

# Football - Passing

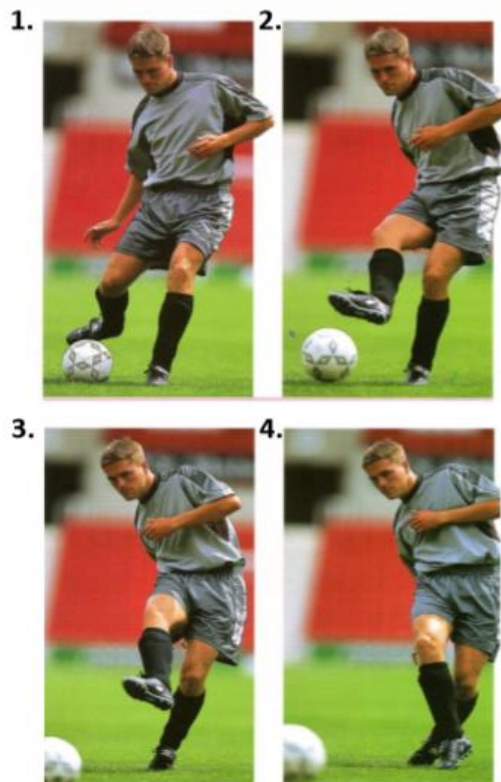
## Keywords

Attack	Accuracy
Balance	Movement
Receive	Possession
Control	Volley
Speed	Shoot
Cushion	Weight of Pass

Can you think of anymore?

What can you do?

Making and Applying Decisions	Can you select the correct pass?
	Can you dribble with both feet?
	What tactics do you play?
	Can you adapt to each game?
Developing physical and mental capacity	What type of training method?
	How often do you train?
	Overcoming mental barriers
	The will to be successful/achieve
Outwitting Opponents	How can you get past opponent?
	Can get away from marker?
	Can you dribble around marker?
	Can you control the game?
Accurate Replication	Can you strike with laces?
	Can you Control the ball?
	Can you dribble with control?
	Can you head the ball correctly?
Exercising Safely & Effectively	Did you warm up effectively?
	How long do you hold a stretch for?
	Why do we need to exercise?
	What happens to your body during exercise?
Evaluating and improving	Able to compare work with others
	Pick out strengths/weaknesses
	To improve your skills and others
	Can react to changes in a game



1. Place your non-kicking foot firmly alongside the ball.
2. Lean your body over the ball as you make contact.
3. Strike the ball solidly with the hard part of your instep.
4. A long, smooth follow through will help your power and accuracy.

How could you challenge yourself further? What would make passing...

(a) Harder? (b) Easier?

# Football - Dribbling

## Keywords

Attack	Accuracy
Balance	Movement
Receive	Possession
Control	Volley
Speed	Shoot
Instep	Laces

Can you think of anymore?

What can you do?



1. 2. 3.

1. Make sure you have good control of the ball by using the inside and outside of both feet.
2. Note the distance between the ball and the feet, and the eyes focused on the ball.
3. Balance is vital. It gives you the platform from which to change direction in an instance.

Can you set up the drill below?



How could you make this drill it ...

(a) Harder? (b) Easier?

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# Football - Shooting

## Keywords

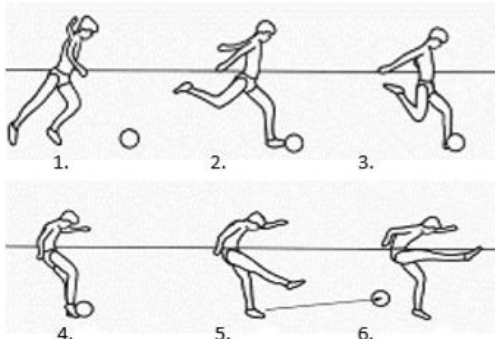
Attack	Accuracy
Balance	Movement
Receive	Possession
Control	Volley
Speed	Shoot
Strike	Curl/Swerve



## Coaching Points



1. Point the striking foot towards the target and draw back the other foot.
2. Use a wide area with the inside of the foot as this gives you greater accuracy.
3. With a good firm contact try to steer the ball into the corner of the net.



Should you shoot High or Low?

Should you shoot with Power or Accuracy?

Can you think of anymore?

What can you do?

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	How long do you hold a stretch for?
	Why do we need to exercise?
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	Pick out strengths/weaknesses
	To improve your skills and others
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# Football - Control

## Keywords

Attack	Accuracy
Balance	Movement
Receive	Possession
Control	Volley
Speed	Shoot
Cushion	Trap

## INSTEP CONTROL



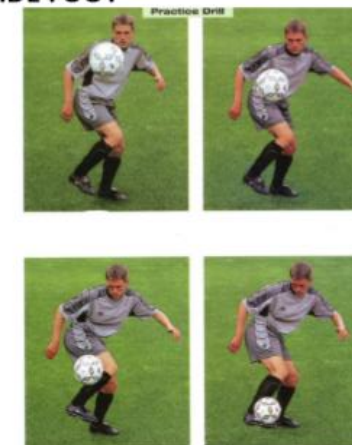
Try to 'catch' the ball on your instep and drop it at your feet. Draw your controlling foot away slightly at the point of impact.

Can you think of anymore?

What can you do?

Making and Applying Decisions	Can you select the correct pass?
	Can you dribble with both feet?
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	Can you adapt to each game?
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## OUTSIDE FOOT



1. If you are facing the goal and the ball comes to you from the side, you need the outside of your foot to control it.
2. Watch the ball all the way onto your foot and use your arms to help with your balance.
3. You can allow the ball to drop a little bit lower than if you were using the instep.
4. You still need to deaden the impact as it strikes your foot on the outside area around your toes.

# Badminton – Net Shots

## Keywords

Clear	Accuracy
Balance	Flick
Tap	Push
Control	Disguise
Speed	Preparation
Angles	Shuttlecock Flight

Can you think of anymore?

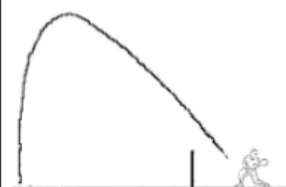
What can you do?



Net Shot



Defensive Lob



### Important Points:

- Early preparation of your feet.
- Disguise on the shot.



Making and Applying Decisions	Can you select the correct shot?
	What is effective grip?
	What tactics do you play?
	Can you adapt to each opponent?
Developing physical and mental capacity	What type of training method?
	How often do you train?
	Overcoming mental barriers
	The will to be successful/achieve
Outwitting Opponents	What is your opponents weakness?
	Can you feint your shot selection?
	What area of court do you aim at?
	Can you control the rally?
Accurate Replication	Can you copy the each shot?
	Which foot do you lead with?
	Can you strike shuttle?
	Do you flick your wrist?
Exercising Safely & Effectively	Did you warm up effectively?
	How long do you hold a stretch for?
	Why do we need to exercise?
	What happens to your body during exercise?
Evaluating and improving	Able to compare work with others
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	To improve your skills and others
	React to the changes in a game

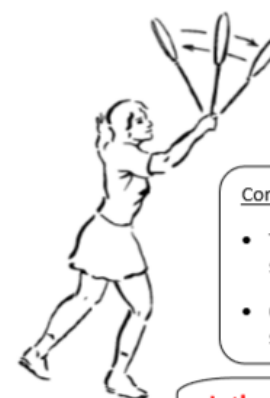
# Badminton – Attacking Shots

## Keywords

Clear	Accuracy
Balance	Flick
Tap	Push
Control	Trajectory
Speed	Stance
Angles	Flight

Can you think of anymore?

What can you do?



### Consider the following:

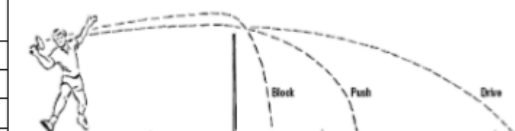
- The Contact Point on the shuttle.
- Consider the flight of the shuttlecock

Is the kill shot an attacking or defensive shot?



### Important Points:

- Early preparation of your feet.
- Disguise on the shot.



Making and Applying Decisions	Can you select the correct shot?
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# Table Tennis – Backhand/Forehand

## Keywords

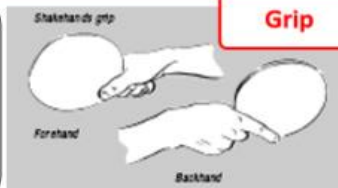
Attack	Return
Serve	Push
Rally	Disguise
Forehand	Side Spin
Backhand	Topspin
Coordination	Slice

Can you think of anymore?

What can you do?

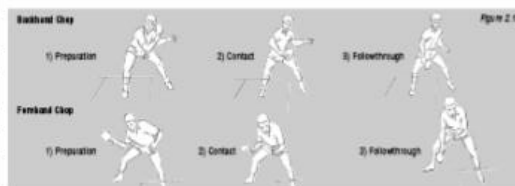
## Teaching Points

- Fit paddle firmly in hand with 1 finger across the back of the bat



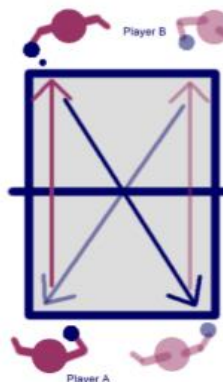
## Teaching Points

- Low stance and light on toes
- Make smooth connection between backswing and forward swing, rotating at the hips
- Start action low and follow through up high



## Forehand/Backhand Drill

One player plays shots straight ahead down each side (H's) and the other plays cross court shots into alternate corners (X's).



# Table Tennis – Serves

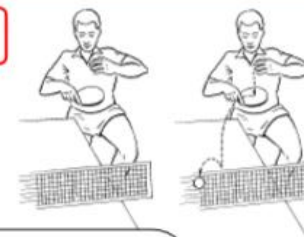
## Keywords

Attack	Return
Serve	Push
Rally	Disguise
Forehand	Side Spin
Backhand	Topspin
Coordination	Slice

Can you think of anymore?

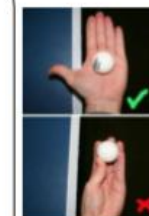
What can you do?

## Service Action



## Teaching Points

- Serves must be from behind the line and you must 'present' the ball
- Ball toss must travel at least 6 inches into the air
- Serves must land on both sides of the table



## Making and Applying Decisions

- Can you select the correct shot?
- What is effective grip?
- What tactics do you play?
- Can you adapt to each opponent?

## Developing physical and mental capacity

- What type of training method?
- How often do you train?
- Overcoming mental barriers
- The will to be successful/achieve

## Outwitting Opponents

- What is your opponents weakness?
- Can you feint your shot selection?
- What area of court do you aim at?
- Can you control the rally?

## Accurate Replication

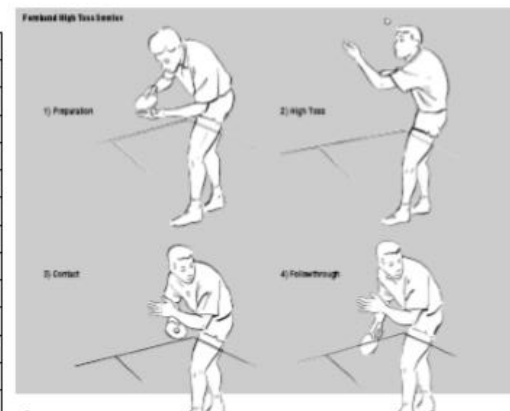
- Can you copy the each shot?
- Which foot do you lead with?
- Can you strike shuttle?
- Do you flick your wrist?

## Exercising Safely & Effectively

- Did you warm up effectively?
- How long do you hold a stretch for?
- Why do we need to exercise?
- What happens to your body during exercise?

## Evaluating and improving

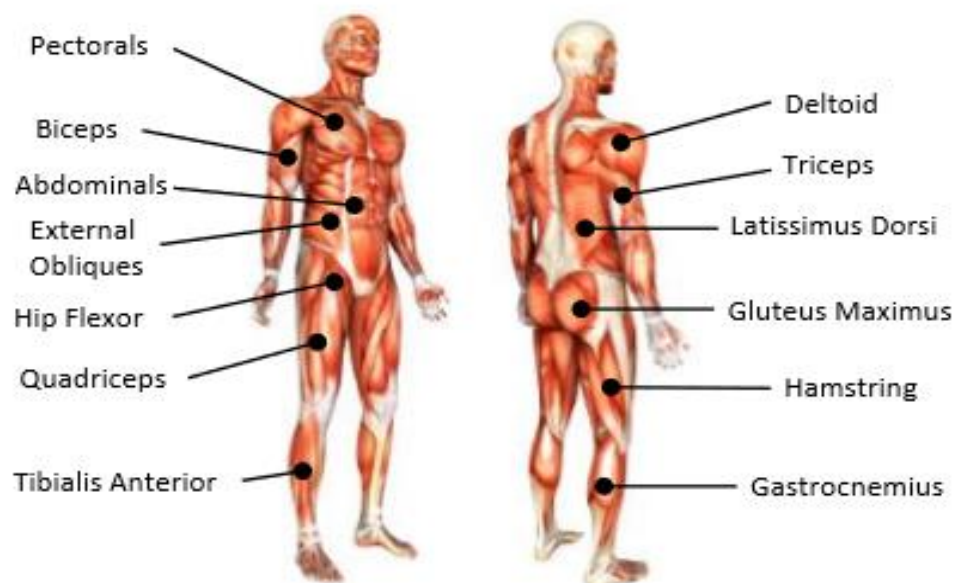
- Able to compare work with others
- Pick out strengths/weaknesses
- To improve your skills and others
- React to the changes in a game



## Can you experiment with different varieties of serve?

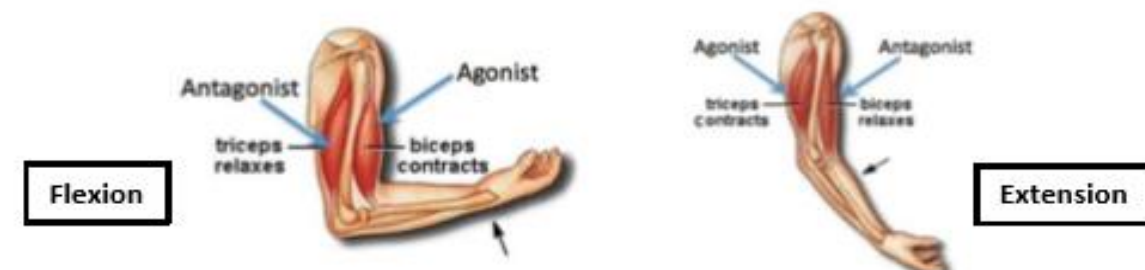
- Can you add topspin, sidespin or slice to your serve?
- How could you disguise your serve without breaking the laws of serve?

## Structure of the muscular system



**Antagonistic pairs** - Muscles are arranged in antagonistic pairs.

As one muscle contracts (shortens) its partner relaxes (lengthens) *i.e. Biceps and Triceps.*



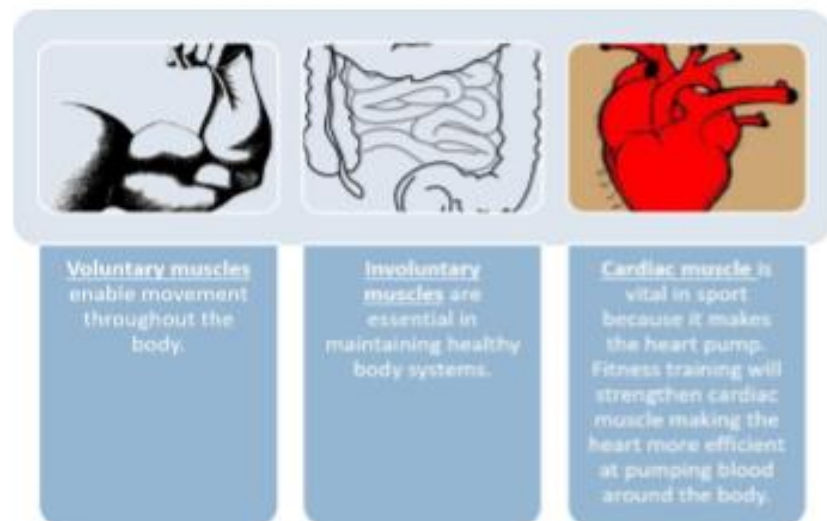
**Agonist** = the muscle that contracts to produce movement.

**Antagonist** = the muscle that relaxes to allow the movement to occur.

**Examples in the body:**

- Biceps & Triceps
- Quadriceps & Hamstring
- Hip Flexor & Gluteus Maximus
- Tibialis Anterior & Gastrocnemius

## Types of muscle

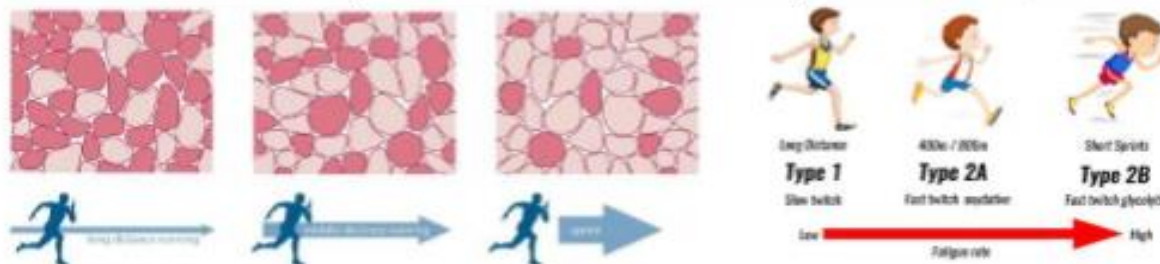


The **short term effects** of exercise on the muscles:

1. Working muscles produce heat
2. Increased muscle fatigue due to lactate accumulation
3. Blood is re-distributed to working muscles (Shunting)

## Muscle fibre types

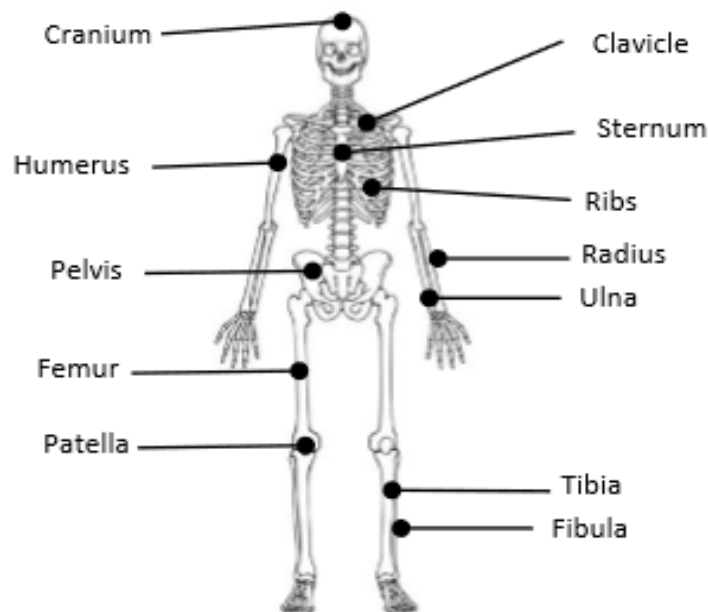
Slow twitch muscle fibres (Type I)	Fast twitch muscle fibres (Type IIa)	Fast twitch muscle fibres (Type IIx/b)
<ol style="list-style-type: none"> <li>1. Smaller in size.</li> <li>2. Work aerobically with high fatigue resistance.</li> <li>3. Have a good oxygen supply = deep red in colour.</li> <li>4. They contract slowly, but can work for long periods.</li> </ol> <p><b>Marathon runner</b></p>	<ol style="list-style-type: none"> <li>1. Larger in size</li> <li>2. Work anaerobically &amp; linked to high intensity activities.</li> <li>3. Are paler in colour and have limited oxygen supply.</li> <li>4. They contract quickly and powerfully, but tire easily.</li> </ol> <p><b>400/800m runner</b></p>	<ol style="list-style-type: none"> <li>1. Large in size</li> <li>2. Work anaerobically &amp; linked to extreme high intensity activities.</li> <li>3. Very high speed of contraction but low fatigue resistance.</li> </ol> <p><b>100m Sprinter</b></p>



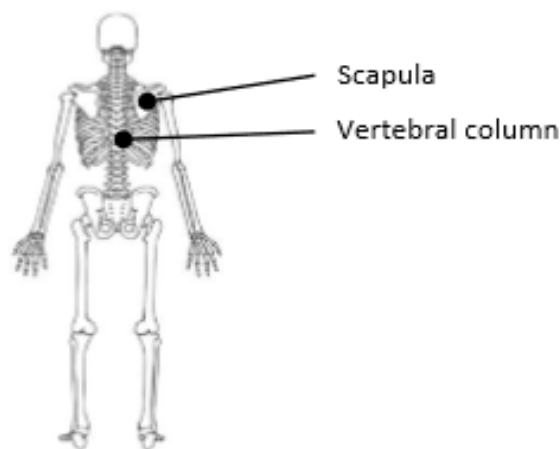
**Link of the muscular and skeletal system** – both systems work together to produce movement. *i.e. a contracting muscle pulls on a bone which changes the angle at a joint.*



## Structure of the skeletal system



## Structure of the skeletal system



## Vertebral Column

The vertebral column is divided into 5 sections. It is made up of irregularly shaped bones called vertebrae.

Each vertebra is protected with cartilage to prevent friction.

The vertebrae protects the spinal cord.



## Function of the skeleton

- Protection of vital organs
- Muscle attachment
- Joints for movement
- Blood cell production (platelets, red and white)
- Storage of calcium and phosphorus

## Classification of joint

- Pivot (neck – atlas and axis)
- Hinge (elbow and knee)
- Ball and socket (hip and shoulder)
- Condyloid (wrist)



## Connective tissue

**Ligaments** – attaches bone to bone to add joint stability.

**Tendons** – attaches muscles to bone and contributes to joint movement as a result of muscle contraction.

## Classification of bones

Long (leverage)	Short (weight bearing)	Flat (protection + muscle attachment)	Irregular (protection and muscle attachment)
Clear shaft region to the bone. <i>i.e. femur, humerus &amp; phalanges</i>	Light, small and very strong. <i>i.e. carpals, tarsals</i>	Broad surface area for muscle attachment. <i>i.e. cranium</i>	Assist the functioning of certain joints. <i>i.e. Patella/vertebrae</i>

## Joint movements

Flexion	Adduction	Rotation	Dorsi-Flexion (ankle joint)
Decreasing the angle at a joint (bending)	Limbs moving towards the midline of the body.	A twisting/turning action around a joint.	When the toes are turned up to the body.
Extension	Abduction	Circumduction	Planter-Flexion (ankle joint)
Increasing the angle at a joint (straightening)	Limbs moving away from the midline of the body.	A combination of flexion, extension, adduction & abduction.	When the toes are pointed away from the body.

### Physical-Related Fitness Components

**Aerobic Endurance:** The ability of the heart and lungs, to work for a long period of time. Sports: Long distance running, Football, Road Cycling.

**Muscular Endurance:** the ability of a muscle, to work continuously without tiring. Sports: Hockey, Rugby, Endurance Sports

**Flexibility:** The range of movement at a joint. Sports: Gymnastics, Dance, Diving.

**Muscular Strength:** The maximum amount of force a muscle can produce in a short period of time. Sports: Rugby, Powerlifting, Boxing.

**Speed:** The ability to cover distances quickly. 3 types of speed; Accelerative Speed, Pure Speed & Speed Endurance. Sports; Athletics, Football, Rugby.

**Body Composition:** The ratio of Fat to fat-free mass In the body. Different sports will need a different body fat percentage



### Skill Related Fitness Components

**Agility:** Ability to change direction quickly and efficiently. Sports: Tennis, Rugby.

**Balance:** Ability to maintain centre of mass over a base of support. Two types; Static and Dynamic Balance. Sports; Gymnastics, games sports.

**Co-Ordination:** Smooth flow of movement to be able to perform a motor skill fluently. Sports; Tennis, Rugby, Gymnastics.

**Power:** Combination of Speed and Strength. Sports; Long Jump, Rugby, American Football.

**Reaction Time:** The ability to react quickly to a stimulus. Sports; Sprinting, Tennis, Table tennis.



### Principles of Training

For any training to be successful, it must stick to the following principles;

**Specificity:** Tailoring training to your goals and sport.

**Progressive Overload:** Gradually increasing exercise intensity to cause adaptation.

**Variation:** Changing the type of training, to increase motivation.

**Adaptation:** Changes in the body caused by exercising at a high intensity.

**Reversibility:** When you stop training, you lose any fitness adaptations you will have gained.

**Rest & Recovery:** The time required to allow your body to repair any damage sustained during training/competition. The body will repair itself and become stronger than before.

**Frequency:** How often you train

**Intensity:** How hard you train

**Time:** How long you train for

**Type:** what type of training do you do



### Exercise Intensity

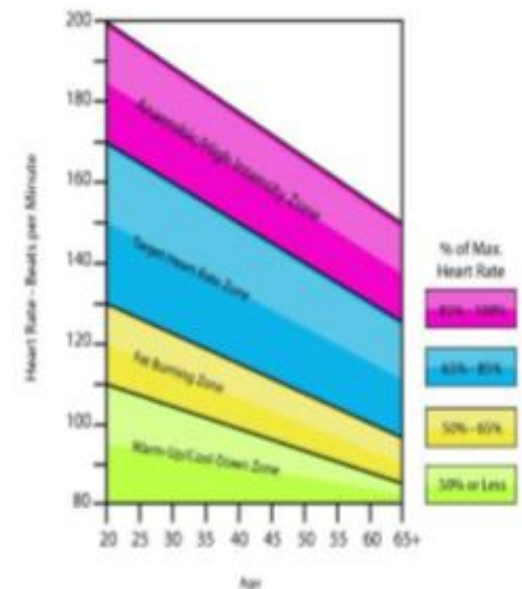
Measure how hard you are training by using your heart rate (BPM).

Maximum heart rate =  $220 - \text{age}$   
Target heart rate zone for Aerobic training 60-85% of your maximum heart rate.

Therefore, you should be training hard enough, that your heart rate is between 60-85% of your maximum heart rate. This will cause your body to adapt.

Borg's RPE scale can also predict intensity and heart rate.

$\text{RPE} \times 10 = \text{HR}$





## Muscular Strength

**Test:** Hand Grip Dynamometer Test

**Protocol:** Grip the dynamometer in one hand. Start with your hand up and bring down to side while pulling in handle. No swinging your hand.



Advantages	Disadvantages
<ul style="list-style-type: none"><li>• Simple and easy to complete</li></ul>	<ul style="list-style-type: none"><li>• Only one size of dynamometer which may affect reading.</li><li>• Focuses solely on forearm strength.</li></ul>

## Muscular Endurance

**Test:** 1 minute sit up test



**Test:** 1 minute press up test



**Protocol:** Complete as many full sit ups/press ups as possible in 1 minute.

Advantages	Disadvantages
<ul style="list-style-type: none"><li>• Simple test to complete</li><li>• Minimal equipment needed.</li></ul>	<ul style="list-style-type: none"><li>• Difficult to assess whether each repetition is performed correctly. Difficult to accurately measure large groups.</li></ul>

## Flexibility

**Test:** Sit and Reach Test

**Protocol:** Sit with legs straight out in front and soles of feet against box/table. Reach forward without bending knees. No jerking movements.



Advantages	Disadvantages
<ul style="list-style-type: none"><li>• Quick and easy to perform.</li><li>• Data table readily available for comparison</li></ul>	<ul style="list-style-type: none"><li>• Can cause injury if not fully warmed up appropriately.</li><li>• Only measures flexibility of lower back and hamstrings.</li></ul>

## Cardiovascular Fitness (Aerobic Endurance)

**Test:** 12 min Cooper Run

**Protocol:** Continuously run/swim for 12 minutes. Distance recorded.



Advantages	Disadvantages
<ul style="list-style-type: none"><li>• Minimal equipment needed</li><li>• Test can be self administered.</li></ul>	<ul style="list-style-type: none"><li>• Inaccuracy of heart rate measurements</li><li>• Motivation dependant</li></ul>

**Test:** Harvard Step Test

**Protocol:** Step continuously for 5 minutes. Measure heart rate at 1, 2 and 3 minutes after exercise.



Advantages	Disadvantages
<ul style="list-style-type: none"><li>• Simple test to complete</li></ul>	<ul style="list-style-type: none"><li>• Motivation dependant</li></ul>

## Agility

**Test:** Illinois Agility Test

**Protocol:** Start lying down at the start line. Complete course as quick as possible (10m x 5m – 4 central cones)



Advantages	Disadvantages
<ul style="list-style-type: none"><li>• Simple and easy to complete</li></ul>	<ul style="list-style-type: none"><li>• Motivation dependant / Timing errors.</li></ul>

## Speed

**Test:** 30m Sprint Test

**Protocol:** Start from stationery position. Complete distance in the quickest possible time. Time is stopped when chest crosses the line.



Advantages	Disadvantages
<ul style="list-style-type: none"><li>• Quick test to complete.</li><li>• Minimal equipment needed and can be performed anywhere with a flat 50m run.</li></ul>	<ul style="list-style-type: none"><li>• Running surfaces/weather conditions can affect the results.</li><li>• Inaccuracies with stopwatch usage.</li></ul>

## Power

**Test:** Vertical jump Test

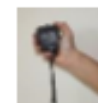
**Protocol:** Stand next to wall and mark an initial reach while feet are flat on the ground. Standing jump to reach as high as possible. Measure distance from first mark to second.



Advantages	Disadvantages
<ul style="list-style-type: none"><li>• Quick and easy to perform.</li><li>• Easy to complete with large groups.</li></ul>	<ul style="list-style-type: none"><li>• Technique plays a large role in successful completion.</li></ul>

## Reliability /Validity

**Validity** relates to whether the test actually measures what it sets out to measure.



**Reliability** is a question of whether the test is accurate. It is important to ensure that the procedure is correctly maintained for ALL individuals.

Results can be improved:

- By using experienced testers & calibrating equipment
- Ensuring performers have the same level of motivation to complete each test
- Repeatedly test to avoid human error (x3)