



World Triathlon Athlete Development Model

Curriculum Document

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Introduction

The **World Triathlon Athlete Development Model** has been specifically designed to provide National Federations (NFs) with current information about athlete selection and development as a framework. The identification of athletes with the potential to compete at the highest level and to the best of their ability in triathlon allows NFs to use the resources available properly. It also helps in the process of designing the best strategy to achieve the best results. The identification process assumes that elite athletes can be selected based on some existing characteristics. However, the multi-dimensionality of sports performance and the variability of competencies needed to be a top athlete creates an environment where the number of variables able to fit an explanatory model of future performance is enormous, and in some cases are hard to identify at the point when selections may be being made, leading to the possibility of future high performing athletes being excluded from the process too early.

The following program provides the necessary information to identify the success factors in the sport of triathlon. It also highlights the essential characteristics athletes need to have if they aspire to compete at the highest level of the sport.

It is important to note that it is not the aim of the programme to dismiss any athlete but to help to establish a realistic and achievable goal according to each athlete's capabilities and characteristics.

Overview

The programme is based on the principle of providing extensive background reading, practical tools and resources. All the content is supported by the latest scientific research in Sport.

All the sections are referenced with scientific articles and papers; in addition, further readings have been recommended in each book so the participants can enlarge their knowledge in each area.

The content of the program is summarized in the following sections:

Physical Maturity

This section explains the process of maturation and highlights how the youngsters experience maturation differently. Males and females do not mature at the same time, and therefore, it is essential to monitor these stages to prescribe the appropriate training. Maturation should be measured in youth athletes to monitor their growth and well-being as athletes accurately. This section brings a proposal for measuring the maturity offset through the calculation of the Peak Height Velocity.

Anthropometric factors and body composition

This chapter explains the vital role that anthropometric characteristics and body composition play in the development and potential of an athlete in the sport of triathlon. Athletes experience a process of body changes through their development and are essential to accurately measure them to effectively monitor their body changes, growth and well-being as athletes.

Physiological attributes

This section is intended to ensure coaches understand the physiological determinants of endurance performance. Reference data of elite and junior athletes is provided and intended to be used during the process of selecting athletes, and for establishing athletes' physiological profiles. The different information presented is aimed to understand the multifactorial nature of endurance training as well as the need for individually tailored training programs. A series of direct and indirect tests are proposed to assess athletes' fitness level.

Psychological Characteristics

Psychological characteristics of athletes play a crucial role in sports performance and may moderate and mediate the influence of technical, tactical, and physical abilities the athletes show. Athletes pass through different stages of development, and their ability to transition from one stage to the next is critical to a successful advance in the sport. This section aims to establish a model of psychological profiling for a triathlon, to help coaches promote athletes' performance and ensure they develop appropriately and successfully to perform at the highest senior international level.

Environmental Factors

In the past, national federations have invested huge resources testing and searching for unique talent in an attempt to find a needle in a haystack. The current research has proven that this method is not the most productive or sustainable, and even might not be ethical, especially when working with young athletes. This chapter aims to identify and classify the environmental factors that are essential for effectively developing the athlete in the sport of triathlon, and summarize those factors that could influence the athlete's development.

Physical Characteristics

This chapter underlines the specific physical characteristics that an athlete has to have to compete at the highest level. The performance factors in sprint and Olympic distance triathlon races and its influence on the overall performance are here explained, and the biomotor abilities which enable athletes to develop the motor capacities to an optimal level for sports performance are also described.

Fundamental Movement Skills for Triathlon.

This section explains how the fundamental movement skills build the foundation for competent and confident participation in a range of physical activities. Additionally, a method for evaluating these skills has been proposed.

How to use the World Triathlon Athlete Development Model?

The World Triathlon Athlete Development Model is a framework, a guideline for National Federations to read, understand and gradually interpret in their operation and structure. This is a resource and toolset available for enrolled personnel of Group 2-5 National Federations through the [World Triathlon Education & Knowledge Hub](#) for their self-study and implementation in their home environment. As the model represents a holistic approach, there is no first step in the implementation, which is largely dependent on the resources, possibilities and current development of the applying NF. National Federations can start with any topic making sure that they aim the building of a well-balanced structure and don't focus only on small facets of the full picture.

Learning Outcomes for National Federations

As the World Triathlon Athlete Development Model is a detailed and described catalogue of approaches and methods that should be performed, together with the conditions under which these should be performed and also the standard of performance expected, after completing this course participating NF professionals should be able to set up their own athlete development programs or pathways.

An NF professional who has completed the training is expected to be able to implement, monitor and oversee an athlete development program. NFs must understand and consider all the areas involving the selection of athletes and have the ability to identify those with enough potential to compete at the highest level of the sport, ensuring they will have a positive long-term effect on participant development and engagement within the sport. It is also vital that any selection at any point of the development program is not aiming at the exclusion of those who are not showing the highest potential at that moment. NFs need to make sure to keep athletes within their development programs and work with them according to their current potentials.

The following list of learning outcomes covers the expectations and remit for the course:

- Become familiar with the Long Term Athlete Development (LTAD) model.
- Understand the many factors that define (can show as) talent.
- Understand the many various types of talents that can result in an athlete becoming a top performer.
- Understand the holistic, non-linear, non-prescriptive approach of athlete development.
- Have an overview of the group of professionals that can facilitate an athlete development program (parents, coaches, medical personnel, physio-therapists, nutritionists, etc.)
- See the athlete development pathway as a full learning progress with the different stages from entering the sport, through youth and junior development, until U23 and elite potential with all the characteristics and requirements of the different stages.
- Ability to establish an interpretation of the World Triathlon Athlete Development Model with regards to National Federation status / opportunities / resources.

Supporting Resources

The content is supported by the [World Triathlon Education & Knowledge Hub](#), which contains all the information (written) required to establish a successful athlete development program. Also, a section called "tools and resources" can be found within the framework. World Triathlon has developed documents, apps (under construction) and spreadsheets from the written content to support the process of athlete development during the practical sessions. With all the content provided, coaches should be able to develop their coaching knowledge and skills and establish a tailored athlete selection program for their NF, academies or clubs.

For more details please contact World Triathlon Development at development@triathlon.org.