

Revision Series 2022
AQA GCSE Physical Education







Paper 1

◆ Notes pages ◆



The EverLearner

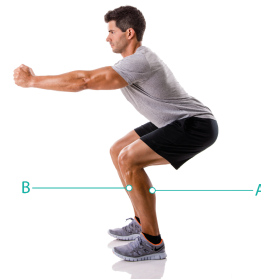
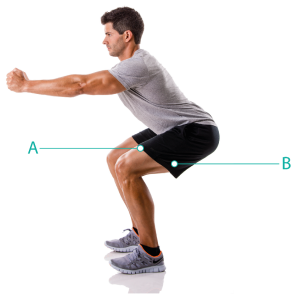
Welcome to the 2022 Revision Series for AQA GCSE Physical Education! We hope you find it useful. Before we start, please make sure you have all of the documents below, as they will be great help for your revision:

-  Notes pages
-  Practice questions
-  Mark schemes
-  Model answers
-  Infographics
-  Revision timetable

You will find all these documents on our [AQA GCSE PE Revision page](https://pages.theeverlearner.com/2022-aqa-gcse-pe-revision) (<https://pages.theeverlearner.com/2022-aqa-gcse-pe-revision>).



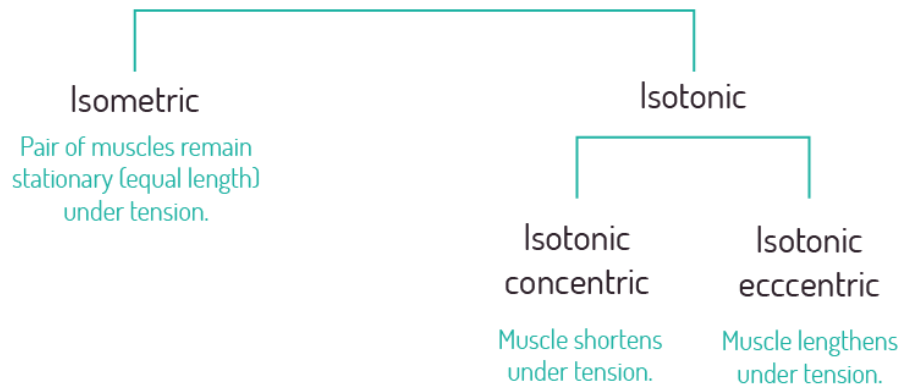
Muscle pairs



Notes



Types of contraction



Notes



Phase A



Phase B

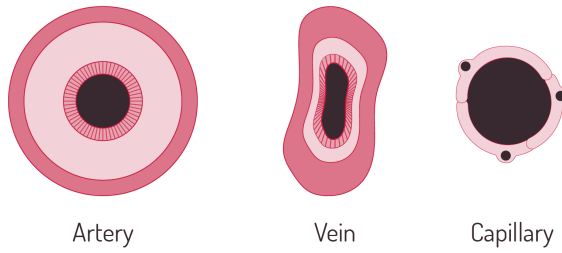


Movement	Joint	Phase	Prime mover	Contraction type
Press-up	Elbow	Upward	Triceps	Isotonic concentric
		Downward	Triceps	Isotonic eccentric

Notes



Blood vessels

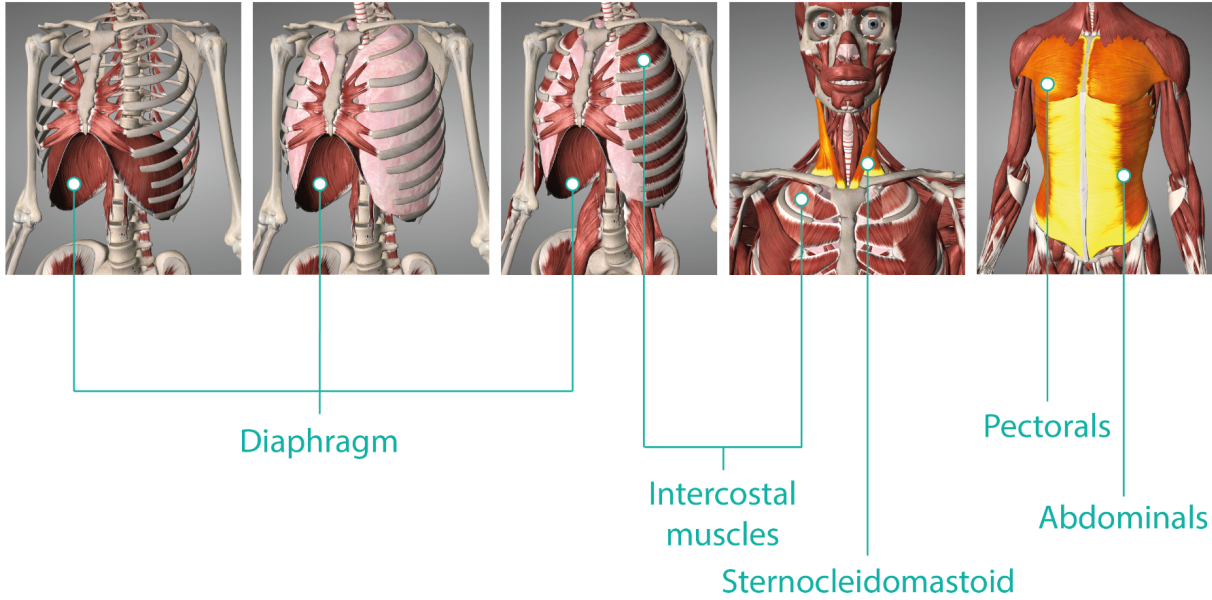


Not to scale

Notes



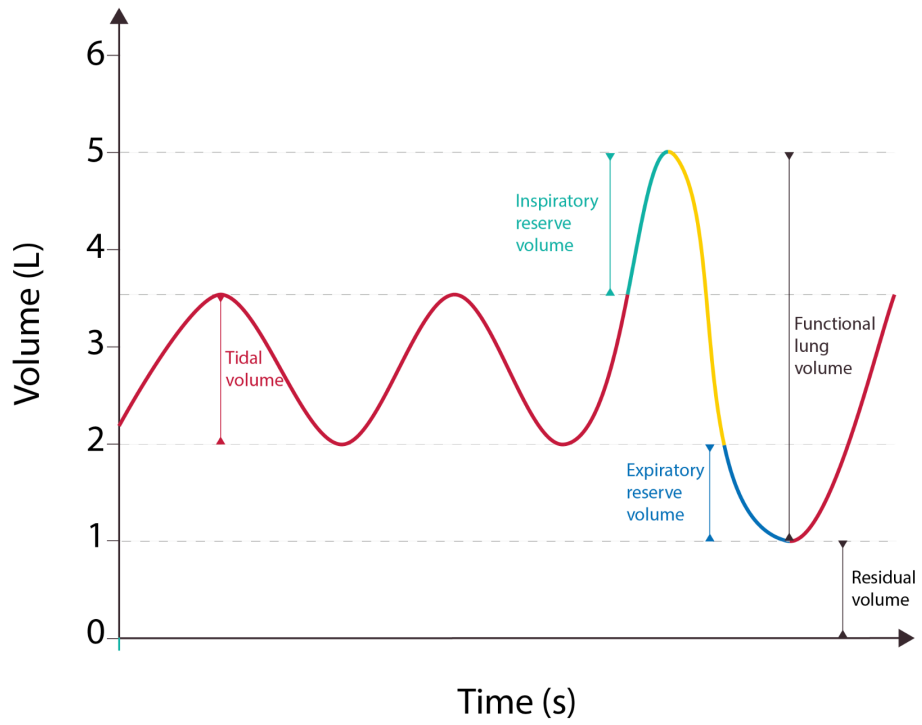
Mechanics of breathing



Notes





Lung Volumes



Notes



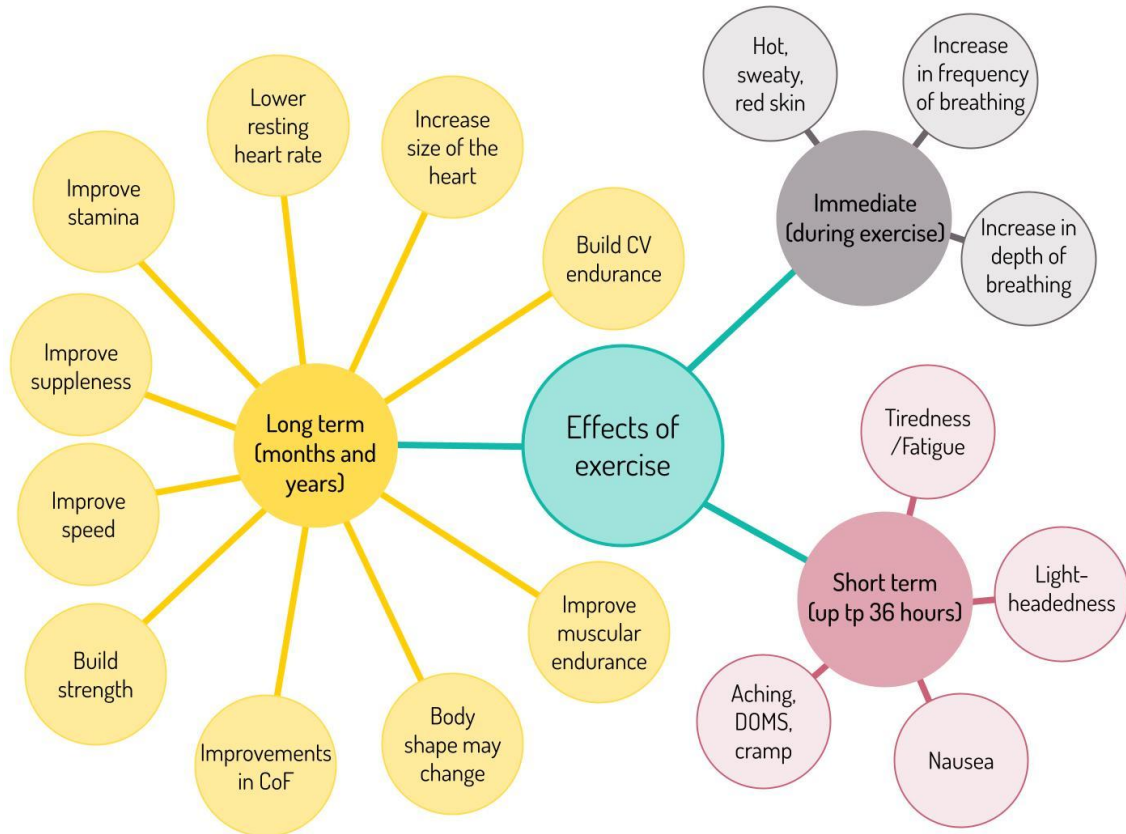
Aerobic and anaerobic exercise

System	Energy release	
Aerobic respiration	Glucose + Oxygen	 Carbon dioxide + Water + Energy
Anaerobic respiration	Glucose	 Lactic acid + Energy

Notes



Long-term effects of exercise



Notes



Analysis of basic movements in sporting examples

Phase A



Phase B



Movement	Joint	Phase	Prime mover	Contraction type
Press-up	Elbow	Upward	Triceps	Isotonic concentric
		Downward	Triceps	Isotonic eccentric

Notes





Movement	Joint	Phase	Prime mover	Contraction type
Throw in	Elbow	Preparation	Biceps	Isotonic concentric
		Release	Triceps	Isotonic concentric

Notes





Movement	Joint	Phase	Prime mover	Contraction type
Kick action	Hip	Preparation	Gluteals	Isotonic concentric
		Kicking	Hip flexors	Isotonic concentric
	Knee	Preparation	Hamstrings	Isotonic concentric
		Kicking	Quadriceps	Isotonic concentric
	Ankle	Preparation	Gastrocnemius	Isotonic concentric
		Kicking	*Tibialis anterior	*Isotonic concentric

Notes





Movement	Joint	Phase	Prime mover	Contraction type
Vertical jump	Hip	Take off	Gluteals	Isotonic concentric
		Landing	Gluteals	Isotonic eccentric
	Knee	Take off	Quadriceps	Isotonic concentric
		Landing	Quadriceps	Isotonic eccentric
	Ankle	Take off	Gastrocnemius	Isotonic concentric
		Landing	Gastrocnemius	Isotonic eccentric

Notes





Movement	Joint	Phase	Prime mover	Contraction type
Running action	Hip	Drive	Gluteals	Isotonic concentric
		Recovery	Hip flexors	Isotonic concentric
	Knee	Drive	Quadriceps	Isotonic concentric
		Recovery	Hamstrings	Isotonic concentric
	Ankle	Drive	Gastrocnemius	Isotonic concentric
		Recovery	Tibialis anterior	Isotonic concentric

Notes





Movement	Joint	Pattern	Prime mover	Contraction type
Bowling	Shoulder	Circumduction	Deltoid	Isotonic concentric

Flexion + Extension + Abduction + Adduction = Circumduction

Notes



Components of fitness

Components of Fitness (A-F)		
Component	Definition	Performance example
Agility	Changing direction quickly whilst maintaining control	Netball player dodging left and right to find space to receive the ball.
Balance	Maintenance of the centre of mass above the base of support	Skier leaning forward to keep their CoM above their skis in order to Prevent a crash and to stay in the race.
CV endurance/Aerobic power	Ability of the heart and lungs to supply oxygen to the working muscles	Triathlete efficiently delivers oxygen to the gastrocnemius when running in order to work at higher intensities aerobically and prevent OBLA.
Coordination	Ability to use different parts of the body together	High jumper arches their back whilst simultaneously kicking their legs up in order to clear the bar with their lower body.
Flexibility	Range of movement possible at a joint	Hockey goalkeeper shows a wide range of movement in the shoulder by hyperextending to save a slow-moving ball that has already looped over their head and is going into the net.

Notes



Components of Fitness (M-S)		
Component	Definition	Performance example
Muscular endurance/Dynamic strength	Ability of a muscle to undergo repeated contractions without fatigue	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.
Power/Explosive strength/Anaerobic power	Product of strength and speed	100m sprinter applies maximal force to the block at the highest speed possible to accelerate them ahead of their opponents in the race.
Reaction time	Time taken to initiate a response to a stimulus	Basketball player reacts quickly to their opponents drive to the basket by starting to push of their left foot so they can begin to move to their right to block the route to the basket and prevent 2 points.
Maximal strength	Ability to overcome a resistance	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.
Static strength	Ability to hold a body part in a static position or maximum force that can be applied to an immovable object	Rugby prop forward applies isometric contractions on the legs against their front row opponent for the first 5 seconds of a scrumage before the scrum starts to move..
Speed	Maximum rate at which an individual is able to perform a movement or cover a distance in a period of time	Table tennis player moves rapidly to their left to reach a hard-hit loop shot before the ball passes their paddle and wins the point for the opponent.

Notes



Reasons for and limitations of fitness testing

Reasons for

Notes

Limitations

Notes



30m Sprint Test	
Protocol	Strengths and Weaknesses
Measure out exactly 30m	Simple to set up
Rolling start	Measures top speed rather than acceleration
Run as fast as you can	Maximal
Use a stopwatch to measure the time	Only measures straight line running speed
Result is time in seconds	Not sport-specific
	Potential timing inaccuracies

Vertical Jump Test	
Protocol	Strengths and Weaknesses
Stand sideways on to the wall	Good measure of leg power
Mark standing reach height with chalk	Little equipment required
Jump as high as possible and mark a line with chalk at the peak of the jump	Maximal
Score is distance in centimetres between the two marks	Not a measure of whole body power

Ruler Drop Test	
Protocol	Strengths and Weaknesses
Ruler is held at 0cm between the thumb and index finger	Simple
Ruler is dropped with no warning	Generic test - not specific to reactions in any sporting context
Participant catches the ruler as early as possible	Results improve with practice - not reliable
Distance dropped is measured in centimetres	

Notes



Warming up and cooling down

Warm Up



Pulse Raiser



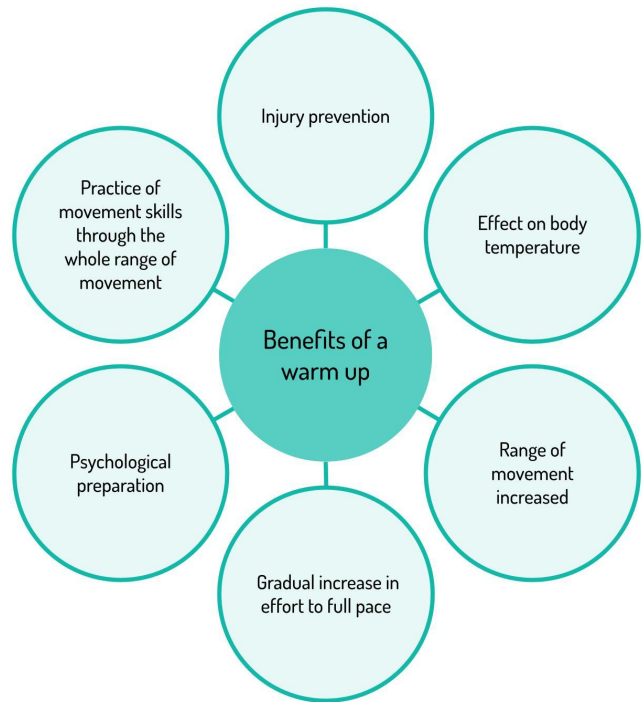
**Stretch/
mobility**



**Skill
Familiarisation**



**Mental
Preparation**



Notes



Cool down



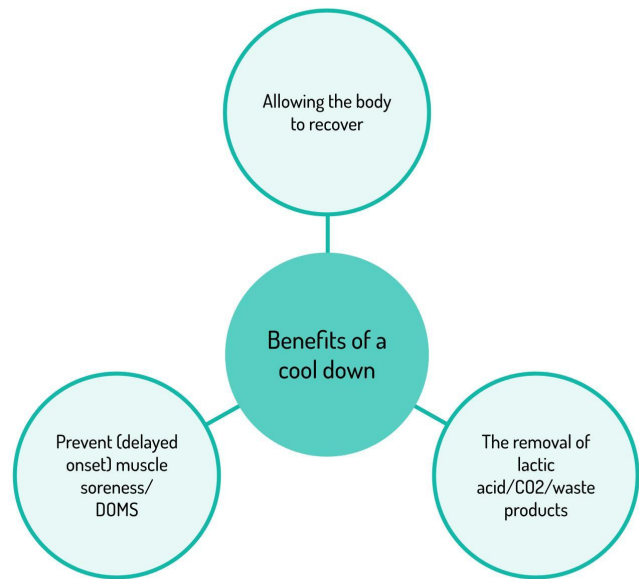
Maintain respiratory/
cardiac rates



Gradually decrease
respiratory/cardiac rates



Stretching



Notes

