



#### **Physical Characteristics - RECAP**

- The performance factors in Sprint and Olympic distance triathlon races and its influence on the overall performance have been previously described.
- The biomotor abilities enable athletes to develop the motor capacities to an optimal level for sports performance, and therefore, should be identified and tested in order to define strengths and weaknesses of the athletes' fitness.
- Beside the components of fitness, balance, coordination and flexibility have been shown as important capacities that should also be assessed and trained accordingly to the specific needs of the sport.





# Fundamental Movement Skills for Triathlon Basic Motor Skills (BMS)





The gross motor skills underpin the development of the more specific sport skills

4 Physical literacy







### **Essential Fundamental Motor Skills**

LOCOMOTOR SKILLS

Run
Jump
Hop
Gallop
Roll
Horizontal
jump
Slide
Swim

MANIPULATIVE SKILLS

Catch
Kick
Vertical Jump
Overhand
Throw
Underhand roll
Ball bounce

STABILITY SKILLS

Balance Twisting Turning Bending







#### **Assessment of Fundamental Motor Skill**

 The primary purpose of the FMS Assessment is to differentiate between individuals whose skills are developing typically and those whose skills are lacking in development.









### **Stages of Athletic Development**

Age		5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
Tri Category					Tri-Start	T	S1	T:	52	T:	S3	Yo	uth	Jun	ior B	Junior C	Senior D		
Sport Focus		Sampling many different Sports								Specia	alising 2-3	sports			Investment in one sport				
Training Structure			14	ow Structu	re								igh Structure			Athlete led			
	and structure	Low Structure Moderate Structure High												· gr. 31/ 31/			71611		
Boys	Fundamental	****																	
	Movement Skills	****				***													
	Strength & Power	****																	
	Agility					****								***					
	Speed					****									***				
	Mobility	***								**									
	Triathlon Skills	**				***				****									
	Endurance	*								**				****					
	Fundamental Movement Skills	****		***															
<b>.</b>	Strength & Power					****													
-		****								***								_	
Girls	Agility												***						
GIIIIS	Speed						****								*	**			
	Mobility	***				**													
	Triathlon Skills	**			*	**		****											
	Endurance	*								**				****					
Tri Category					Tri-Start	-	S1	70	52	71	S3	V-	uth	line	ior B	Junior C	or C Senior D		
		_	-			- '	_			-	_	_	uth	_		_	_		
Age		5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	

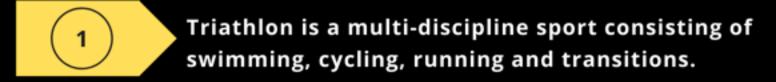
- Adapted from The Youth Physical Development Model
- Strength and conditioning Journal june 2012 Rhodri Lloyd, Jon Oliver







### **Specific skills for triathlon**



The economy of movement of each discipline will play a vital role in the athlete's performance.

Apart from the proper technique of each discipline, athletes must possess a series of specific skills for each segment of the triathlon.

Any lack of these skills will negatively affect the overall performance of the race.







#### **SWIM**

The aim is to swim in the first group or exit the water as close to the lead swimmer as possible.



World Triathlon has developed a unique Swim Technique Analysis Sheet that can be used as a guideline to run a swim stroke analysis proper.







#### BIKE

Cycling usually makes up slightly more than 50% of the duration of a triathlon

Factors which impact race outcomes:

Race tactics

Physical capabilities

Interaction with other triathletes

Bike handling skills

#### **BIKE SKILLS**

Pedalling, cadence and gears

Braking and cornering

Climbing and Descending

Group Riding

Eating and Drinking



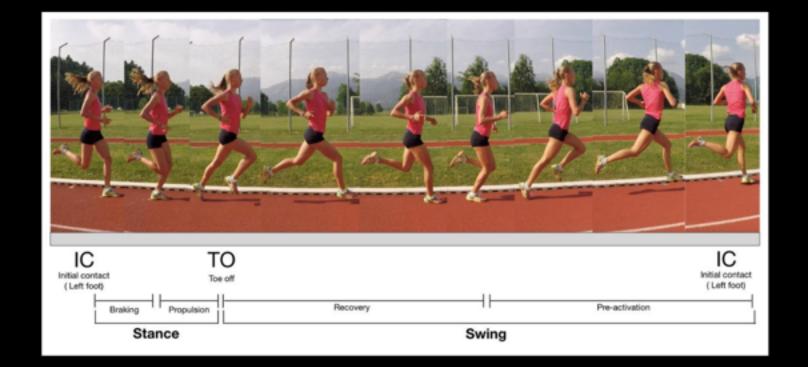




#### RUN

When considering running, it comes at the end of the race, and so is often perceived as the discipline that makes the most significant difference to overall performance

Running analysis is the study of the specific movements required for running.











Transitions require different skills from swimming, cycling, and running. More fine motor skill use is required to perform specific skills.

#### T1 - SWIM - BIKE

- Exit the swim.
- Remove cap and goggles.
- · Run to the transition area.
- Find transition spot and place cap and goggles near the bike.
- Put on any clothes, if required (most athletes race in their bathing suits, singlets, or triathlon suits.
- Put on the helmet (must be fastened BEFORE touching the bike).
- Put on shoes.
- Unrack bike (unhook it from the bike racks).
- Run or walk the bike to the exit of transition (NO riding in transition).
- Mount the bike at the mount line and begin cycling.

#### T2 - BIKE - RUN

- Dismount bike at dismount line (slow down before dismount!)
- Run or walk the bike through the transition to the transition spot.
- Rack bike BEFORE removing the helmet.
- Take off the helmet.
- Change shoes if necessary.
- Put on a hat if necessary (e.g. in the hot sun).
- Run out of transition to begin the last leg of the triathlon (run).







## **Take Home Message**

- The specific skills needed for a triathlon, range from basic level to more advanced exercises.
- It is the task of the coach to assess them and prescribe the necessary training for the athletes to master their weakest areas.
- It is essential to note that each athlete will need his/her own time for developing specific abilities
- Setting and individual skill profile will help coaches prescribing the right task for each athlete, and therefore, will guide them tailor-making a series of exercises to improve their skills and performance.









## Any questions not discussed during the webinar will be answered and posted on the WT Education Hub within 24 hours

World Triathlon Education Hub Open Content

https://education.triathlon.org/

World Triathlon Development Webinars Past and Upcoming

https://education.triathlon.org/mod/page/view.php?id=6249

**Triathlon Live** 

https://www.triathlonlive.tv/













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