



Revision Series 2022
OCR GCSE Physical Education

Paper 1

◆ Notes pages ◆



The EverLearner

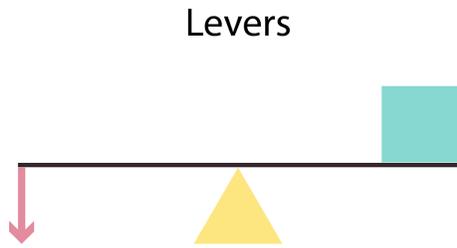
Welcome to the 2022 Revision Series for OCR GCSE Physical Education! We hope you find it useful. Before we start, please make sure you have all of the documents below, as they will be great help for your revision:

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

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



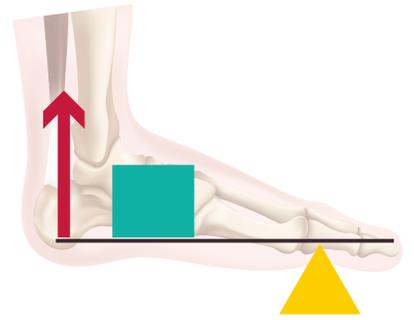
Lever Systems



Notes



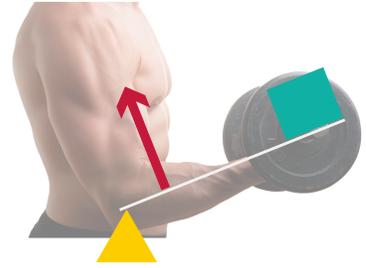
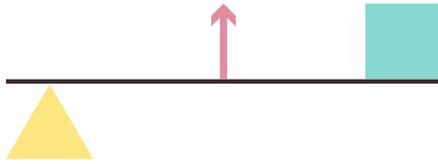
Levers



Notes

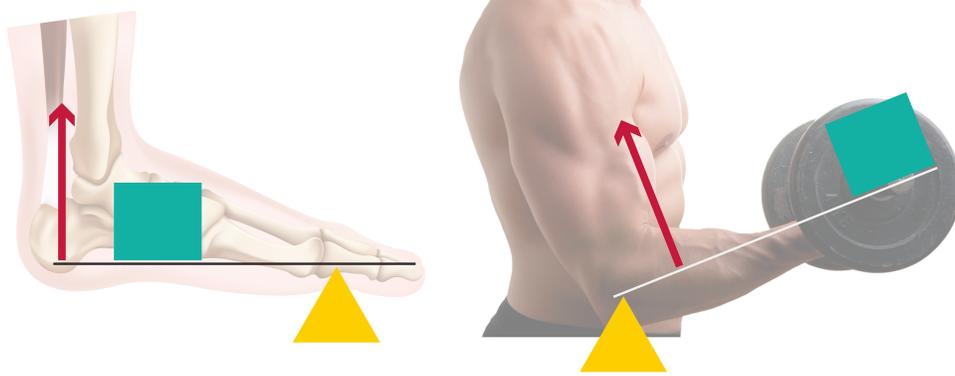


Levers



Notes

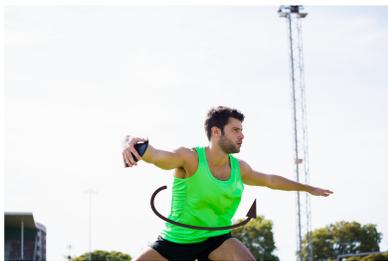
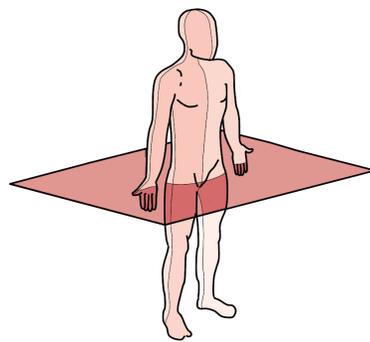
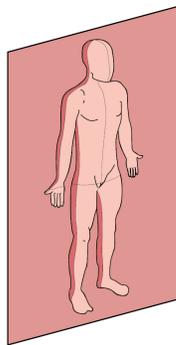
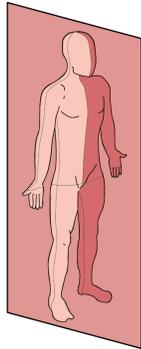




Notes



Planes of movement and axes of rotation



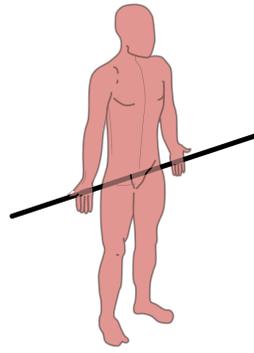
Notes



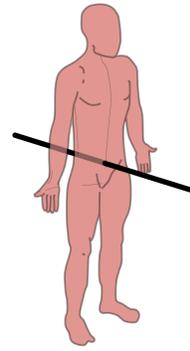
The EverLerner



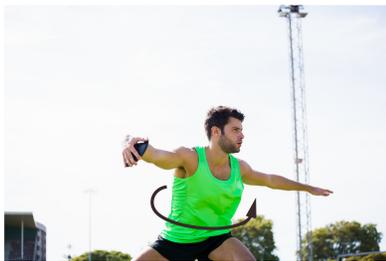
A



B



C

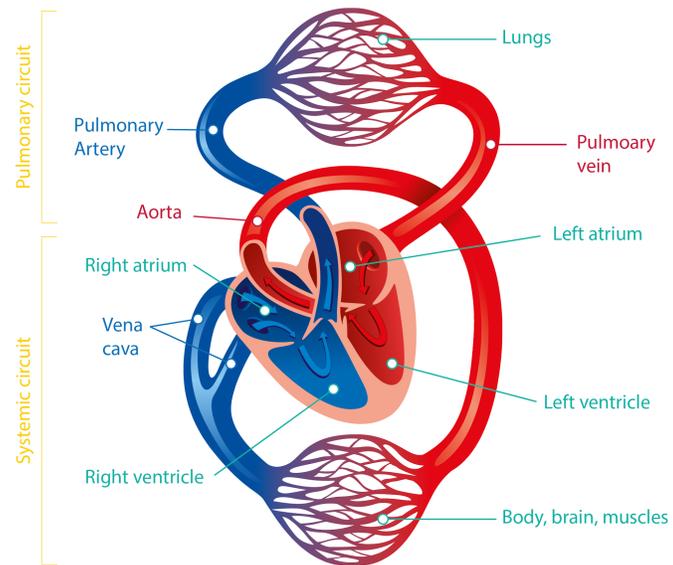


Notes



Structure and function of the CV system

Double Loop Circulatory System



Notes



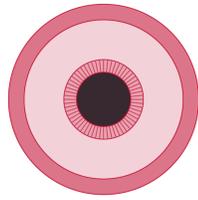
Chamber	Role
Atria	Upper chambers
	Receive blood
Ventricles	Lower chambers
	Eject blood

Type	Blood vessel	Description
Artery	Aorta	Exits left ventricle
		Robust/Strong/Elastic
		High pressure blood
		Oxygenated
Vein	Vena cava	Carries blood to the whole body
		Exits right ventricle
		Deoxygenated
		Carries blood to the lungs
Vein	Pulmonary vein	Inferior and superior
		Pocket valves
		Low pressure blood
		Deoxygenated
Vein	Pulmonary vein	Carries blood to the right atrium
		From the lungs
		Oxygenated
		Carries blood to the left atrium

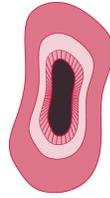
Heart valve	Description
Bicuspid	Mitral valve
	Between the left atrium and left ventricle
	Prevents blood re-entering the left atrium
Tricuspid	Between the right atrium and right ventricle
	Prevents blood re-entering the right atrium
Semilunar	Pulmonary (right) and aortic (left)
	Prevents blood flowing in the wrong direction

Notes





Artery



Vein



Capillary

Not to scale

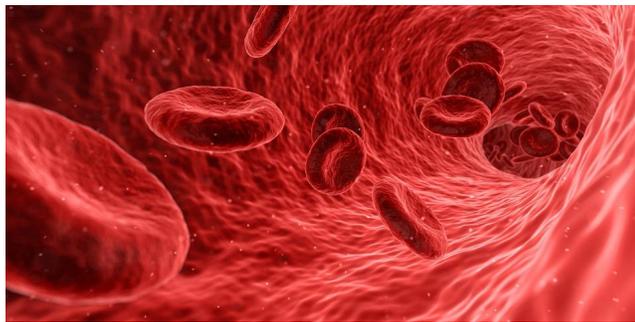
Notes



Heart Rate Values

Cardiac output = Stroke volume x Heart rate

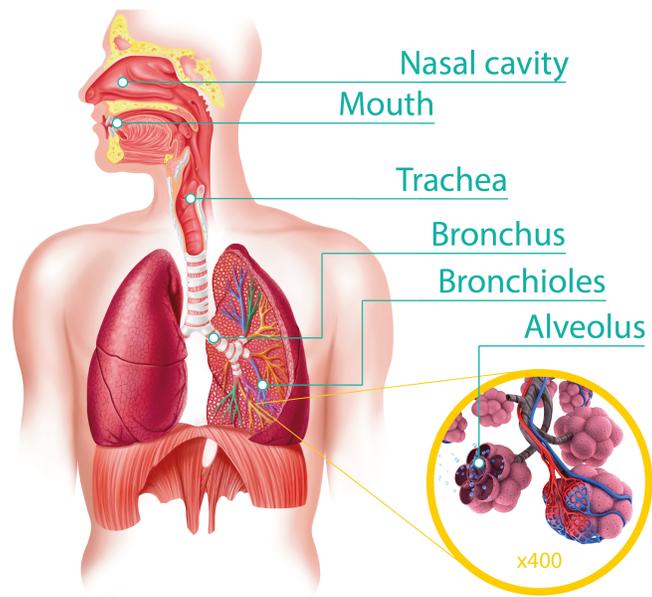
Notes



Notes



Structure and function of the respiratory system

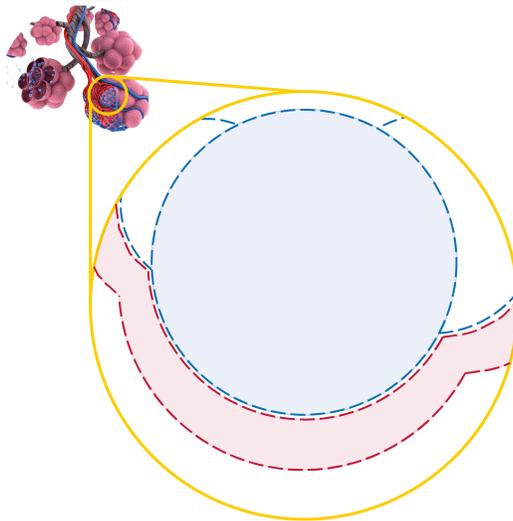


Notes



Minute ventilation = Tidal volume x Breathing rate

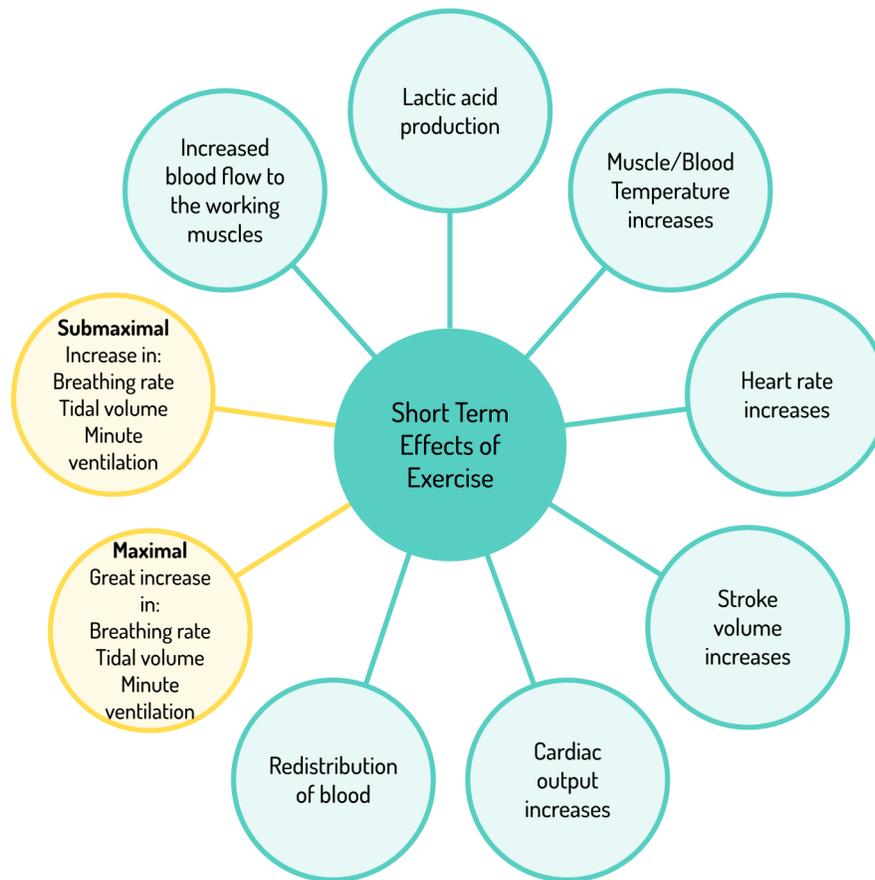
Notes



Notes



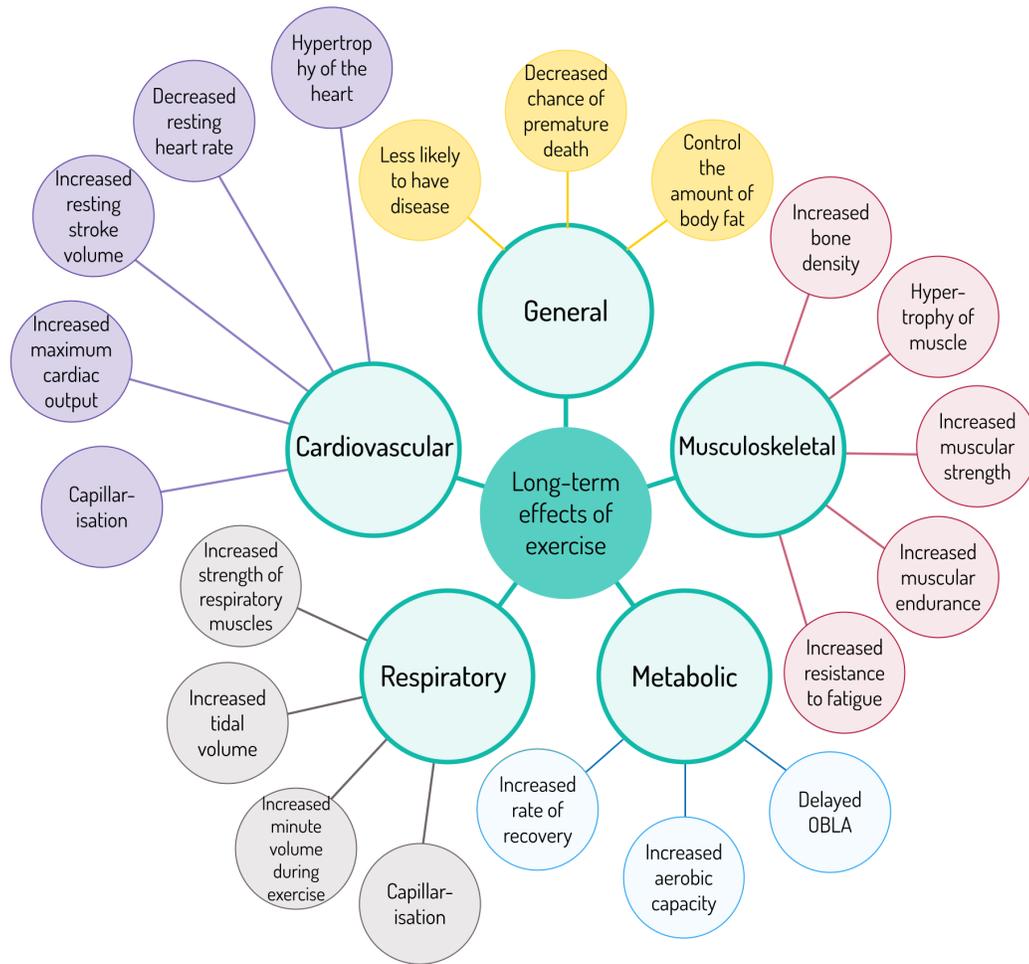
Short-term effects of exercise



Notes



Long-term effects of exercise



Notes



Components of fitness

Components of Fitness - CV endurance	
Definition	Ability to continuously exercise without tiring
Examples	Triathlete is able to swim, cycle and run continuously without fatigue and work at higher intensities aerobically and prevent OBLA.
Cooper 12-minute run/walk	Measure out a known area/use running track.
	Participants need to keep moving around the area for 12 minutes.
	Result is how far they run/distance covered.
	Calculate metres travelled/measured in metres.
Multi-stage fitness test	Measure out a 20m track.
	Use a Multi stage fitness recording.
	Keep in time to the bleeps/Arrive at the line on or before the bleep.
	Wait for bleep before turning.
	Bleeps get faster.
	Test ends after two missed bleeps.
	Result is the last level and shuttle they reach.

Notes

Notes

Components of Fitness - Muscular endurance	
Definition	Ability of the muscles to repeatedly contract without rest
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.
Press-up and Sit-up Test	Correct sit-up/press-up technique
	Time for 1 minute
	Count the number of sit-ups/Count the number of press-ups



Components of Fitness - Speed	
Definition	Ability to move the body quickly/Distance divided by time
Examples	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.
30m Sprint Test	Select a sprinting area 60-80ms long
	Measure a 30m distance
	Rolling start/Accelerate before the start
	Run as fast as you can/Run through the line
	Time is recorded

Notes

Notes

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.
Grip strength dynamometer test	Hold in dominant hand
	Start with your hand up
	Bring down to side/Squeeze the handle/Lower arm
	No swinging your hand
	Repeat three times
1 Repetition Maximum (1RM)	Record the maximum force reading
	Select the body part/Select the muscle group/Test specific muscle
	Weight lifting technique for that body part
	Select a realistic weight
	Lift weight once
	Rest for 5 minutes
	Repeat with heavier weight
	Repeat the process until a weight is selected that cannot be lifted successfully for one rep
	Last weight you lifted successfully
	Usually measured in kilogram

Components of Fitness – Power	
Definition	Combination of strength and speed
Examples	100m sprinter applies maximal force to the block at the highest speed possible to accelerate them ahead of their opponents in the race.
Standing Jump test	Stand with feet facing forwards
	Without a run-up
	Jump forwards as far as you can
	Measure to the back of the heel
	Distance in cm
Vertical Jump test	Reach up and make a mark/Slide ruler up
	Jump up and touch the board/Jump up and mark chalk on the wall
	Measure the distance between two marks in cm

Notes

Notes

Components of Fitness – Flexibility	
Definition	RoM around a joint
Examples	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.
Sit-and-reach test	Remove shoes
	Sit on floor with legs straight out
	Soles of feet on the box
	Reach forward with one hand on top of the other
	Stretch as far as possible
	Hold for two seconds
	No jerking movements
	Distance reached is measured in cm



Components of Fitness - Agility	
Definition	How quickly you can change direction under control without losing speed, balance or power
Examples	Netball player dodging left and right to find space to receive the ball.
Illinois Agility test	Mark out the course to the exact measurements required
	Start lying face down on the start line (prone position)
	Run the course as quickly as you can
	How fast you complete the course is recorded
	Measured in seconds

Notes

Notes

Components of Fitness - Balance	
Definition	Keeping CoM above base of support
Examples	Skier leaning forward to keep their CoM above their skis in order to Prevent a crash and to stay in the race.
Stork Stand Test	Hands on hips and one foot on inside knee of the opposite leg
	Participant raises their heel
	Hold balance for as long as possible
	If either heel of standing foot leaves the floor or other foot leaves the knee, balance is lost
	The score is total time the participant held the balance successfully
	Measured in seconds



Components of Fitness - Coordination	
Definition	Ability to repeat a pattern or sequence with fluency and accuracy
Examples	High jumper arches their back whilst simultaneously kicking their legs up in order to clear the bar with their lower body.
Wall Throw test	Mark a line 2m from the wall
	Stand behind the line
	Underarm action throw the ball at the wall
	Throw the ball with one hand and catch with the other
	Count the number of successful catches
	In 30 seconds

Notes

Notes

Components of Fitness - Reaction Time	
Definition	The length of time it takes a performer to respond to a stimulus/The time between the onset of the stimulus and the initiation of the response
Examples	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.
Reaction Time Ruler test	Partner holds a ruler above the open hand
	The 0 cm mark must be directly between the thumb and index finger
	Drop the ruler with no warning
	Catch it as soon as possible
	The score is taken from where the top of the thumb hits the ruler
	Measured in cm



Types of training

Continuous Training



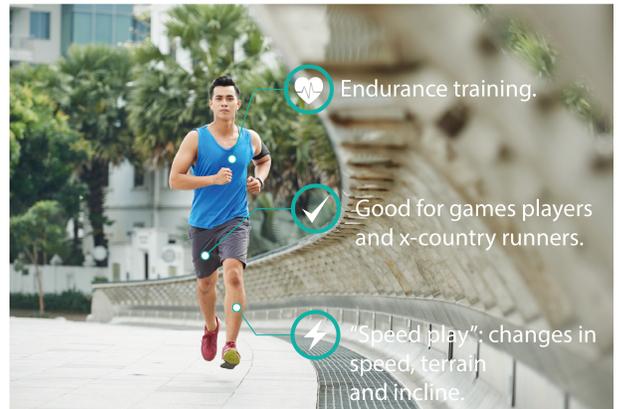
- Simple
- Cheap
- Intensity accuracy
- All age groups
- Essential

- Monotonous
- Time-consuming
- Weight-bearing
- Overuse injuries
- Can decrease speed

Notes

Notes

Fartlek Training



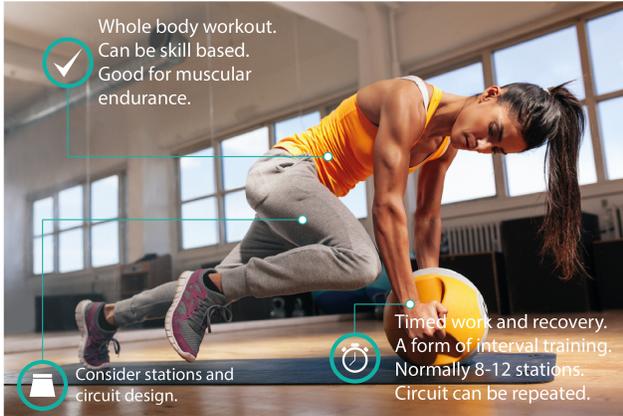
- More varied than continuous
- Non-rhythmical
- Different sessions
- More sport-specific
- Does not threaten speed

- More varied locations needed
- Individual requirements-harder for group training



The EverLearner

Circuit Training

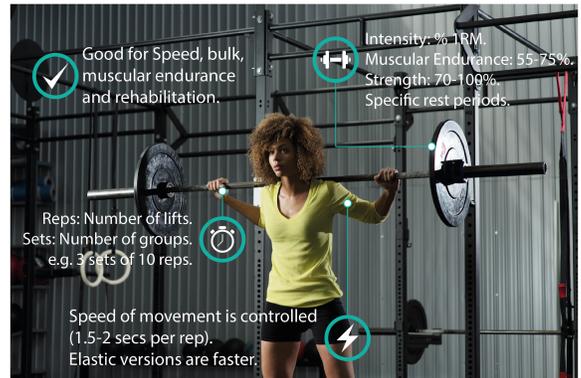


- Versatile
- Can cater for large numbers
- Basic equipment
- Can target skill and fitness
- Few records
- Loafing

Notes

Notes

Resistance Training



- Good for rehabilitation
- Endless variations
- Impacts performance
- Muscle isolation
- Poor technique has major side-effects
- Weight machines control movement



The EverLearner

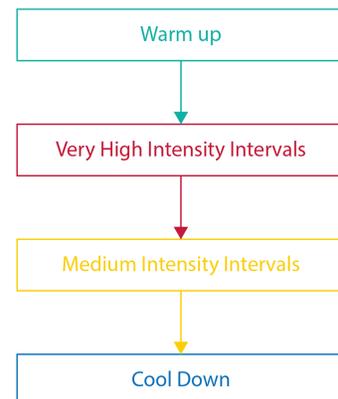
HIIT

High
Intensity
Interval
Training

Notes

Notes

HIIT Process



Minimising risk of injury

Minimising risk





The EverLearner