CBSC GCSE PE REVISION SHEETS

1.1

Exam Question Frequency

1.1 Health, active lifestyles

		1.1.1 Healthy, active lifestyles and how they could benefit you				1.1.2 Influences on your healthy active lifestyle				1.1.3 Exercise and fitness as part of your healthy, active lifestyle			1.1.4 Physical activity as part of your healthy, active lifestyle														1.1.5 Your personal health and wellbeing			
		Explain what constitutes a healthy, active lifestyle	Classify the benefits of a healthy, active lifestyle as social, physical or mental	Describe the positive effects of physical activity	Explain how participation in physical activity can stimulate co-operation, competition, physical challenge, aesthetic appreciation and social mixing	Identify key influences on you and others in achieving sustained involvement in physical activity	Explain the opportunities available and qualities needed to become or remain involved in physical activity in a range of roles	Explain the sports participation pyramid with regard to the foundation, participation, performance and elite stages	Describe initiatives developed to provide opportunities to become, or remain, involved in physical activity	Explain the terms health, fitness and exercise and know how they relate to a balanced healthy lifestyle and performance in physical activities	Know about the components of health-related exercise and relate these to physical activity, identifying the relative importance of these to different physical activities	Know about the components of skill-related fitness and relate these to physical activity, identifying the relative importance of these to different physical activities	Assess personal readiness (PAR-Q)	Assess fitness levels for use in a Personal Exercise Programme	Describe, explain and apply the principles of progressive overload; specificity; individual differences/needs; rest and recovery	Explain the components of the FITT principle, noting overlap with other principles of training and how application can lead to improved performance	Explain the term 'reversibility', why it might occur and its impact on performance	Explain the value of goal setting in terms of planning, developing and maintaining regular involvement in healthy physical activity	Describe, explain and apply the principles of setting SMART targets	Describe a range of methods of training and explain how these can bring about improved health and fitness, and their relationships with the components of fitness	Link methods of training to specific physical activities based on the associated health-related exercise and skill-related fitness requirements	Plan and present examples from typical training sessions to match the fitness requirements of selected physical activities or individuals	Understand the exercise session and the purpose of each component	Explain the use of the principles of training within a training programme, showing how they may be applied in planning to improve health and skill-related fitness as part of a healthy lifestyle	Link methods of training to aerobic and anaerobic activity	Understand what is meant by resting heart rate, working heart rate and recovery rates, plot examples on a graph and evaluate results	Use graphs to demonstrate and explain the use of target zones and training thresholds	Understand the link between exercise diet, work and rest and their influence on personal health and wellbeing	Explain the requirements of a balanced diet	Explain the importance and uses of macro and micro nutrients, carbohydrates, proteins, fats, vitamins, minerals, water and fibre in maintaining a healthy active lifestyle	Explain the need to consider the timing of dietary intake when performing due to the redistribution of blood flow during exercise
Jun-11	Section A		1			1					1			1																1
	Section B		1		4			1	2		6			2	1				3	3						4	4		3			
	Section C						6																								
Total Marks per section		6				10				7			18															4			
Jun-12	Section A				1	1					1					1														1
	Section B			6			3	1		3		3	1	2	2					2	1								5		
	Section C																		6												
Total Marks per section		7				5				7			15															6			
Jun-13	Section A							1			1				1					1										1	
	Section B			6		2			3	2	3	4	1	3					4								3	4		2	
	Section C											6																			
Total Marks per section		6				6				16			17															3			
Jun-14	Section A		1			1				1										1											
	Section B		2		3				5		3	6		2					3								3			3	3
	Section C														6																
Total Marks per section		6				6				10			15															6			
Jun-15	Section A						1						1			1					1									1		
	Section B		4	5		3	6				5	5			2						3	2								4	3
	Section C																			8											
Total Marks per section		9				10				10			19															7			
Jun-16	Section A		2	1		2		1			1			1													1				
	Section B						4		3			3	2		5	3		1	2	4	3	4		2					2			
	Section C																													6		
Total Marks per section		3				10				4			28															8			
Total Marks per section 2011-2016		37				47				54			112															34			

- Work body to limit / push yourself harder
- Having the mental toughness to keep going/keep motivated

E.g. Not wanting to give up in marathon even though body is tired/Scared of abseiling but overcome fear and complete activity

Physical Challenge

- Increasing a person's understanding of excellent technique or high level performances and the difficulties of performing such skills.
- E.g the technique required for completing a double somersault.

Aesthetic Appreciation
(recognition of beauty)

- Creating fixtures or events in which people compete and win against an opponent.
- Developing the desire to be the best
- Trying to beat your personal best.

Competition

- Joining the organising and running of the club such as fixtures, finances, and managing facilities
- Working with a team/in a team to achieve a common goal.

Co-operation

- Having a social side to the club
- By allowing people to stay at the clubhouse after the match /holding social events.
- friendships at the club

Social mixing

(PACCS)

physical activity can stimulate

1.1.1 Healthy active lifestyles (HAL) and how they can benefit you

Health…
is the state of complete social, mental and physical well-being and not merely the absence of disease and infirmity. Physical activity will contribute positively to good health because of the physical, social and mental factors outlined below.

What constitutes a HAL

- Take part in physical activity
- Eat a balanced diet
- Avoid harmful substances such as drugs, smoking & alcohol
- Sustain friendships

Benefits of a HAL

Social
how well you relate to others. Exercise allows you to relate to other people more effectively.

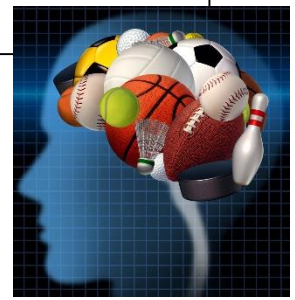
- Develop teamwork and cooperation
- Overcome challenges in a team against the opposition
- Increase your self-worth
- Meet new people and make friends

Physical
changes that happen to the body when you exercise.

- Improve muscle tone, posture and strengthens bones
- Improves all HR components of fitness e.g flexibility and cardiovascular fitness
- Burns off stored fat making you look good
- CV system - Lowers HR, Increases SV and CO.

Mental
relates to your approach and attitude. Exercise will make both more positive.

- Relieves stress, tension and aggression
- Provides excitement and enjoyment (fun)
- Improves self-esteem and confidence
- Helps you to feel good



PHYSICAL ACTIVITY helps relieve STRESS by…

- Allows you to sleep better, decreases boredom and reduces muscle tension
- **Releases endorphins** (the 'happy' hormone) which make you feel **euphoric**
- **Increases Serotonin;** a chemical found in the body which controls your mood. When you exercise **serotonin levels increase**. If you have more serotonin in your body, it makes you 'feel good'.

CULTURAL INFLUENCES

1.AGE; usually **AGE GROUPS** for **JOINING** some clubs and **SAFETY** limits for **YOUNGER** people.
2.**DISABILITY**; difficult to **ACCESS FACILITIES.** May prefer to participate with other **DISABLED** people
3.GENDER; often **CONSTRAINTS** because sports are **SINGLE SEX**. Occasionally **MIXED PAIRS** (tennis). **BOYS & MEN** participate **MORE** than women
4.**RACE**; ethnic **MINORIITIES** often suffer **DISCRIMINATION**.

HEALTH and WELL-BEING INFLUENCES:

1.ILLNESS and **INJURY**; People who are **ILL/INJURED** are less likely to participate
2.**HEALTH PROBLEMS**; a person who suffers from problems such as **OBESITY**, **CORONARY HEART DISEASE** and **MENTAL HEALTH** issues participate **LESS**. Physical activity can **IMPROVE HEALTH.**

IMAGE INFLUENCES:

1.FASHION; if a **ROLE MODEL** wears certain **EQUIPMENT** it can **INFLUENCE TRENDS**. **SPORTS** can become **FASHIONABLE**. EG **TENNIS** during **WIMBLEDON** fortnight

2.MEDIA COVERAGE; the media such as the **INTERNET, NEWSPAPERS, TV** and **RADIO** can **PROMOTE** certain sports and **INFLUENCE** people's **OPINIONS.**

RESOURCES INFLUENCES:

1.**ACCESS**; If **MONEY** or **FACILITIES** are not there then the person cannot participate
2.**AVAILABILITY**; if a sport has **FACILITIES** local to you your more inclined to **PARTICIPATE**
3.**LOCATION**; if the facility is **NOT LOCATED** near by you will **NOT** be influenced to take part.
4.**TIME**; people have **WORK/SCHOOL** so may have reduced **TIME**

PEOPLE INFLUENCES:

1.FAMILY; **PARENTS** influence their child's **PARTICIPATION** as **ROLE MODELS** but also provide **SUPPORT** such as **FINANCIAL** and **TRAVEL**
2.**PEERS**; these are **PEOPLE** of the **SAME AGE**. **PEER PRESSURE** is **HUGE** in **TEENAGERS** and can influence which sport you play.
3.ROLE MODELS; these can be **GOOD** and **BAD**. **ELITE** sports persons are often **COPIED** by people who want to **ACT** like them

SOCIO-ECONOMIC INFLUENCES:

1.COST; If you have a **LOW INCOME** it can **PREVENT** you from buying necessary **EQUIPMENT** and **MEMBERS FEES.**
2.**PERCEIVED STATUS** of the activity; if the sport is **PERCEIVED** (judged) as **HIGH** status then more people will want to **SUCCEED** in it.

(CHIRPS)

key INFLUENCES on involvement in PA

1.1.2 Influences on your healthy active lifestyles

Common purposes of initiatives for Becoming, or Remaining, in PA: (START – STAY – SUCCEED)

START

INCREASE PARTICIPATION in sport to improve health, with a focus on PRIORITY GROUPS. *PRIORITY GROUPS*;

a) **DISABILITY**
b) **WOMEN** & **GIRLS**
c) **ETHNIC MINORITIES**
d) **LOW SOCIO-ECONOMIC** groups

STAY

RETAIN PEOPLE in sport
through an effective network of clubs, sports facilities, coaches, volunteers and competition

Creating **LINKS** and **NETWORKS** between **SCHOOLS, CLUBS** and **LOCAL ORGANISATIONS** will **INCREASING PARTICIPATION** and create **COMPETITION** in the area

SUCCEED

CREATE OPPORTUNITIES for TALENTED performers

UK SPORT is a **NATIONAL AGENCY** with the responsibility for developing **TALENTED PERFORMERS**. It works closely with the **NATIONAL LOTTERY** to receive **FUNDING** which allows athletes to **TRAIN** and **COMPETE** at the highest level.

TALENT is also developed at **NATIONAL SPORTS CENTRES** and **CENTRES OF EXCELLENCE**

IDENTIFY AGENCIES who provide opportunities for becoming, or remaining, involved in physical activity, including:

a) **SPORT ENGLAND**; is a government agency with the responsibility for **INCREASING PARTICIPATION** at **GRASS ROOTS level**. It is **FUNDED** by the **NATIONAL LOTTERY**

a) **YOUTH SPORTS TRUST**; is a **CHARITY** whose **ROLE** is to **INCREASE PARTICIPATION** in **SCHOOLS** and sports **COMPETITION** in **SCHOOLS**

a) **NATIONAL GOVERNING BODIES**; run **SPECIFIC** sports. They support the sport with **CLUBS**, **COACHES** and **VOLUNTEERS**. They also establish the **RULES**. An example is the **FA** (football Association) which runs **FOOTBALL**

Opportunities/Roles available in physical activity

1.Become a **PERFORMER**; this can be achieved through involvement in **SCHOOL**, **CLUB** or **REPRESENTATIVE** sport
2.Become **a COACH**; this can be achieved through gaining **QUALIFICATIONS** in specific sports
3.Become an **OFFICIAL**; this can be achieved through **QUALIFICATIONS** allowing your to **REFEREE** or **UMPIRE** sports events
4.Become a **VOLUNTEER**; this can be achieved through **FUNDRAISING**, **FINANCE**, **ADMINISTRATION** or **MAINTENANCE** of a sports club

QUALITIES NEEDED IN THESE ROLES **COMMUNICATION**, **TEAMWORK**, **ORGANISATIONAL**, **MOTIVATIONAL**, **RESILIENCE**, **CONFIDENCE**

Sports Participation Pyramid

1.1.3 Exercise & fitness as part of a HAL

HEALTH, FITNESS AND EXERCISE and its relation to PHYSICAL ACTIVITY

HEALTH

is the **COMPLETE STATE** of **PHYSICAL, MENTAL** and **SOCIAL WELL-BEING** and **NOT** just the **ABSENCE** of **ILLNESS** or **INFIRMITY.**

If you have **GOOD GENERAL** health you will be able to **TRAIN HARDER** and go **BEYOND** this **LEVEL** and **IMPROVE** your **PERFORMANCE.**

FITNESS

is the **ABILITY** to **MEET** the **DEMANDS** of the **ENVIRONMENT**.

For **IMPROVEMENTS** in **PERFORMANCE** you must **TRAIN SPECIFIC FITNESS COMPONENTS**. EG; for **TENNIS** you need to specifically **TRAIN SPEED, AGILITY, COORDINATION** and **POWER**

EXERCISE

is a form of **PHYSICAL ACTIVITY** done to maintain or **IMPROVE HEALTH** and/or **PHYSICAL FITNESS**, it is **NOT** a **COMPETITIVE SPORT**.

For **IMPROVEMENTS** in **PERFORMANCE** you must complete **EXERCISE** which **PROGRESSIVELY OVERLOADS** your **PHYSICAL SYSTEMS** and which is **SPECIFIC** to the **DEMANDS** of your **SPORT**

A **LACK** of **EXERCISE** will have **5 NEGATIVE EFFECTS** on **PERFORMANCE**

1. **INCREASE** in **WEIGHT**
2. **REDUCED FLEXIBILITY**
3. **REDUCED AEROBIC CAPACITY**
4. **REDUCED STRENGTH**
5. **REDUCED ANAEROBIC CAPACITY**

Skill related components of Fitness (ABC PRS)

AGILITY

IMPORTANT in: For a winger in football to dribble a ball past a full back
NOT IMPORTANT in: snooker where no real change in direction is needed

the **ABILITY** to **CHANGE DIRECTION** with **SPEED** and **CONTROL**

BALANCE

IMPORTANT in: walking along a narrow beam in gymnastics
NOT IMPORTANT in: formulae 1 where your sitting down

The **ABILITY** to **KEEP** the **BODY STABLE** by **MAINTAINING** the **CENTRE** of **MASS ABOVE** a **SUPPORT BASE**

COORDINATION

IMPORTANT in: cricket when catching.
NOT IMPORTANT in: weight lifting

the **ABILITY** to use **TWO** or **MORE BODY PARTS** at the **SAME TIME**

POWER

IMPORTANT in: shot putt where a fast technique and strength will result in a long throw.
NOT IMPORTANT in: marathon

the **ABILITY** to **APPLY** a **COMBINATION** of **SPEED** and **STRENGTH**

REACTION TIME

IMPORTANT in: 100m where the gun is a stimulus
NOT IMPORTANT in: golf as nothing to react to.

the **TIME TAKEN** to **RESPOND** to a **STIMULUS**

SPEED

the **FASTEST RATE** at which a **PERSON** can **COMPLETE** a **TASK** or **COVER** a specific **DISTANCE**

IMPORTANT in: rugby to outpace a defender

NOT IMPORTANT in: lawn bowls

Health related components of Fitness (Fat Men Eat More Sweets Cos Fit Boys Can't - FMEMSCFBC)

FLEXIBILITY

the **RANGE** of **MOVEMENT** at a **JOINT**

IMPORTANT in: Gymnastics where a joint needs to move through a large range of movement

NOT IMPORTANT in: Archery – no great movement at joints.

MUSCULAR ENDURANCE

the **ABILITY** to use **VOLUNTARY MUSCLES MANY TIMES WITHOUT** getting **TIRED**

IMPORTANT in: Long distance activities like the marathon where you need to perform consistently without tiring.

NOT IMPORTANT in: power sports like discuss or 100m

MUSCULAR STRENGTH

the AMOUNT of FORCE a MUSCLE can EXERT against a RESISTANCE

IMPORTANT in: sports where you need to exert a large mount of force like a tackle in rugby

NOT IMPORTANT in: Lawn Bowles where no real force is relevant.

CARDIOVASCULAR FITNESS

the **ABILITY** to **EXERCISE** the **WHOLE BODY** for **LONG PERIODS** of **TIME**.

IMPORTANT in: in sports which require endurance such as the marathon and games like basketball.

NOT IMPORTANT in: Power sports like long jump and high jump.

BODY COMPOSITION

the **PERCENTAGE** of **BODY WEIGHT** which is **FAT, MUSCLE** and **BONE**. There is an **IDEAL BODY SHAPE** for each activity (**SOMATOTYPE**)

IT IS IMPORTANT IN all sports. for example a 100m sprinter's ideal shape is a mesomorph, a sumo wrestler's ideal shape is an endomorph and a high jumper's ideal shape is an ectomorph

IF YOU ARE NOT THE IDEAL SHAPE FOR YOUR SPORT it will be a disadvantage. for example and endomorph would not make a good marathon runner

1.1.4 Pt1: Physical activity as Part of your HAL (Fitness training)

PHYSICAL ACTIVITY READINESS QUESTIONNAIRE (PAR-Q)

asks a series of **QUESTIONS** to **INDIVIDUALS** to **CHECK** whether they are…

1. **HEALTHY ENOUGH** to **START** an **EXERCISE PROGRAMME (High BP/Chest pains/injuries).**
2. **TO ESTABLISH A BASELINE OF INTENSITY FOR PHYSICAL WORK.**

ASSESS FITNESS LEVELS: FITNESS TESTS (12)

HEALTH RELATED FITNESS TESTS (7)

COOPER's 12 MINUTE RUN
- Requires you to RUN as FAR as you can in 12 MINUTES.
- It is a CARDIOVASCULAR FITNESS (ENDURANCE) test.

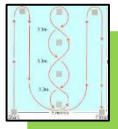
HAND GRIP DYNANOMETER
- Requires you to GENERATE as much FORCE as you can with a GRIP DYNANOMETER.
- It is a STRENGTH test.

SIT & REACH test;
- Requires you to STRETCH FORWARD with both HANDS as far as you can whilst STRAIGHT-LEGGED.
- It is a FLEXIBILITY test.

HARVARD STEP test;
- Requires you to STEP onto a BENCH ONCE every TWO seconds for 5 MINUTES. You take your PULSE RATE 1 MINUTE AFTER the test, then 2 MINUTES AFTER the test, then 3 MINUTES AFTER the test. You then ADD these up and then; 30,000 / The SUM.
- It is a CARDIOVASCULAR FITNESS (ENDURANCE) test.

TREADMILL tests;
- Require you to RUN on a TREADMILL and the SPEED and GRADIENT are GRADUALLY INCREASED. The test stops when the athlete is EXHAUSTED
- It is a CARDIOVASCULAR FITNESS & MUSCULAR ENDURANCE test.

SKILL RELATED FITNESS TESTS (5)



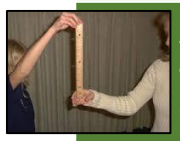
ILLINOIS AGILITY RUN test;
-Requires you to RUN IN and OUT of a series of CONES over a 10M by 5M AREA as fast as you can.
-It is an AGILITY test.

STANDING STORK test;
-Requires you to STAND on ONE LEG for as long as possible. The heel should be raised.
-It is a BALANCE test.

3 BALL JUGGLE test;
-Requires you to be able to JUGGLE 3 BALLS without DROPPING.
-It is a COORDINATION test.

SERGEANT JUMP test;
-Requires you to JUMP as HIGH as you can from a STANDING START. The DISTANCE between this POINT and where you can REACH NORMALLY when STANDING is MEASURED.
-It is a POWER test.

STANDING BROAD JUMP test
-Requires you to JUMP as FAR as you can from a STANDING START. The DISTANCE is MEASURED
-It is a POWER test.



RULER DROP test;
-Requires you to CATCH a ruler with your FINGER and THUMB which is dropped by a PARTNER. The DISTANCE the ruler DROPPED before it is CAUGHT is measured.
-It is a REACTION TIME test.

30 METRE SPRINT test;
-Requires you to SPRINT 30M from a STANDING START.
-It is a SPEED test.

PRINCIPLES OF TRAINING (SPORID)

SPECIFICITY

MATCHING the **TRAINING** to the **REQUIRMEENTS** of your **ACTIVITY** or **SPORT**

For example a **FOOTBALLER** should train on **GRASS** and for **ATLEAST 90 MINUTES** using **DIFFERENT SPEEDS** and **INTENSITIES**

PROGRESSIVE OVERLOAD

GRADUALLY INCREASING the **AMOUNT** of **OVERLOAD** so your body can **ADAPT** but also so that **INJURY** will **NOT** occur

The **FITT** principle **OVERLAPS** with **PROGRESSIVE OVERLOAD** and will help an athlete **IMPROVE PERFORMANCE**

There are **4 WAYS** you can do this (**F.I.T.T**)

1. ***FREQUENCY;*** by training **MORE OFTEN** (3 times per week instead of 2)
2. ***INTENSITY***; by training **HARDER** (at 80% of your maximum heart rate not 75%)
3. ***TIME;*** by training **LONGER** (30 minutes instead of 25)
4. ***TYPE;*** by training with a different **METHOD** (Interval training not Fartlek)

REST & RECOVERY

rest is the **PERIOD** of **TIME USED** to **RECOVER** and recovery is the **TIME** required to **REPAIR** the **DAMAGE** caused by training

To avoid injury an athlete should rest for **24 - 48 HOURS.**

INDIVIDUAL DIFFERENCES (Needs)

MATCHING the training to the **REQUIREMENTS** of the **INDIVIDUAL**.

This may be related to the athlete's **AGE**, **FITNESS** level or **GOALS**

REVERSIBILITY

This is when you **LOSE FITNESS**, **STRENGTH** and **TONE** when you do **NOT EXERCISE**

This may occur when you are **ILL**, **or INJURED**, during the **OFF SEASON** or when you **DO NOT EXERCISE.**
REVRSIBILITY WILL DECREASE PERFORMANCE!!!

1.1.4 Pt2: Physical activity as Part of your HAL (Fitness training)

***GOAL SETTING** help us to plan develop and maintain performance*

GOAL SETTING can achieve this by;

1. Increasing **FOCUS**
2. Increasing **MOTIVATION**
3. **MENTALLY PREPARE** athletes for the target
4. Providing **INDICATION** of **PROGRESS**

SMART TARGETS

SPECIFIC

this is when the goals are **CLEAR** and to the **POINT**

(I want to jump **4 METRES** in the long jump)

MEASURABLE

this is to measure your **RESULTS** and **IDENTIFY PROGRESS**

(I will measure my jumps each week to see if I am **IMPORVING**)

ACHIEVABLE

this is when the goals are **CHALLENGING** but **REACHABLE**

(I jumped **3 METRES 90 CMS** last season so this difference is a challenge but I could do it)

REALISTIC

this is **MANAGEABLE** to my **LEVEL** of **ABILITY**

(I could jump **3 METRES 90 CMS** in **YEAR 10** so this is within my **ABILITY** now that I am in **Y11**).

TIME-BOUND

when you state a specific **START DATE** and a specific **END DATE** when you hope to achieve the goal

(I will start my programme on **1st May** and I want to reach my goal in **2 MONTHS** – the **30th June**)

METHODS (TYPES) OF TRAINING (6)

Come Inside For Cheese With Crackers

INTERVAL training;

Characteristics - HIGH INTENSITY WORK REPETITIONS mixed with **REST or LOW INTENSITY REPETITIONS.**

Example - 30 metre sprints at **FULL SPEED** followed by 30 seconds **REST**.

Develops - **FITNESS COMPONENTS** of **SPEED** and **POWER. However** it builds up **LACTIC ACID** because it is **ANAEROBIC** exercise (**without O2**).

Used by: **GAMES** players like rugby, **FOOTBALL,** and **TENNIS** players

CONTINUOUS training;

Characteristics - training at a **MODERATE** (medium – **60-80%** of **Maximum Heart Rate**) speed for **AT LEAST 30 MINUTES** at the **SAME, CONSTANT SPEED.**

Example - be going for a **JOG** for 30 minutes at 75% of your **MHR**

Develops – AEROBIC components such as **CARDIOVASCULAR FITNESS** and **MUSCULAR ENDURANCE.**

Used by: **MARATHON RUNNERS** but also **GAMES** players

FARTLEK training;

Characteristics – are **CHANGES** of **SPEED** or **TERRAIN**

Example – WALK 50 METRES, JOG 50 METRES, SPRINT 50 METRES or **JOGGING UPHILL** and **DOWNHILL** or through **WOODLAND**

Develops – develops **BOTH AEROBIC** and **ANAEROBIC** components specifically; **CARDIO VASCULAR FITNESS, MUSCULAR ENDURANCE, SPEED, POWER** and **STRENGTH**

Used by: **GAMES** players like **RUGBY, FOOTBALL,** and **TENNIS** players

WEIGHT training;

Characteristics - MOVING WEIGHTS or **RESISTANCE MACHINES** to **INCREASE** the **STRENGTH** of **MUSCLES**. You use a series of **REPETITIONS** (**REPS**) and **SETS**.

Example – BACK SQUATS, BENCH PRESS, SHOULDER PRESS 3 sets of 8 reps.

Develops - STRENGTH, POWER (HIGH WEIGHT and LOW REPS) and **MUSCULAR ENDURANCE(LOW WEIGHT and HIGH REPS)**

Used by: **SPRINTERS, SHOT PUTTERS, RUGBY** Players

CROSS training

Characteristics – it is a **COMBINATION** of the other **DIFFERENT METHODS** of training to **DEVELOP** many aspects of the **BODY and avoid injury.** It could also refer to using the **same method** of training in a **different activity.**

Example - INTERVAL training on **MONDAY, WEIGHT** training on **TUESDAY** and **CIRCUIT** training on **WEDNESDAY.** OR Continuous training through **SWIMMING** rather than **RUNNING**

Develops - BOTH AEROBIC and **ANAEROBIC** components depending on the methods you use but specifically; **CARDIO VASCULAR FITNESS, MUSCULAR ENDURANCE, SPEED, POWER** and **STRENGTH**

Used by: All athletes during the **OFF SEASON** and those who are **INJURED** or bored with their usual training.

CIRCUIT training;

Characteristics - VARIOUS EXERCISE STATIONS which are completed one after the other in a **SPECIFIC AMOUNT** of **TIME**. **REST PERIODS** can be included between each station and **AFTER A CIRCUIT.**

Example - ; **PRESS UPS, SIT UPS, SHUTTLE RUNS, SKIPPING** and the **PLANK** followed by a **REST,** then **REPEAT.**

Develops - develops **BOTH AEROBIC** and **ANAEROBIC** components specifically; **CARDIO VASCULAR FITNESS, MUSCULAR ENDURANCE, SPEED, POWER** and **STRENGTH**

Used by: **GAMES** players like **RUGBY, FOOTBALL,** and **TENNIS** players

1.1.5 Your personal health & well-being (Diet and Nutrition)

REQUIREMENTS of a BALANCED DIET

There are **7 REQUIREMENTS** of a balanced diet: **3 MACRO NUTRIENTS** (**CARBOHYDRATE**, **PROTEIN** and **FAT**) ---- **2 MICRO NUTRIENTS** (**MINERALS** and **VITAMINS**) --- **WATER** --- **FIBRE**

IMPORTANCE of MACRO NUTRIENTS

CARBOHYDRATES

POTATOES, RICE, BREAD and **PASTA** are **IMPORTANT** because they provide **ENERGY**

FATS

CHEESE, BUTTER, OILS, CHOCOLATE and **FATTY MEATS (burgers)** are **IMPORTANT** because they **PROVIDE ENERGY** when **CARBOHYDRATES** are **LOW** and they **INCREASE** the **SIZE** and **WEIGHT** of the **BODY**

PROTEINS

MEAT, FISH, NUTS, EGGS and **POULTRY** are **IMPORTANT** because they **BUILD MUSCLE** and **REPAIR TISSUE**

IMPORTANCE of MICRO NUTRIENTS

MINERALS

CALCIUM (found in **MILK**) strengthens bones.
IRON (found in **RED MEAT**) produces red blood cells so more oxygen can be transported around the body

VITAMINS

VITAMIN C (found in **FRUIT**), **VITAMIN A** (found in **CARROTS**), **VITAMIN B1** (found in **NUTS**) and **VITAMIN E** (found in **VEGETABLE OIL**).

They are **IMPORTANT** for the **GENERAL HEALTH** of **VISION**, **SKIN CONDITION**, **FORMING** of **RED BLOOD CELLS** and the **CONDITION** of **BONES** and **TEETH.**

IMPORTANCE of WATER and FIBRE

WATER

IMPORTANT because it ensures that you are **HYDRATED** especially in **HOT WEATHER** or **DURING EXERCISE**

FIBRE

From **GRAINS, FRUIT AND VEG** is **IMPORTANT** because it ensures your **DIGESTIVE SYSTEM FUNCTIONS** properly and it **LOWERS CHOLESTEROL**

TIMING of DIETARY INTAKE

BLOOD SHUNTING: when individual's **EXERCISE, BLOOD** is **SHUNTED** (or **REDISTRIBUTED AROUND** the **BODY**) from the **MAJOR BODY SYSTEMS** (such as the **DIGESTIVE SYSTEM**) to the **WORKING MUSCLES**.

This is so that **MORE OXYGEN** can be **DELIVERED** to the **WORKING MUSCLES,** so that **ENERGY** can be **RELEASED**. As a consequence, **BLOOD SUPPLY** to the other systems (such as the **DIGESTIVE SYSTEM**) is **MASSIVELY REDUCED which** means **FOOD** will **STOP** being **DIGESTED**. This could cause **CRAMPS & STOMACH DISCOMFORT.**

GAME/RACE DAY: Athletes should eat a **CARBOHYDRATE RICH MEAL 2** to **4 HOURS** before an **EVENT** to ensure that it is **FULLY DIGESTED.**

Alongside the **ENERGY** from the **MEAL** athletes may also **CONSUME SMALL AMOUNTS** of **CARBOHYDRATE** (**GLUCOSE GELS**) or **CARBOHYDRATE** based **DRINKS (Lucozade)** to **PROVIDE ENERGY** and **HYDRATION.**

how EXERCISE, DIET, WORK and REST INFLUENCE your PERSONAL HEALTH (PMS)

- *REDUCING the RISK of **PHYSICAL** HEALTH PROBLEMS (such as HEART DISEASE, STROKE, HIGH BLOOD PRESSURE and HIGH CHOLESTEROL).*
- *REDUCING the RISK of **MENTAL** HEALTH PROBLEMS (such as STRESS, LOW SELF ESTEEM and LOW CONFIDENCE).*
- *REDUCING the RISK of **SOCIAL** HEALTH PROBLEMS (such as NOT HAVING FRIENDS or OPPORTUNITIES to become involved in SOCIAL MIXING).*

the link between EXERCISE, DIET, WORK and REST

- **EXERCISE PREPARES** the body so that it is **PHYSICALLY** capable of **COMPLETING TASKS** without being **EXHAUSTED**.
- **DIET** will see the **CORRECT AMOUNT** of **CALORIES** to provide the body with enough **ENERGY** to **COMPLETE** the **EXERCISE**.
- **WORK** and **REST CREATE** a **PHYSICAL** and **MENTAL BALANCE** which is enables the **BODY** to **FUNCTION** at its **OPTIMAL LEVEL**

1.2

Exam Question Frequency

1.2 Your healthy, active body

		1.2.1 Physical activity and your healthy mind and body						1.2.2 A healthy, active lifestyle and your cardiovascular system					1.2.3 A healthy, active lifestyle and your respiratory system			1.2.4 A healthy, active lifestyle and your muscular system								1.2.5 A healthy, active lifestyle and your skeletal system					
		Describe the different body types and explain the effect of each on participation and performance	Outline why and how expected and optimum weight varies according to height, gender, bone structure and muscle girth; explain how this may affect participation and performance in physical activity	Explain the terms anorexic, obese, overfat, overweight, underweight; explain how they may impact on achieving a sustained involvement in physical activity	Explain the effects of smoking and alcohol on general health and on physical activity	Know about different categories of drugs and the effects they may have on health, wellbeing and physical performance and why some performers might risk using them	Identify risks associated with participation physical activities, and explain how to reduce these risks to better maintain wellbeing	Understand the immediate and short-term effects of exercise and physical activity on the cardiovascular system	Understand the long-term effects of regular exercise and physical activity on the cardiovascular system	Understand the impact of rest on the cardiovascular system	Understand the impact of diet on the cardiovascular system	Understand the impact of recreational drugs on the cardiovascular system	Understand the immediate and short-term effects on the respiratory system of participation in exercise and physical activity	Understand the long-term effects of regular exercise and physical activity on the respiratory system	Understand the impact of recreational drugs on the respiratory system	Understand the role of the muscular system during physical activity and how the major muscle groups benefit from particular types of physical activity	Understand the role of muscles in movement	Understand the immediate and short-term effects on the muscular system of participation in exercise and physical activity	Understand the long-term effects of regular exercise and physical activity on the muscular system	Understand the potential for muscle injuries through exercise and physical activity and know common techniques for treatment	Understand the impact of rest on the muscular system	Understand the impact of diet on the muscular system	Understand the impact of performance enhancing drugs on the muscular system	Understand the function of the skeletal system for movement, support or protection during physical activity	Understand the ranges of movement at joints during physical activity	Understand the effects of regular exercise and physical activity on the skeletal system	Understand the importance of weight-bearing exercise to prevent osteoporosis	Understand the potential for skeletal injuries through exercise and physical activity and know common techniques for treatment	Understand the impact of diet on the skeletal system
Jun-11	Section A	1									1			1			1												
	Section B				5	6	5						3				1							2	1			1	
	Section C							3										3											
Total Marks per section		17						4					4			5							5					
Jun-12	Section A					1			1						1			1							1				
	Section B	4	2					3		2	3		5			4							6					
	Section C						6																						
Total Marks per section		13						9					6			5							7					
Jun-13	Section A				1	1									1		1											1	
	Section B						2	3	1				4	3		3			2						3				
	Section C	6																											
Total Marks per section		10						4					8			6							4					
Jun-14	Section A		1	1					1					1							1						1	
	Section B	2					6	2	4	1		1	2				4								3				
	Section C					6																							
Total Marks per section		16						9					3			5							4					
Jun-15	Section A					2					1	1	1																
	Section B	3					2		3				2				4				1				1				
	Section C															2									2				
Total Marks per section		7						5					3			7							3					
Jun-16	Section A													1															
	Section B					4	9				2		4																
	Section C																3								3				
Total Marks per section		13						2					5			3							3					
Total Marks per section 2011-2016		76						33					29			31							26					

1.2.1 RISK (BAP –WCCC)

Adherence to the rules;

will reduce the risk because…
- Foul play will injure an opponent or yourself.
- You will also be expected to apply etiquette (to play within the unwritten code of the game) e.g kicking the ball out of play when an opponent is injured

Balanced competition

will reduce the risk because…
it ensures performers play in the correct:
- Age group,
- Gender classification,
- Ability level (handicap system)
- Weight category

PAR-Q

Will reduce the risk because…
- It assesses whether you are ready to participate in an activity.
- problems highlighted by this questionnaire must be reviewed by a doctor

Warming up

will reduce the risk because…
- You become more flexible,
- You increase your heart rate and temperature
- Mentally prepare for your sport.

Cooling down

will reduce the risk because…
- You gradually return the body to its resting state
- Prevent lactic acid build up

Correct clothing;

will reduce the risk because…
- Clothing or footwear will not catch anything, hinder personal performance, or cause an injury to others.
- You may also be required to wear protective clothing (shin pads) and to remove jewellery

Checking equipment and facilities

will reduce the risk because…
- You will ensure the playing surface, the ground, the arena are safe and free from unnecessary hazards for players and spectators

1.2.1 DRUGS

Recreational

Smoking

Effects on Health

They cause cancers (lung and mouth) and coronary heart disease.

Effects on Performance

It reduces the body's ability to carry oxygen and is a major hindrance to endurance events such as marathon

Alcohol

Effects on Health

increased anxiety, decreased judgement and coordination, reduced fertility, increased weight gain, liver disease

Effects on Performance

It slows reaction time because it is a sedative and a depressant

Some performers still risk using them because the rewards for winning are huge; including fame, wealth and celebrity status

Performance Enhancing (BAD –HENS)

Drug	Example	Positive Effect on Performance…	Negative Effect on health…
Beta blockers		in sports which require steadiness (golf putting) because they slow the heart rate down	because the heart may actually stop beating
Anabolic steroids		in power sports (100m) because they increases muscle mass and bone growth allowing you to train harder	because these cause kidney problems, mood swings, aggression heart attacks and death
Diuretics		in sports with weight categories (boxing) because they allow you to increase fluid loss.	because they cause kidney damage, dehydration and dizziness.
Human Growth Hormone (**Peptide hormones**)		in power sports (American football) because they increase muscle mass and reduce fat	because they cause diabetes and irregular heart beats
EPO (**Peptide hormones**)		in endurance sports (marathon) because they increase the number of red blood cells in your body meaning more oxygen can be transported	because they cause strokes and heart attacks
Narcotic analgesics		when you require pain relief and when you have an injury	because they are addictive. They also make the injury worse.
Stimulants		in sports that require you to be alert (badminton)	because these cause high blood pressure, anxiety and insomnia

1.2.1 Weight related conditions and somatotypes

Weight related conditions (A.U.O.O.O)

Optimum weight

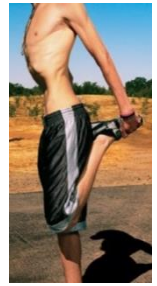
1. *The* ***ideal weight*** *for a person which gives them the* ***best chance*** *of* ***success*** *in a* ***sport.***

2. *Optimum weight* ***varies*** *because different* ***sports*** *have* ***different requirements*** *of* ***height, muscle girth, gende****r and* ***bone structure***

3. Differences *can* ***affect*** *the type of* ***activity*** *you are most likely to be* ***involved in****. For example* ***tall people*** *may be* ***influenced*** *to take part in* ***basketball***

Anorexia *prolonged weight loss eating disorder due to obsessive control of food intake*

It can affect your involvement in sport because you will not have energy or strength to participate.



Underweight *weighing less than is normal.*

It can affect your involvement in sport because you do not have enough energy

Overfat *people who have more body fat than you should have for you height and weight.*

It can affect your involvement in sport because you may have health problems such as high blood pressure

Overweight *having weight in excess of normal. It is not a problem unless you are overfat as well.*

It can affect your involvement in sport because you may have a lot of muscle and be effective in power or strength sports

Obese **Obese;** *people who are very over fat. It can lead to many health problems.*

It can affect your involvement in sport because you may not be healthy enough to exercise and find it difficult. You may also suffer ridicule.

somatotypes

Ectomorph (t = tall and thin)

Ectomorph

skinny, tall and have narrow shoulders and hips.

PERFORMANCE & PARTICIPATION

+ Lighter for sports such as high jump and long distance running.
+ Do not have to carry much weight for endurance activities such as marathon and long distance cycling.

- Do not have much strength or power for sports such as rugby.

Mesomorph (M=Muscular)

Mesomorph

high proportion of muscle and bone, broad shoulders and narrow hips.

PERFORMANCE & PARTICIPATION

+ Powerful in sports such as 100m, rugby

- Not built for endurance events because they carry a lot of weight

Endomorph (d=dumpy)

Endomorph

heavy, carry excess fat, short limbs, wide hips and a round shape

PERFORMANCE & PARTICIPATION

+ Effective for sports which require you to maintain your position (sumo wrestler or scrum in rugby).

- Do not have speed or power for explosive activities or endurance for marathon

1.2.2 Cardiovascular system

When you exercise you place the CVS under stress. The CVS must be given relaxation time to recover and adapt. As a result (cardiac) Hypertrophy occurs and the immune system grows stronger allowing white blood cells to fight disease

REST on the CVS

This increases when we begin to **exercise pumping blood** more **forcibly** which leads to a **higher pressure**.

Systolic blood pressure; the pressure when blood is being pumped out of the heart (contraction phase)

Pressure does not change significantly

Diastolic blood pressure; the pressure when the heart is relaxing (relaxation phase).

Blood pressure; the force of the blood pushing against the blood vessel walls as it travels around the body.

this increases when we begin to exercise meaning a increased blood flow transporting oxygen around the body to the muscles for energy to be released

Heart rate; the amount of times the heart beats per minute (BPM)

SHORT TERM (immediate) EFFECTS of EXERCISE

DIET on the CVS

Reduces the risk of coronary heart disease, strokes, heart attacks and even death.

Eating a **healthy diet** which contains **high density lipoproteins** and fruit and vegetables will reduce **cholesterol levels** and **reduce blood pressure**.

Cholesterol is found in fatty foods. Eating **fatty foods** and **low density lipoproteins** causes **cholesterol** to **increase** and **plaque** to form on the **inside walls** of your **blood vessels**.

This **reduces blood flow** and **increases blood pressure**. This can lead to coronary **heart disease, strokes, heart attacks**

Impact of recreational drugs on the CVS

ALCOHOL on the CVS

increases your blood pressure and cause the red blood cells to clump together

SMOKING on the CVS

Smoking contains a gas called **carbon monoxide. Haemoglobin (in red blood cells)** is attracted to carbon monoxide 240 times more than oxygen.

if you smoke cigarettes you transport **less oxygen**, **reducing** your **energy** release and you starve your **organs** of **oxygen**. This can lead to coronary **heart disease, strokes, heart attacks.**

LONG TERM EFFECTS of EXERCISE

Recovery time; Time taken after exercise for your **heart rate (HR) to return** to its rest state (**Resting HR**).

Blood pressure

Resting heart rate; this is the amount of times your heart beats in one minute when you are ***NOT*** exercising.

These **decrease** with long term exercise because your heart can pump more blood round the body.

Arteries; (take blood **a**way from the heart) and work under high pressure

Veins; (take blood **in** to the heart) work under low pressure

Long term exercise **increases the strength and elasticity** of this muscle **making blood flow easier**.

Stroke volume; the amount of blood pumped out of the heart in one beat.

Cardiac output; this is the amount of blood pumped out of the heart in one minute. It is calculated by; SV x HR = CO

Size of the heart (hypertrophy)

These will increase. This means more oxygen is delivered to the muscles so energy can be released.

1.2.3 Respiratory system

Results in a more efficient gaseous exchange and improved oxygen delivery to the working muscles.

INCREASES during physical activity

Breathing rate; is the number of breaths that a person takes in one minute.

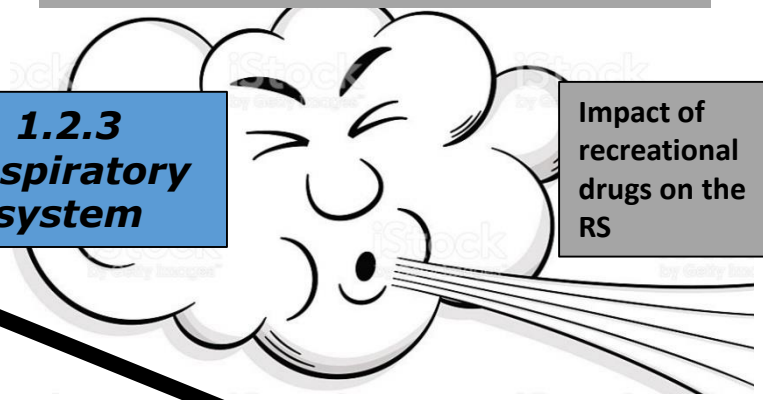
Tidal volume; is the amount of air breathed in or out during normal breathing. Measured in millilitres.

Because your body is working at high intensity and cannot get enough oxygen in to cope with the exercise.

INCREASES during physical activity

Oxygen Debt occurs in ANEROBIC exercise. It is the amount of oxygen consumed during recovery above that which would have ordinarily been consumed in the same time at rest.

SHORT TERM (immediate) EFFECTS of EXERCISE (B – T – O)



Impact of recreational drugs on the RS

Smoking / nicotine; results in less alveoli and therefore a reduced alveoli-gaseous exchange and a decreased delivery of oxygen to the working muscles

Alcohol; results in poor respiration, irregular/slow breathing and less oxygen being transported to the working muscles or organs

LONG TERM EFFECTS of EXERSIZE (L – V)

Lung capacity; is the amount of air a lung can hold

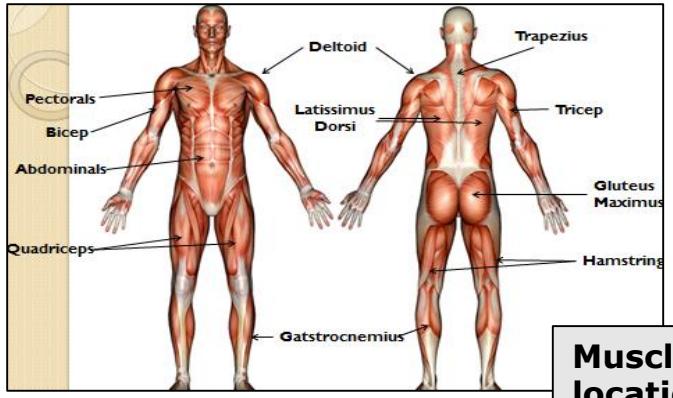
Vital capacity is the amount of air that can be forcibly breathed out after a deep breath in

INCREASES as a result of regular and ongoing (Long term) Physical activity (e.g 6 week training programme)

Results in the muscles involved in respiration becoming stronger therefore a more efficient Gaseous exchange and improved oxygen delivery to the working muscles.

1.2.4 Muscular System

Muscle location

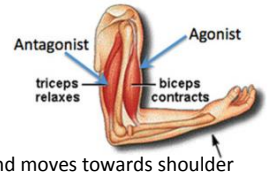


The role of muscles

Muscles connect to the skeleton and contract or relax to cause movement at a joint. Muscles work as antagonistic pairs.

Antagonistic pairs

Antagonistic pairs work when one of the muscles is under tension and it contracts (this is called the agonist muscle), whilst the other muscle in the pair relaxes (this is called the antagonist muscle). Antagonistic pairs work as opposites.



Hand moves towards shoulder

Hand moves away from shoulder

Muscle Contraction (2 types)

Isotonic contraction; e.g bicep curl
- Agonist muscle is under tension but it also shortens (e.g bicep)
- Antagonist muscle relaxes (no tension) and also lengthens (e.g triceps)

Isometric contraction; e.g rugby scrum, gymnastics crucifix
- Agonist muscle is under tension but it remains the same length.
- Antagonist muscle relaxes but also remains the same length.

Diet on MS

PROTEIN found in Meat, fish, eggs
helps to…

1.REPAIR TISSUE
2.BUILD BODY CELLS
3.BUILD MUSLCE MASS

Long term effects (adaptations) of P.A on MS

1. Hypertrophy of the muscles (increasing in size)
2. Increased strength
3. Increased endurance
4. Increased muscle tone

Anabolic steroids on MS

HUGE IMPACT on the SIZE and CONDITION of the athlete's MUSCLES. They…

1.BUILD MUSCLE TISSUE very quickly (HYPERTROPHY)
2.SPEED UP RECOVERY TIME allowing FREQUENT TRAINING which INCREASES PERFORMANCE levels in EXPLOSIVE sports.

Immediate (short term) effects of P.A on MS

Muscles can contract at anaerobically for about 8 seconds. After this point lactic acid builds up and fatigue (tiredness) sets in.

'*CHAFF BLOG*'

1.Muscular CONTRACTIONS increase
2.HEAT is produced
3.ACHES in muscles
4.FATIGUE sets in
5.FUEL demands increase
6.BLOOD is SHUNTED to the working muscles
7.LACTIC ACID builds up
8.OXYGEN DEMANDS increase
9.GLYCOGEN is released for energy

Rest/ recovery on MS

For an athlete's TRAINING to be EFFECTIVE they must strike the right BALANCE between REST and WORK. If REST TIMES are not LONG ENOUGH the muscles will not be able to CONTRACT effectively.

For a TRAINING SESSION to be EFFECTIVE the TIREDENESS and FATIGUE of the muscle should have DISAPPEARED. If they don't do this then the RISK of INJURY INCREASES. This can take 48 HOURS.

However TOO MUCH RECOVERY TIME can WASTE the EFFORT made in the PREVIOUS training session

Injury to MS

1. Strain (pulled muscle); muscle is overstretched. prevented with a thorough warm up.
2. Sprain; this is a twist to the joint (eg; ankle ligaments) prevented by strengthening the joint.
3. Tennis/ golfers elbow; overuse of tendons in the joint. Prevented by not repeating the same action.

Treatment

REST; immediately rest the area
ICE; apply ice to reduce the swelling and increase recovery time
COMPRESS; place a bandage to support and to reduce the swelling
ELEVATE; you place the injured part of the body above the level of the heart to reduce the swelling

Atrophy

Atrophy is the decrease in size of a muscle. This can occur when you are injured, when you are ill or during the off season. It is the opposite of hypertrophy.

1.2.5 Skeletal System (L.O.R.D W.I.J)

Role of SS

A. MOVEMENT: this is achieved at a JOINT. Muscles attach to the skeleton through TENDONS. The 2 systems work together to cause movement
B. SUPPORT: provides SHAPE & supports it through a variety of movements or positions.
C. PROTECTION: Protects vital organs e.g the CRANIUM (skull) which protects the BRAIN, the RIBS protect the HEART, LUNGS & LIVER.

Diet

Calcium

CALCIUM is found in MILK, CHEESE and other DAIRY PRODUCTS. Calcium STRENGTHENS bones. A LACK of calcium will DECREASE their STRENGTH and can lead to OSTEOPOROSIS

Vitamin D

VITAMIN D is produced by the BODY in REACTION to exposure to SUNLIGHT. It is also found in FISH & EGGS. Vitamin D helps to ABSORB CALCIUM and MAINTAIN BONE MASS and REDUCES the RISK of OSTEOPOROSIS.

Osteoporosis

OSTEOPOROSIS is a condition in which BONE DENSITY is REDUCED and the bone becomes WEAK and PRONE to FRACTURE.

Long term effects of PA

1. INCREASED BONE DENSITY which offsets the RISK of OSTEOPOROSIS
2. SLOWED LOSS of CALCIUM so bones stay STRONG
3. INCREASED FLEXIBILITY at JOINTS
4. STRONGER TENDONS & LIGAMENTS

Weight bearing exercise

WEIGHT BEARING exercise e.g WALKING, RUNNING, TENNIS, AEROBICS or WEIGHT LIFTING are IMPORTANT because they put STRESS and WEIGHT through the SKELETON helping to PREVENT OSTEOPEROSIS. ACTIVITIES such as SWIMMING & CYCLING are NOT weight bearing.

Injury

Fractures

COMPOUND fracture; when the BONE fractures and the bone sticks through the SKIN

GREENSTICK fracture; when the bone fractures PARTIALLY and NOT FULLY

SIMPLE fracture is when the bone fractures FULLY but does NOT stick through the skin

STRESS fracture is an INCOMPLETE fracture of the bone due to REPEATED STRESS

Joint injury

1. SPRAIN; damaged ligaments and tendons caused by a TWISTING action

2. TENNIS/ GOLFERS ELBOW; part of the ELBOW becomes PAINFUL through TOO MUCH USE of the TENDONS in the joint. PREVENTED by not OVERUSING or REPEATING the same action

3. TORN CARTILAGE; cartilage is soft tissue which covers the end of BONES to REDUCE FRICTION. When a JOINT SPRAINS it can TEAR the CARTILAGE. It REDUCES FLEXIBILITY and it is PAINFUL

4. DISLOCATION; this is a HARD TISSUE injury and is caused when a JOINT MOVES OUTSIDE its NORMAL RANGE or LOCATION

THE RICE TECHNIQUE WOULD BE USED TO TREAT SUCH INJURIES

Joint Movements

A JOINT is a LOCATION where 2 or MORE BONES ARTICULATE (MEET). For example the shoulder, knee and elbow are all joints.

A) HINGE Joints; the KNEE and the ELBOW are both HINGE joints. They can perform EXTENSION & FLEXION.
B) BALL & SOCKET Joints: EG: The SHOULDER. This can perform EXTENSION, FLEXION, ABDUCTION, ADDUCTION, ROTATION

Rotation

the movement of a LIMB (arm or leg) AROUND an AXIS. It can happen at the SHOULDER

Abduction

the movement of a LIMB (arm or leg) AWAY FROM the MIDLINE of the body.

ABDUCTION at the SHOULDER caused when the DELTOID

CONTRACTS

Adduction

the movement of a LIMB (arm or leg) TOWARDS the MIDLINE of the body.

ADDUCTION at the SHOULDER caused when the L. DELTOID & R. LATIMUS DORSI

CONTRACT

Flexion

the DECREASE in the ANGLE of a joint.

This is FLEXION at the R. KNEE caused when the HAMSTRING CONTRACTS

Extension

the INCREASE in the ANGLE of a joint.

This is EXTENSION at the R. KNEE caused when the QUADRICEPT CONTRACTS