



Revision Series 2024

BTEC Tech Award in Sport Component 3

◆ Notes pages ◆



The EverLearner

How to use this revision session and notes

- Complete this document when doing the live or on-demand revision shows.
- The imagery contained in the notes is designed for you to be able to study the key knowledge prior to the live session.
- During the live session, James will guide you through how to use that knowledge in your exam.
- Focus on the skills that James is presenting as much as the content. In most cases, students have a knowledge of the topic but struggle to respond to the command in the question. This is a focus of our revision.
- Complete the notes pages as extensively as possible and, if necessary, return to the show to complete it more than once in order to make the fullest notes possible.
- Have the National Mock Exam to hand and, ideally, your completed, marked version of it.
- Have the [exam infographics](#) to hand. These will be referred to throughout the show.

My ticklist:


- Notes pages
- Exam infographics
- Exam paper
- Exam mark scheme
- Exam model answers

During the live show, we will cover...

Topic 1: Components of fitness: Aerobic endurance.....	4
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We will also cover a wide array of exam skills including command terms for shorter and longer answers as well as the extended writing requirements of the paper.

Athlete profiles



Mills

Basic details
Age: 17
Sport: Steeplechase
Level: Club



Filip

Basic details
Age: 16
Sport: Lacrosse
Level: County



Samira



Basic details
Age: 26
Sport: Badminton
Level: For health

Topic 1: Components of fitness: Aerobic endurance



Fill in the gaps to complete the definition of aerobic endurance.

The ability of the _____ system to work _____ supplying _____ and _____ to _____ muscles for _____ physical activity

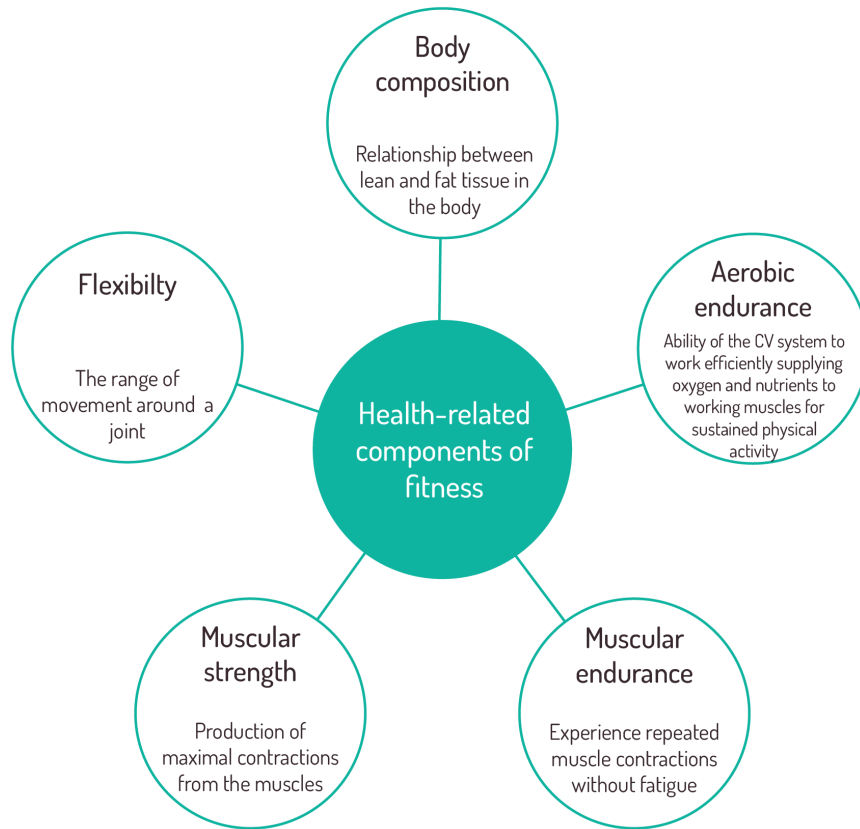
Describe a sporting example of when each boy needs aerobic endurance



	 <p>Mills</p>	 <p>Filip</p>
Aerobic endurance example	<hr/> <hr/> <hr/>	<hr/> <hr/> <hr/>

Explain its importance to performance.

	 <p>Mills</p>	 <p>Filip</p>
Explain the importance of aerobic endurance	<p><i>Mills needs aerobic endurance because it allows him to work continuously for the duration of the race, without tiring and slowing down.</i></p>	<hr/> <hr/> <hr/>

EXT: select another CoF for both boys, give examples and justify the importance.



	 <p>Mills</p>	 <p>Filip</p>
Component of Fitness	_____	_____
Specific example	<i>Mills uses this to jump over the barriers.</i>	_____ _____ _____
Explain the importance of each component of fitness.	_____ _____ _____	_____ _____ _____



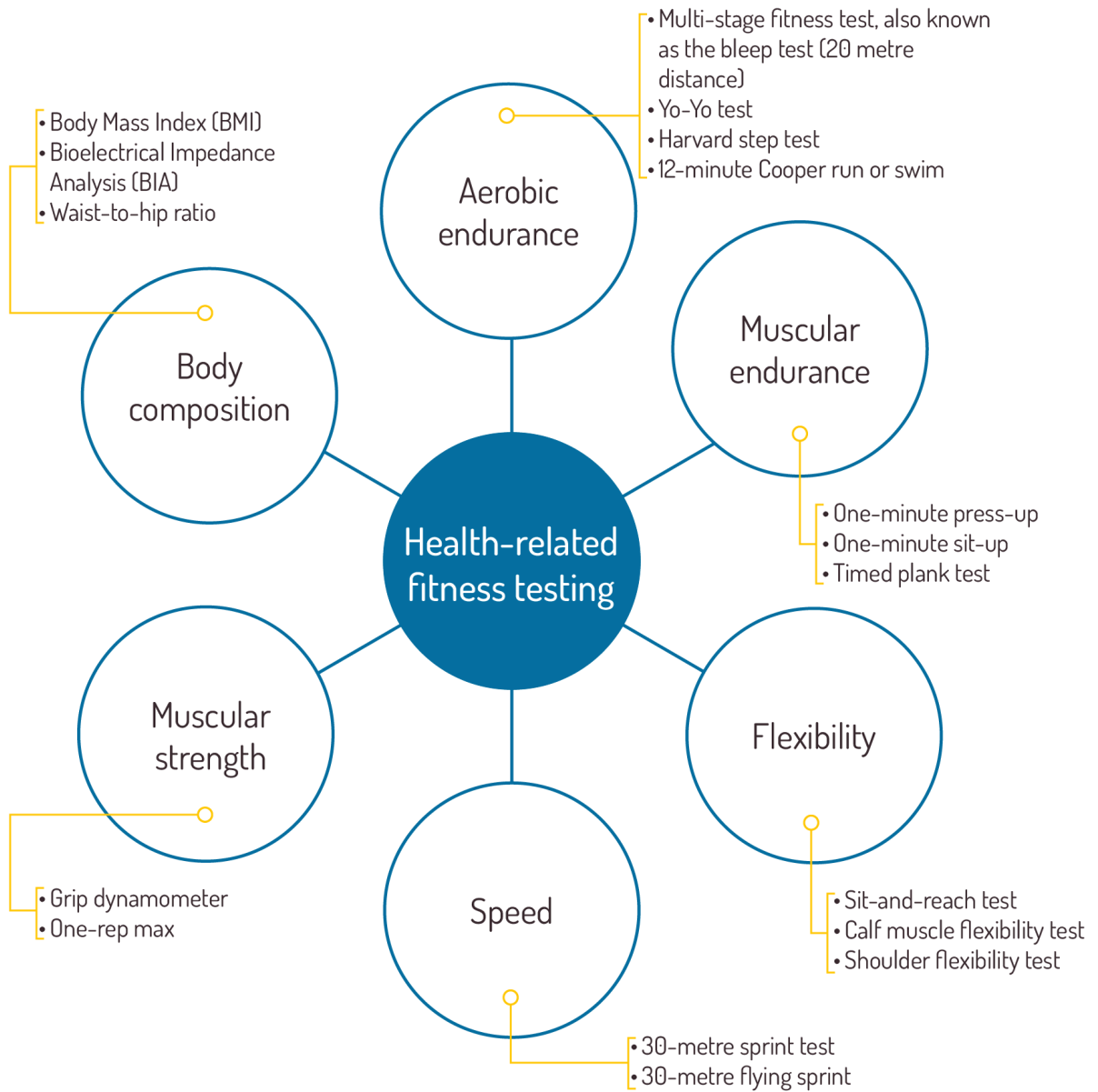
Want to know more? Watch the FREE tutorial "Aerobic endurance" on [TheEverLearner.com](https://www.theeverlearner.com)

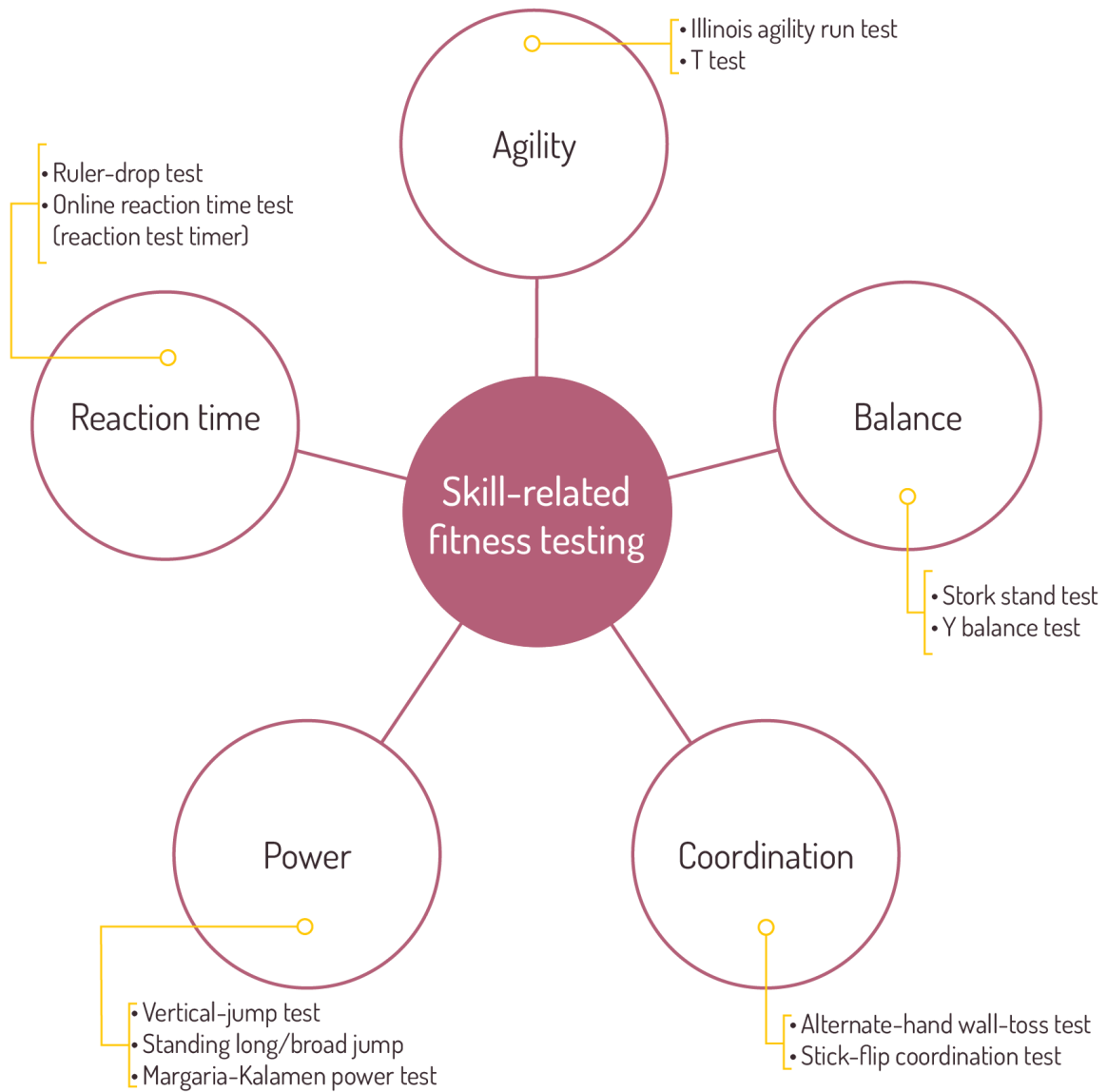
Describe why the 12-minute Cooper run test would be appropriate for a lacrosse player.

Describe how you might adjust the 12-minute Cooper run test for a triathlete.

Explain how you ensure the multi-stage fitness test is reliable.

Don't forget all the other different types of fitness testing:





Want to know more? Watch the FREE tutorial "Multi-stage fitness test" on [TheEverLearner.com](https://www.theeverlearner.com)

Topic 3: Methods of training: Continuous and Fartlek training

Method of training	Description	Component of fitness	Examples of associated fitness test
_____	<ul style="list-style-type: none"> Choice of resistance Correct lifting techniques Spotters 	<ul style="list-style-type: none"> Strength Power Muscular endurance 	<ul style="list-style-type: none"> Hand-grip dynamometer One-repetition max 12-minute Cooper test
_____	<p>Eccentric followed by larger concentric contraction</p>	<ul style="list-style-type: none"> Power Explosive strength 	<ul style="list-style-type: none"> Vertical jump
_____	<p>Static active: The individual performs the stretch. Static passive: The individual is helped by another person or object to perform the stretch. PNF: The use of a partner to create an isometric contraction to inhibit the stretch reflex.</p>	<ul style="list-style-type: none"> Flexibility 	<ul style="list-style-type: none"> Sit-and-reach
_____	<ul style="list-style-type: none"> Series of stations Work:Rest ratio 	<ul style="list-style-type: none"> Muscular endurance Aerobic endurance Flexibility Muscular strength 	<ul style="list-style-type: none"> Sit-up bleep

Method of training	Description	Component of fitness	Examples of associated fitness test
_____	<ul style="list-style-type: none"> Sustained exercise at a constant rate No rests Minimum of 20 minutes 	<ul style="list-style-type: none"> Cardiovascular endurance 	<ul style="list-style-type: none"> Multi-stage fitness test
_____	<ul style="list-style-type: none"> Varying speed Varying terrain Varying Work:Recovery ratios 	<ul style="list-style-type: none"> Cardiovascular endurance Speed 	<ul style="list-style-type: none"> Multi-stage fitness test 30m sprint test
_____	<ul style="list-style-type: none"> Periods of exercising hard Interspersed with periods of rest 	<ul style="list-style-type: none"> Speed 	<ul style="list-style-type: none"> 1 min sit-up, 1 min press-up 30m sprint test

6. Filip wants to use circuit training to help him improve his aerobic endurance. Describe the key characteristics of an aerobic endurance circuit.

An aerobic endurance circuit should have at least six stations set up. Exercises are completed for a set amount of time before a short rest period between stations. The stations should be varied to include working different muscle groups. The performer should aim to work in their aerobic training zone during the circuit.

Marks: **[3]**

Explain how both Mills and Phillip would structure a fartlek training session to suit their needs. **[2]**

22. Mills trains three times a week. His coach has recently decided to introduce Fartlek training to his training group. Justify his coach's choice for Fartlek training.



Marks: [3]

Analyse the different methods of training that Filip could use in order to improve his aerobic endurance.

Analyse

Break into parts and explain

Analysis

Firstly, secondly, lastly
Evidently,
This means that
This causes
As a result of this,
This is because
Therefore.

Explanation

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Analyse

Observation 1
from the subject being analysed

Make an observation about part of the topic/image/graph you are analysing and then explain it.

Use language such as:
 Firstly,
 because
 This means that

Firstly,

Observation 2
from the subject being analysed

Make an observation about another part of the topic/image/graph you are analysing and then explain it.

Use language such as:
 Secondly,
 This means that
 This is because

Secondly,

Observation 3
from the subject being analysed

Make an observation about another part of the topic/image/graph you are analysing and then explain it.

Use language such as:
 Thirdly,
 This means that
 This shows that

Thirdly,

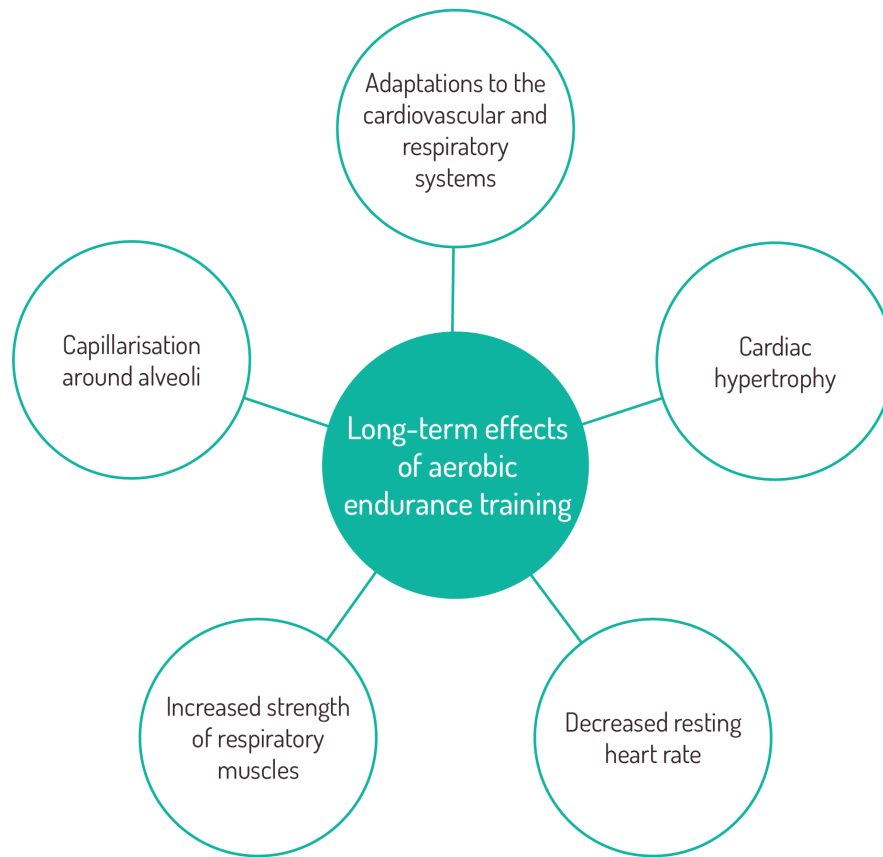
	Continuous training	Fartlek training	Interval training	Circuit training
Firstly,	<i>Continuous training should be longer than 30 minutes, this reflects the two halves of Filip's lacrosse game. This means that Filip will be able to maintain his aerobic endurance for the full length of each half.</i>	_____	<i>Although interval training can be used to develop speed, longer intervals can also be used to develop aerobic endurance.</i>	_____
Secondly,	_____	<i>Secondly, Fartlek training can be adjusted to different speeds, which is specific to lacrosse as Filip will be running, jogging and sprinting throughout his match.</i>	<i>By changing the length of the rest periods, aerobic endurance can be training due to...</i>	_____
Thirdly,	_____	_____	_____	_____



Want to know more?

Watch the FREE tutorials "Continuous training" and "Fartlek training" on [TheEverLearner.com](https://www.theeverlearner.com)

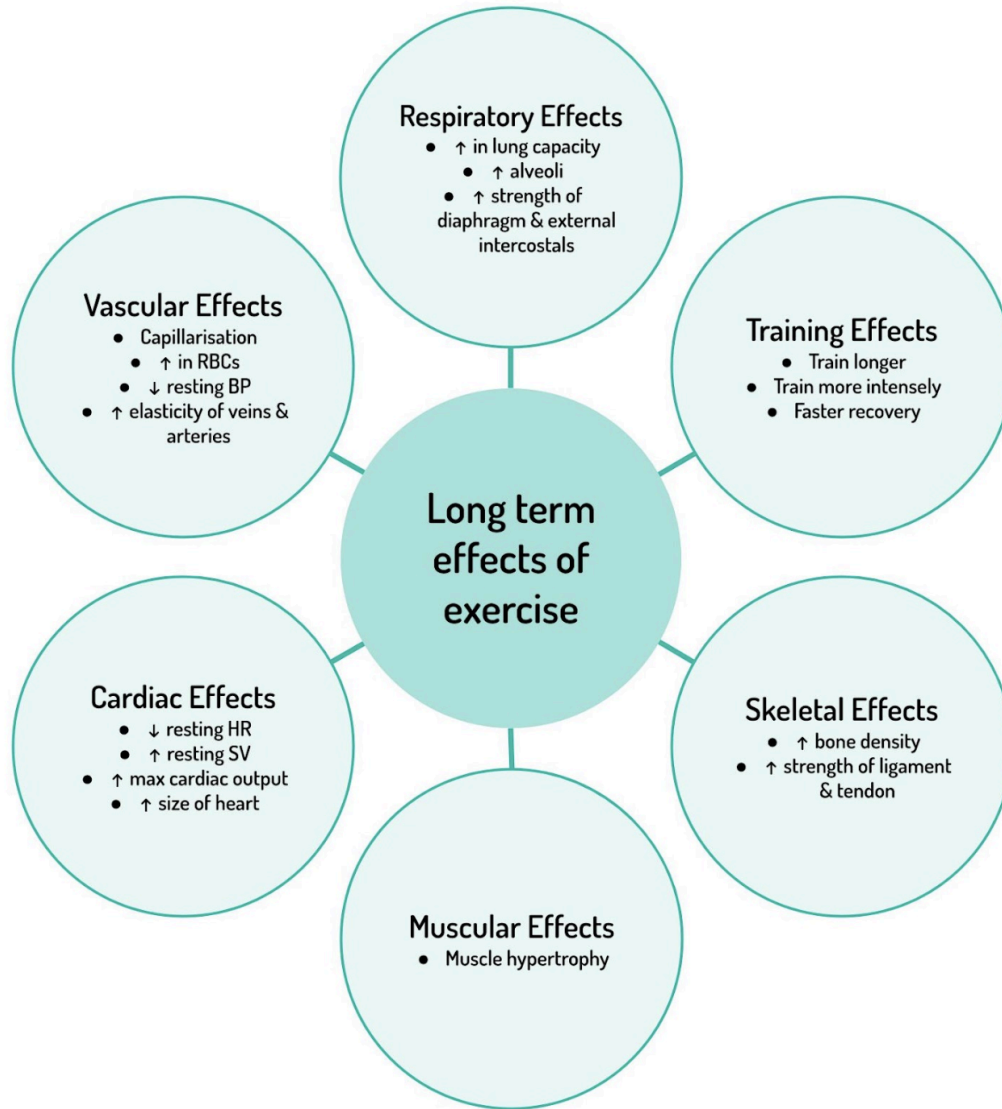
Topic 4: Long-term training on the body systems



24. In addition to Mills's Fartlek training, he has been using continuous training to help improve his steeplechase performance. Suggest the benefits of these types of training on Mills's body systems.

Marks: **[3]**

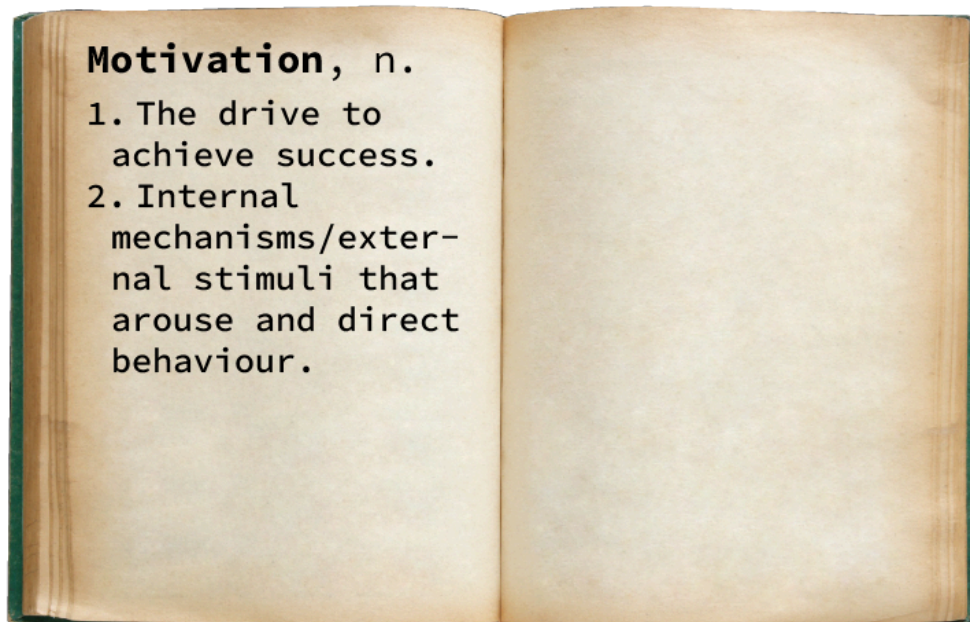
Remember, it is not just aerobic endurance training that leads to body system adaptations:



Want to know more?

Watch the tutorial "Adaptations to different types of training" on [TheEverLearner.com](https://www.theeverlearner.com) (subscribers only).

Topic 5: Motivation



Specific examples of motivation for Mills & Filip.

Intrinsic	Extrinsic	
	Tangible	Intangible

How might setting goals increase their motivation?

Describe the benefits of motivation on Mills & Filip's sporting performances.

- _____
- _____
- _____
- _____




Want to know more? Watch the tutorial "Motivation" on [TheEverLearner.com](https://www.theeverlearner.com) (subscribers only).

Topic 6: Components of fitness: Muscular strength and muscular endurance


Components of Fitness - Muscular endurance	
Definition	Ability to use voluntary muscles repeatedly without getting tired.
Examples	Olympic rower repeatedly contracts the biceps to flex the elbows and pull against the water without fatiguing meaning they maintain their pace in the crucial last 100m.

Components of Fitness - Strength	
Definition	Ability of a muscle to exert force for a short period of time
Examples	Weightlifter begins to raise a world record weight off the ground by applying maximal muscular force to the bar with the upper and lower body.

Describe a specific sporting example in badminton where Samira will need these components of fitness:

	Muscular strength	Muscular endurance
Describe		
 <p>Samira</p>		

Explain their importance to performance:

	Muscular strength	Muscular endurance
<p>Explain</p> <p style="text-align: center; color: teal; font-size: 1.2em;">Samira</p> 	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>

Can you do the same with these components of fitness?

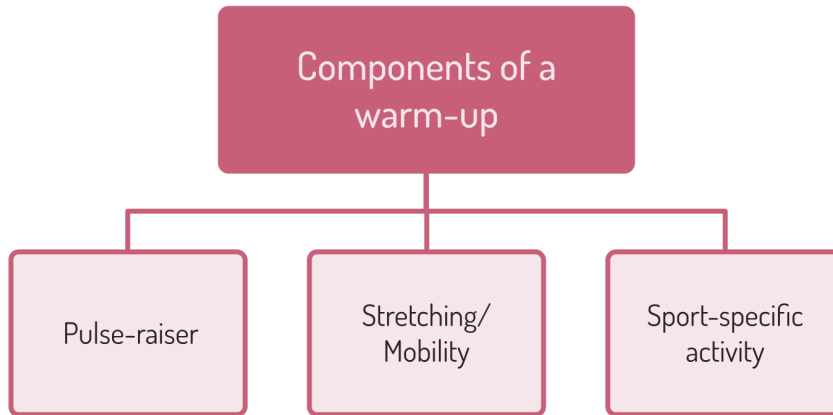
	Coordination	Balance
<p>Describe a specific example.</p>	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
<p>Explain why the component of fitness is needed</p>	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>






Want to know more?

Watch the tutorials "Muscular endurance" and "Muscular strength" on [TheEverLearner.com](https://www.theeverlearner.com) (subscribers only).

Topic 7: Warm-up



How might you plan a warm-up for our three different athletes and what key differences would each warm-up include?

 <p>Mills</p>	 <p>Filip</p>	 <p>Samira</p>
<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>



Want to know more?

Watch the tutorial "Requirements for training methods" on [TheEverLearner.com](https://www.theeverlearner.com) (subscribers only).

Topic 8: Methods of training

Circuit training



- + Lots of possibility to alter and adapt the workout.
- + Whole body can be trained.
- + Order of stations can be varied.
- + Capacity to train ME, strength and even CV fitness.
- + Excellent use of space. Lots of people training in small area.
- + Different levels of fitness can work together.
- No record of who did what.
- Hard to monitor.
- Loafing may occur.


	Muscular strength	Muscular endurance
Describe a circuit training session for Samira.		

	Muscular strength	Muscular endurance
Explain why they are different.	_____	_____
	_____	_____
	_____	_____
	_____	_____
	_____	_____

16. Explain how Samira would adapt her circuit training to develop her muscular endurance and her muscular strength.

Samira would adapt a circuit training session for muscular strength by lifting heavy weights with low repetitions. She would adapt the circuit training for muscular endurance by lifting light weights with high repetitions.

Marks: **[2]**

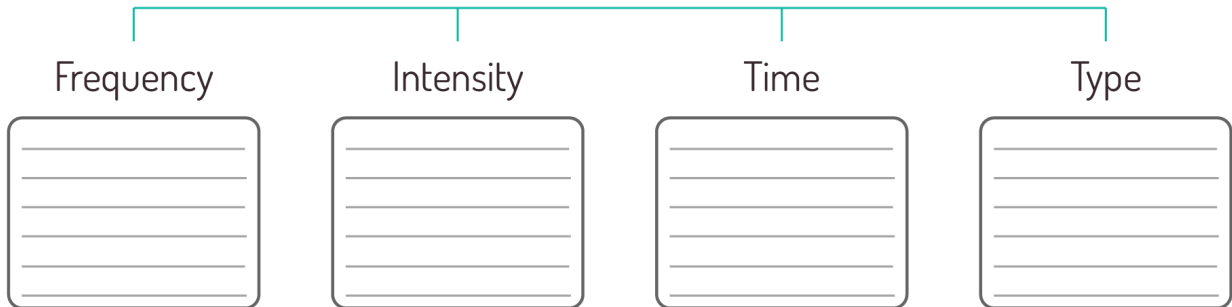


Want to know more?

Watch the tutorial "Circuit training" on [TheEverLearner.com](https://www.theeverlearner.com) (subscribers only).

Topic 9: Basic principles of training and application

Basic principles of training FITT



Samira



Samira plays badminton once a week for an hour. She has been trying to improve her muscular endurance and has been completing a weight training session twice a week. See her session plan for more details.

Session: Key information	Session description
Week 1 1-hour weight training Local gym	3 x 15 reps bicep curls (50% 1RM) 3 x 15 reps Kettlebell single-arm shoulder press (50% 1RM) 3 x 15 reps push-up

Describe how Samira might apply each basic principle of training to her plan:

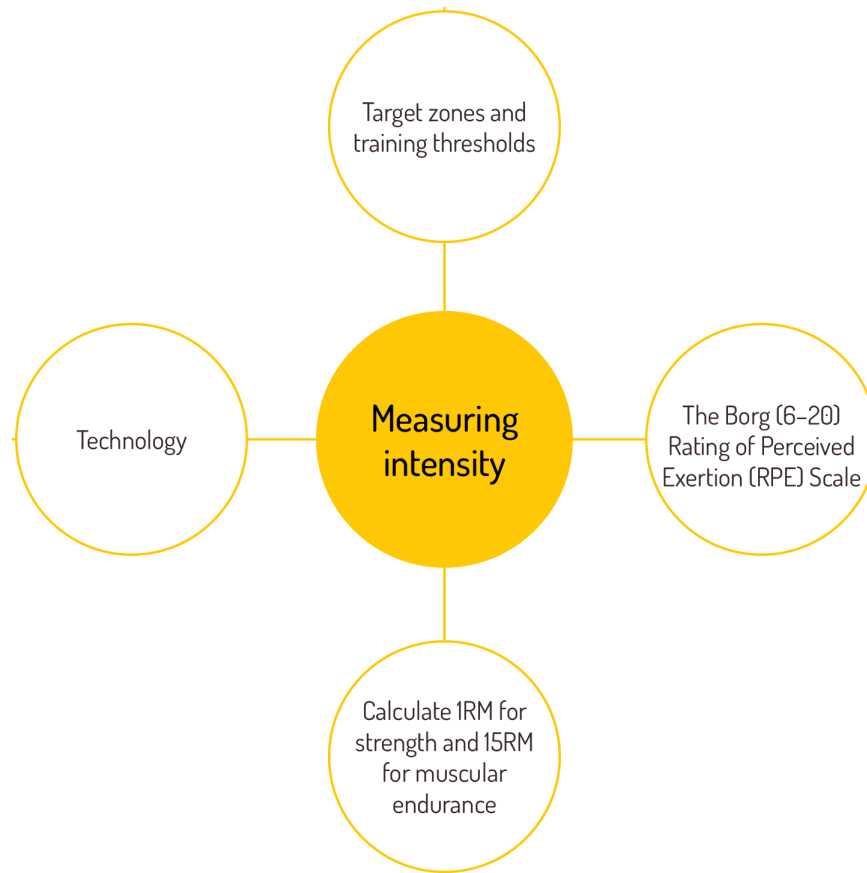
Principle	How Samira might apply it
F _____	<hr/> <hr/>
I _____	<hr/> <hr/>
T _____	<hr/> <hr/>
T _____	<hr/> <hr/>



Want to know more?

Watch the tutorial "Basic principles of training" on [TheEverLearner.com](https://www.theeverlearner.com) (subscribers only).

Topic 10: Intensity and target zones



		Target zones	The Borg RPE Scale	Calculating RM
High(er) intensity	Appropriate components of fitness	_____ _____	_____ _____	_____ _____
	Appropriate methods of training	_____ _____	_____ _____	_____ _____
	Description of application	_____ _____	_____ _____	_____ _____

		Target zones	The Borg RPE Scale	Calculating RM
Low(er) intensity	Appropriate components of fitness	_____ _____	_____ _____	_____ _____
	Appropriate methods of training	_____ _____	_____ _____	_____ _____
	Description of application	_____ _____	_____ _____	_____ _____

18. Describe, using an example, how the Borg scale can be used to monitor Samira's exercise intensity when completing her circuit training.

Marks: **[2]**



Want to know more?

Watch the tutorial "The Borg Scale" on [TheEverLearner.com](https://www.theeverlearner.com) (subscribers only).