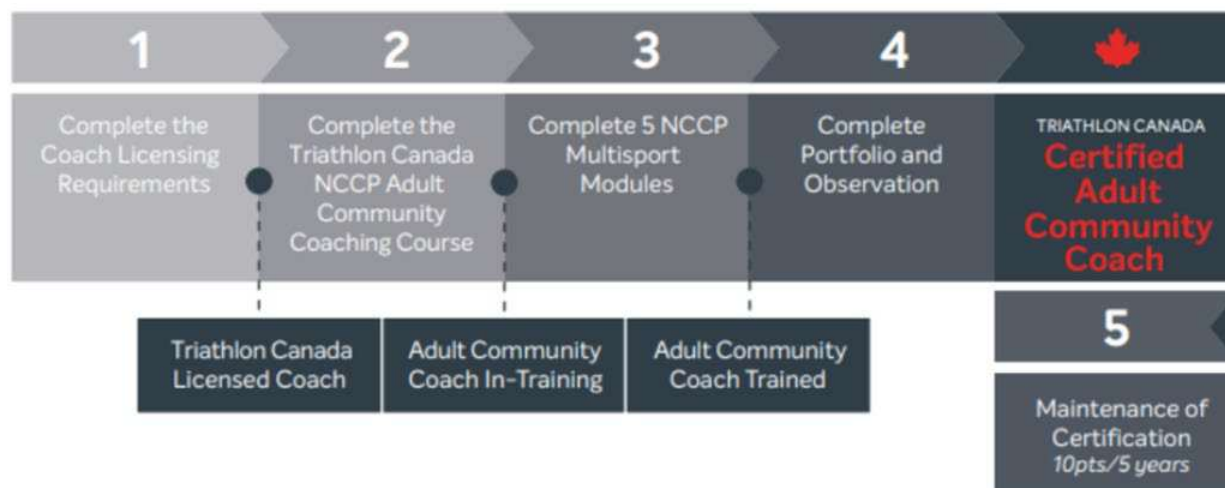
1. Basic Registration

“Safe Sport” as a movement is gaining prominence and traction in both Canada and across the world. More than ever, participants and consumers of sport are demanding that sporting environments are safe, inclusive, and conducive to a quality sporting experience. Coaches are the architects of these environments and experiences, and they hold the highest responsibility in the delivery of Safe Sport practices. Triathlon Canada's goal of providing sport environments that are safe for all is inclusive to the needs of our coaches. Sport Canada has developed and mandated a variety of Safe Sport-related policies for National Sport Organizations like Triathlon Canada to implement on behalf of its members and participants. For coaches, it can be difficult to stay up to date with current requirements and best practices in this area. In response to these mandates, and to support our coaches in adhering to them, Triathlon Canada has created a formal coach licensing process. The “basic registration” steps include all the required safe sport training and screenings. Once these requirements are met, a formal license is issued, and the coach is added to a public registry of Safe Sport coaches. The best way to promote and model a culture of Safe Sport for all includes obtaining an annual license and ensuring your Safe Sport requirements are kept current. This shows your commitment to the Safe Sport movement, which is a fundamental aspect of protecting the integrity and reputation of all coaches in the Canadian sport system.



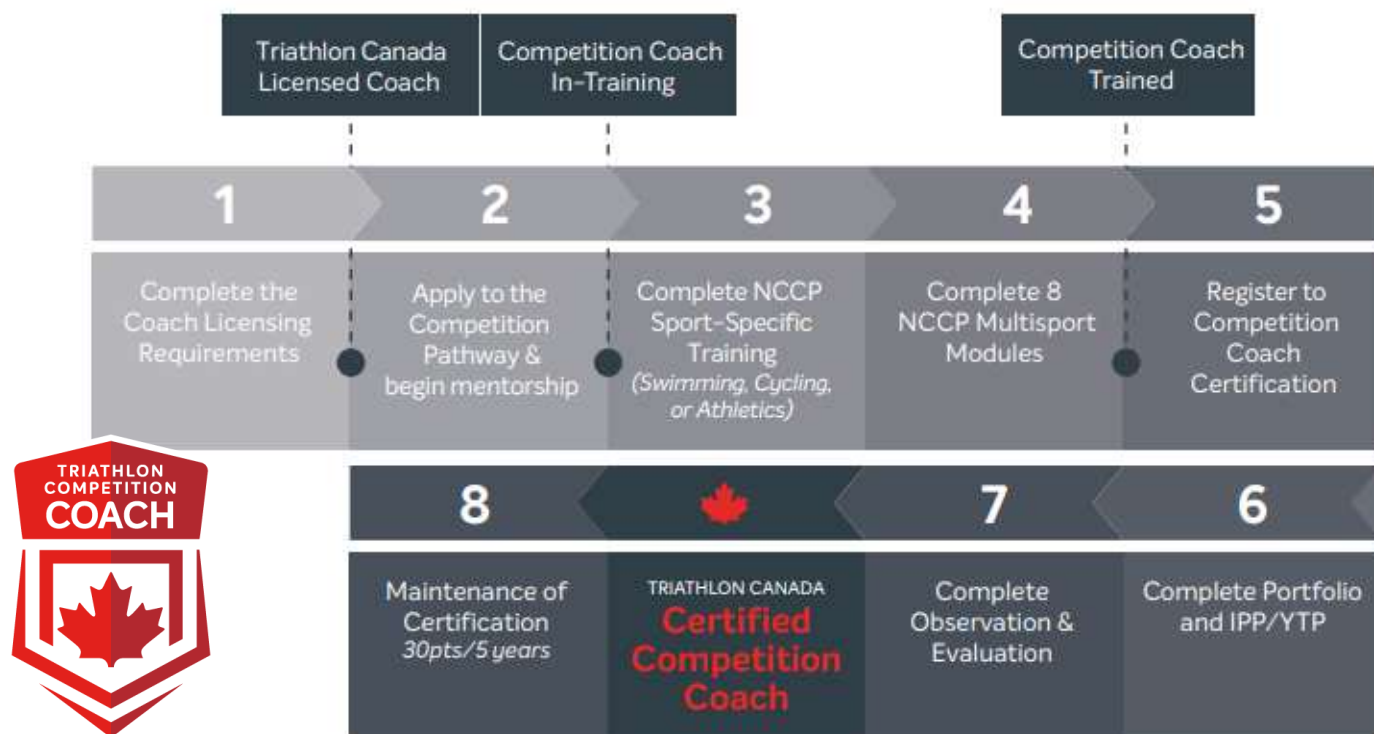
2. Community Coaching Pathway

The Community Coach (youth or adult) is focused on supporting community athletes both by introducing them to the sport and with long-term engagement throughout the community sport pathway. These athletes can be all ages, novices to the sport, or experienced athletes with a passion for competition. Community coaches teach fundamental triathlon skills, provide a road map for safe participation, and introduce athletes to events and competition - skill, technique, and fun! This context is designed for coaches of athletes moving from the FUNdamentals to Learn-to-Train, Train-to-Train, and Active-for-Life stages of the long term athlete development model (LTAD).



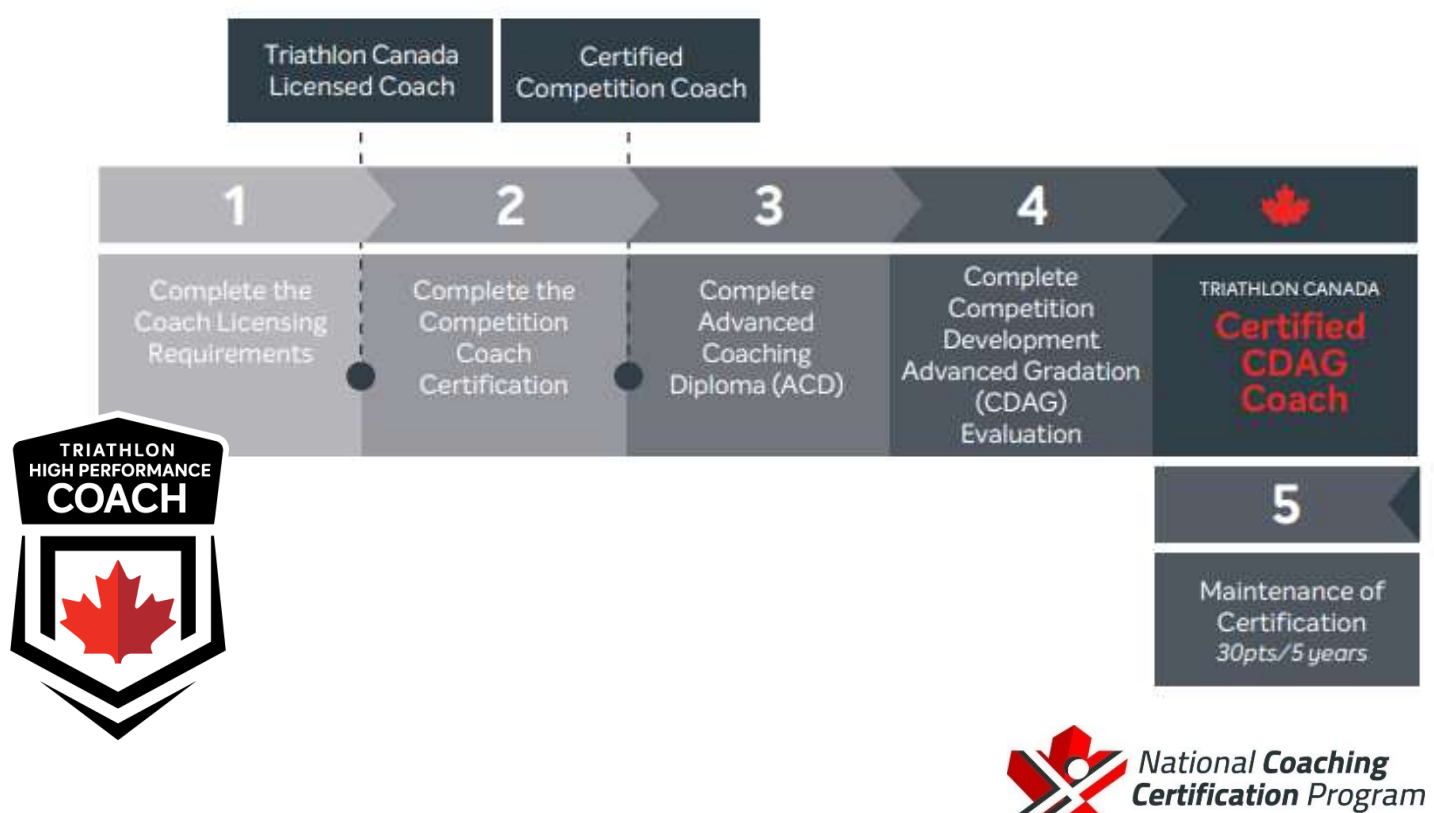
3. Competition Coaching Pathway

A Competition Coach is focused on athletes who are on or are interested in moving onto the high performance pathway. Their priority is refining skills and technique, physical training, sport psychology and all aspects of the daily training environment to develop strong practices and competition skills. This context is designed for coaches of athletes in the Train-to-Train, Train-to-Compete and Train-to-Win stages of the LTAD. Those interested in applying to the Competition pathway should be working with the athlete group identified above and must be supported in their application by their Provincial Sport Organization. Coaching is not a linear pathway, so there is no requirement to first complete training as a Community Coach. However, the training is aligned in that the CAC Multisport modules required on the Community pathway are also recognized and credited on the Competition pathway.



4. High Performance Coaching Pathway

The High Performance Coach is focused on working with National- or Provincial-level athletes who are on the podium pathway. This context is for coaches of athletes in the Train-to-Compete and Compete-to-Win stages of the LTAD. Their priority is consistent and repeatable mastery of technical skills and development of comprehensive support systems for athletes in their daily training environment. They also specialize in supporting athletes to high level competitions (World Triathlon Cup, World Triathlon/Para Triathlon Championship Series, World Triathlon/Para Championships) as well as major games such as the Olympic and Paralympic Games



SECTION 14

COACH DEVELOPMENT AND THE NCCP

Triathlon Canada NCCP - Community

A Community coach is trained to support new and existing youth and adult age group athletes by teaching basic triathlon skills and the safe introduction to events. A community coach is focused on safety, technique, skills, and fun. This context is designed for coaches of the athletes in the Learn to Train, Train to Train and Sport for Life stages of LTAD. There are separate workshops for youth and adult Community coaches. Congruent with the philosophy that guides the Triathlon Canada LTAD 3.0, coaches are encouraged to teach skills, safety, and mastery of the sport as well as the planning for racing.

Triathlon Canada NCCP - Competition

The purpose of the Competition coach program is to train and support learning for Triathlon Canada's coaches who are coaching junior development, junior elite, and elite/U23 triathletes. The Competition context in triathlon spans several years of athlete development, from preparing athletes for Canada Games, through to international competition. It is intense and focused on best practices since the Competition coach plays a critical role in the Podium Pathway for athlete development in triathlon. Coaches in this context are involved in the Daily Performance Environment and yearly training and performance plan management of athletes who may choose to follow a high-performance path as they transition into becoming invested in their careers in triathlon. Competition coaches are important as they affect the development of athletes at critical stages of their lives and must have a comprehensive understanding of high performance and the Podium Pathway in Triathlon Canada and at the international level.

Triathlon Canada LTAD 3.0 And NCCP At A Glance Table

Triathlon Canada Stage	Age	Key Concepts	NCCP
Active Start	0-6	Awareness and fun	Community Youth
Swim, Bike, Run Essentials	6-9	Whole body movements, intro to the sport for fun	Community Youth
Introduction	9-12	Learning skills: physical mental, emotional aspects of sport	Community Youth
Acquisition	12-16	Building the engine and building skills	Community Youth/ Competition Trained/Competition Certified
Consolidation	16-19	Learning how to race, developing self-mastery with intensity	Competition Certified/Adv Coach Gradation
Refinement	20-35	Consistently performs skills in highest level of competition	Competition Certified/ ChPC/Comp Dev Advanced Gradation/Advanced Coaching Diploma
Integration	AG 16 +	Enjoyment at any level for personal goals and values	Community Adult

Triathlon Canada LTAD 3.0 :



<https://www.triathloncanada.com/publications/#ltad>

CAC Coaching pararesources:



<https://coach.ca/coaching-athletes-disability>
https://coach.ca/sites/default/files/2020-02/Coaching_Athletes_Disability_update2016.pdf

An aerial photograph of a large group of triathletes swimming in a dark, choppy ocean. The swimmers are seen from above, creating white splashes as they move through the water. They are wearing various colored swim caps and suits. The overall scene is dynamic and captures a moment of intense physical activity.

APPENDIX

Athlete Development Matrix

Discipline	Introduction	Acquisition	Consolidate	Refine
	Step 3 Learn to Train	Step 4 Train to Train	Step 5 Train to Compete	Stage 6 Compete to Win
Swim	• Breathing • Balance • Rotation • Catch • Pull • Kick	• Range of stroke rate • Speed Control • 2 Beat kick • Wetsuit	• Sighting • Contact • Beach start • Pontoon start/dives • Exits	• Start positioning • Buoys • Position in pack • Drafting
Bike	• Foot position on cleat • Hip Stability • UpperBody Stability • Range of cadences • Single hand riding • Ride in straight line • Clip in Clip out • Turtle races • Water bottle pickups • Braking	• Bunny hops • Step & Stand • Falling on grass • Mike setup T1 • Running with bike • Mount while moving • Getting in shoes • Getting out of shoes • Moving dismount • Gearrestricted crits • Pace lines	• Running mounts • Dismount at speed • Reading lines/corners • 90 Degree cornering • 180 Degree cornering • Riding on different surfaces • Solo cornering • Echalon • Bumping • Motor pacing • Track riding	• Successive corners • Group cornering • Attacks • Pack positioning • High speed cornering
Bike	• Hip and Pelvis stability • Double leg stability • Single leg stability • Posture • Positioning • Placement • Core engagement • Ground contact time • Swing time • Sprinting	• Pacing • Run off bike • Terrain (varied) • Run strength (hills/snowshoe) • Sprinting	• Pack running • T2 Contact • Speed extension • Variable pacing • Run off bike performance capacity	• Speed reserve • Fatigue resistance • Variable pacing • Tactics to win

APPENDIX A

Transitions	• Organization • Racking bike • Orientation • Planned route in/out • Using mount/dismount lines	• Bike setup (pedals/gearing) • Equipment layout • Sense of urgency	• Aware of competitors • Establish position T1 exit • T1 entrance (maintain contact)	• Exit T1 (first 3 min) • Flawless execution
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APPENDIX A

Discipline	Introduction	Acquisition	Consolidate	Refine
	Step 3 Learn to Train	Step 4 Train to Train	Step 5 Train to Compete	Stage 6 Compete to Win
Lifestyle & Nutrition	• Hydration at all sessions • Recovery snack at all sessions • Bring all equipment for all sessions • Overall importance of recovery • Familiar with Canada's food guide • Life Balance • Sleep Hygiene • Family support • Self Care	• Understand caloric deficit • Plan meals • Knowledge of fats/carbs/protein • Drinks throughout day • Injury history/management • Self reliance • PSO requirements • Injury History/management • Performance pathway	• Has nutrition support • Can shop for groceries • Able to prepare meals • Plans pre/post session fueling • Decision making • Injury management • Training time missed • NSO requirements	• Work ethic • Performance readiness • Coach/Athlete relationship • Patience • Resilience • Perseverance • Able to prepare a menu • Travel expertise
Athlete Character	• Patience • Becoming coachable • Good work ethic • Self Awareness	• Patience • Resilience • Performance readiness • Work ethic • Self Awareness	• Patience • Resilience	• Patience • Resilience • Perseverance
Physiology & Training Environment	• Structured/Unstructured training • Functional strength • Balance • Movement Patterns • Range of motion • Speed Development • Games & Challenges • Physical Literacy	• Aerobic Capacity Development • Anerobic Capacity Development • Training frequency • Functional strength • Structured training • Maximal capacity • Performance capacity • Recovery	• Economy of Motion • Power • Speed • Extend Performance Capacity • Training specificity • Fatigue resistance • Speed Reserve • Recovery	• Peaking • Tapering • Race planning • Sport specific training • Recovery • Altitude training • Heat acclimatation • Tactical preparations

Developmentally Appropriate Competition

Triathlon Canada Stage	Age	Key Concepts	Key Competitions
Active Start	0-6	Awareness and fun	NO
Introduction	6-9	Whole body movements, intro to the sport for fun	NO
Acquisition	9-12	Learning skills: physical mental, emotional aspects of sport	Kids and Youth Triathlon Regional races
Acquisition	12-16	Building the engine and building skills	Regional races Provincial races and Games Provincial Series
Consolidation	16-19	Learning how to race, developing self-mastery with intensity	Provincial Series Nat Dev Series Junior Nationals Canada Games Junior Continental Cup Junior Worlds
Refinement	20-35	Consistently performs skills in highest level of competition	Continental Cup World Cup WTCS PanAm/Commonwealth Games WTCS Final Olympic/Paralympic Games Nat Dev Series Senior Nationals
Integration	AG 16 +	Enjoyment at any level for personal goals and values.	Regional events Provincial Series Nationals WT Multisport World Championships AG Ironman, 70.3 Sport Tourism

Definitions Of Canadian Sport System Terms



<https://www.canada.ca/en/canadian-heritage/services/sport-policies-acts-regulations/high-performance-strategy.html#a11>

Athlete Development Matrix (ADM): within the Long-Term Athlete Development (LTAD) Framework, the ADM describes the skills and attributes of athletes progressing through the stages of the LTAD Framework. The generic Sport for Life Athlete Development Matrix (ADM) guides the National Sport Organizations (NSOs) to create a focused, sport-specific matrix of skills and attributes that optimize athlete development. This establishes the background knowledge to inform NSO program design, coaching programs and materials, and effective competition reviews. In the excellence stages of LTAD, the ADM skills and attributes underpin the Gold Medal Profile.

<https://www.triathloncanada.com/publications/#ltad>

Canadian Olympic and Paralympic Sport Institute Network (COPSIN): the COPSIN provides a world leading multi-sport daily training environment for high performance athletes, coaches and practitioners through expert leadership, programs, and sport science and sport medicine services.

Enhanced Excellence: refers to a focused strategy to achieve podium success at the Olympic and Paralympic Games and Senior World Championships.

Gold Medal Profile (GMP): the collection of skills and attributes that underpin the performance of an athlete capable of stepping onto the Olympic, Paralympic or Senior World Championship podium. The GMP is based on validated metrics with clear benchmarks for each of the skills and attributes, scaled according to the stage the athlete is at along the Podium Pathway. The GMP is the excellence reference point for all the stage-based profiles in the LTAD Framework.

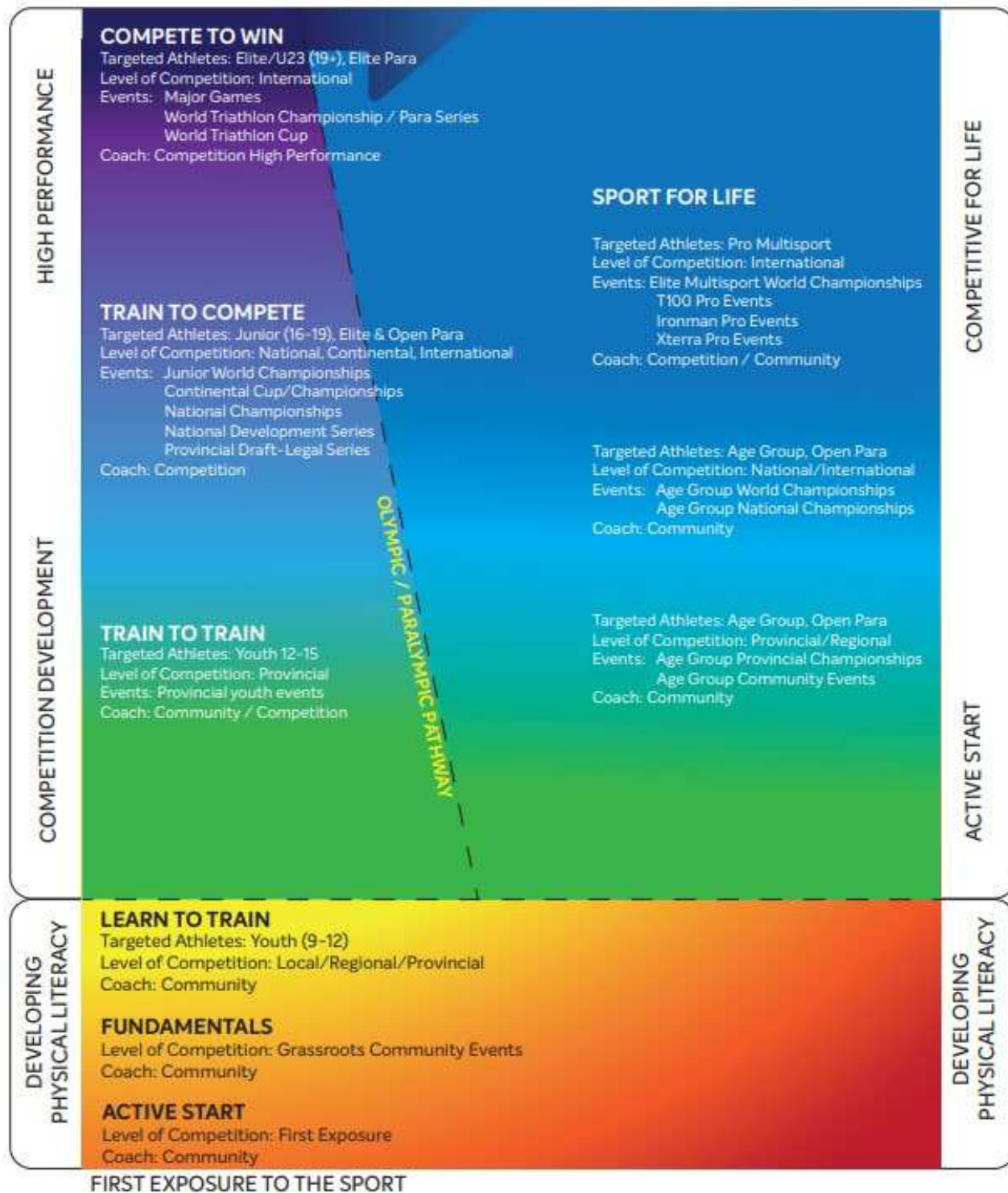
High Performance: defined in this document as a sport system that supports athletes that have stepped onto the Podium Pathway (or equivalent). It includes the resources and support personnel in place to support them that culminates in performance at the Olympic / Paralympic Games and/or single sport Senior World Championships.

Holistically: defined as engaging and developing the whole person (see Wellness).

APPENDIX B

DEFINITIONS OF CANADIAN SPORT SYSTEM TERMS

LONG TERM ATHLETE DEVELOPMENT (LTAD) MODEL



APPENDIX B

DEFINITIONS OF CANADIAN SPORT SYSTEM TERMS

Individual Performance Plan (IPP): developed from an individual athlete's gap analysis and is used to ensure optimal performance planning, relevant sport science and sports medicine services, and monitoring processes to mitigate the identified gaps. The IPP will align with the sport's validated Podium Results Track (PRT) and GMP indicators.

Integrated Support Team (IST): is a multi-disciplinary team of sport science, sport medicine and sport performance professionals that support coaches and athletes in their Daily Training Environment/Competition Environment (DTE/CE).

Long Term Athlete Development (LTAD): is a multistage training, competition, and recovery framework guiding an individual's pathway in sport and physical activity from infancy through all phases of adulthood. It progresses from awareness and first involvement, leads to an active start, and continues through to the pursuit of excellence and/or being active for life. In this strategy, LTAD is inclusive of the Aboriginal Long-Term Participant Development (ALTPD), the Aboriginal Long-Term Participant Development Pathway is a reference for those who work with Indigenous participants in sport and recreation. It has grown out of the understanding that mainstream models for sport development do not necessarily align with Indigenous needs or experiences.

Multisport Service Organizations (MSO): lead or coordinate the delivery of specific services to the Canadian sport community.

National Sport Organizations (NSO): are the national governing bodies for their respective sports in Canada (often referred to National Sport Federations (NSF) at the international level).

Podium Pathway: describes the sport-defined excellence stages of Long-Term Athlete Development and specifically applies to athletes on a trajectory toward podium results at the highest level of their sport. Podium Pathway encompasses both the Podium Results Track (PRT) and the Gold Medal Profile (GMP).

Podium Potential Athletes: athletes with evidence of medal potential for the upcoming and/or subsequent Olympic or Paralympic Games as demonstrated by meeting established performance benchmarks and Gold Medal Profile (GMP) indicators that have been validated by OTP and the NSO.

APPENDIX B

DEFINITIONS OF CANADIAN SPORT SYSTEM TERMS

Podium Results Track (PRT): derived from competition results, is the progression of performance benchmarks required to move through the Podium Pathway and successfully reach the Olympic, Paralympic or Senior World Championship podium.

Sport Integrity: is in reference to upholding the values of high-performance sport to counter threats such as doping, match manipulation, poor governance, violence, abuse, and harassment (all forms—sexual, racial, gender, etc.), and provides support and encouragement to Canadian leaders that are internationally influencing the promotion of positive values, anti-doping, and ethics in sport at the international level.

Values-Based Sport: Is an approach to sport that is intentionally based on, and driven by, a shared set of values and principles identified in the Canadian Sport Policy. Sport policies, programs and practices will explicitly identify, promote, reinforce, and require that these shared set of values are always present in the sport experience in the right balance and proportion respecting the stage of the athlete's development in the sport's LTAD stages.

Yearly Training Program (YTP): A systemic approach of periodized training phases with an objective of producing optimal performances at specified competitions. The individual athlete gap analysis informs the YTP and focuses on timing, peaking and workload distribution of daily training requirements and competition strategies.

Wellness: The quality or state of being healthy in body and mind, as a result of deliberate effort as defined by the five dimensions of emotional, social, spiritual, intellectual, and physical well-being.

Winning Style of Play (WSP): is similar to GMP except this concept is applied to Team Sports and other sports such as Tennis, Badminton, or combat sports.

World Leading: A system, organization or person that is a world leader is perceived as the most successful or advanced in one particular field or area of activity.



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