**Long answer questions and Answers**

* + 1. **Healthy Active Lifestyles and how they could benefit you**

Tom has recently joined a local football club; explain some of the reasons behind Tom’s decision to become more physically active and how this may contribute to his health.

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| Possible Reason for taking Part in Physical Activity | Explanation and Link to Health |
| Cooperation | **Explanation:** Helps him working in a team, wants to support and encourage team mates and also receive that support  **Link to Health:** Allows social benefits (i.e. develop teamwork/equiv and Mental by increasing self-esteem/confidence/enjoyment |
| Competition | **Explanation:** Likes the feel of competing, puts aside all other problems and wants to win and be part of a winning team/equiv.  **Link to Health:** Allows Mental benefits (i.e. gets away from the stresses of life to concentrate completely on the competition at hand/allows thorough preparation for the game. |
| For a Physical Challenge | **Explanation:** Taking on a tough or seemingly impossible challenge physically can be very satisfying and wants to do this through Football.  **Link to Health:** Physical- Increase HRE factors, increase performance level in the sport. |
| Aesthetic Appreciation | **Explanation:** Has seen how good it looks to perform in the game of Football, appreciates the skill level and wants to try and replicate it. Likes the feeling or performing a skill well  **Link to Health:** Allows sense of achievement/enjoyment |
| Development of Friendships and Social Mixing | **Explanation:** Development friendships with players/coaches/officials. Make friends with people who have similar interests.  **Link to Health:** Allows you to develop socially, makes you feel wanted and part of the team. |

**1.1.2 Influences on Your Healthy Active Lifestyle**

Chloe is a good all round sports performer and could represent her school in many different sports.

Evaluate the potential influence of different factors on Chloe’s choice of physical activities.

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| Possible Influence on Choice | Explanation and evaluate |
| People | **Explanation:** Family/peers/role model have influence on choice. Depends what they like/equiv  **Evaluate:** Very high influence, certainly peers being at school and family if they allow it/approve/equiv. |
| Image | **Explanation:** Fashion (correct clothes/like what they look like) and Media Coverage (see how much is on the TV/Papers etc  **Evaluate:** Not that high influence/ within a school and they may provide clothing/equipment anyway |
| Cultural Factors | **Explanation:** Age/gender/disability/race  **Evaluate:** School sport so Age/race not necessarily a factor. Doesn’t state disability but gender could be deemed a factor i.e. not suitable for a girl, not many girls play that particular sport etc. |
| Resources | **Explanation:** Availability/Location/access/time  **Evaluate:** Could be a big factor with lunchtime/after school clubs. Can they access outside of school as well to practice it? Local club/team etc? |
| Health and Well-being | **Explanation:** Illness and Health problems  **Evaluate:** Could be ill at school/time off when competition is on/equiv. |
| Socio-economic | **Explanation:** Cost/status  **Evaluate:** Should not be a big factor as school should cover cost/transport etc and she is in education already. |

**1.1.3 Healthy Active Lifestyles**

Louise is a good sprinter and long jumper and represents her school in both these events. She is also doing GCSE PE and wants to use her Personal Exercise Programme to help improve her performance in both events in order that she can make the qualifying standards for the National Schools Championships.

Analyse both of her events and choose three important skill related fitness requirements that she will need to improve and explain how she applies them in her events.

Answer:

Need to improve-

1. **Power:** As a sprinter to drive their bodies out of the blocks and propel themselves along the track. As a long jumper with the run-up but mostly at the moment of take-off. Requires strength and speed.
2. **Speed:** As a sprinter with leg and arm speed along the track and cover the distance in shortest amount of time possible. In long jump same running down the track to the pit, however looking how quickly can move arms/legs in the air to try to create a further distance (i.e. getting into the pike position etc)
3. **Reaction Time:** Sprinting to react to the gun at the start of the race/long-jump with reacting to the board when on the run up and the landing into the sand-pit to move the body into the correct landing position.
4. **Coordination:** Sprinting with arm and leg movements leading to balance while running and creating to most efficient/fast running style possible. Long-jump creating different movements with arms and legs while in the take-off and then flight phase of the jump etc.

**1.1.4 Physical Activity as part of your Healthy, Active Lifestyle**

Describe the characteristics of circuit training and explain how it could be used to improve an individual’s health and fitness?

**Characteristics**

1. Use of stations
2. Circular order
3. Alternate use of muscle groups
4. Set number of reps/circuits/heart rate/time
5. Caters for large numbers/small space/limited specialist equipment/equiv
6. Variety of exercised/no boredom
7. Sports specific/general fitness/aerobic or anaerobic

**Explanation**

1. Fitness increased through increasing number of reps/FIT/equiv
2. E.g. strength increase through increased weight bearing stations/equiv example for any aspect of fitness
3. Health increased through benefits of exercise – reduction in blood pressure/equiv example of health benefits

**1.1.5 Your personal health and wellbeing**

Anita is a long distance runner who trains regularly and competes to a high standard.

Explain the importance of a balanced diet on Anita’s performance and consider how her dietary requirements may be altered prior to an important race.

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| --- | --- |
| Components of a Balanced Diet | Explanation of importance to Anita’s Performance |
| **Macro-Nutrients**   * Carbohydrates: (Complex/Starch-banana’s wholemeal bread etc) Simple fruit and vegetables * Fats: Butter/oils etc * Protein: Fish/eggs/poultry etc | * Stored as Glycogen and used to convert to energy needed for performance. Preferably complex as slower longer lasting release of energy for the long distance. * Can provide energy and would be good to have some Fats in diet for long-distance running to breakdown for extra energy. * Helps rebuild damaged muscle fibres. Very useful for long distance runners for after event/training to help build muscle and could be used for energy in very long-distance events as well |
| **Micro-Nutrients**   * Minerals: Calcium (milk/cheese etc), Iron (red meat/spinach etc) * Vitamins :) Vit B1 (whole grains, nuts), Vit C (Fruit and Veg), Vit D (milk and Fish) | * *Calcium*-Formation of Bone, reduce likelihood of osteoporosis and especially in weight baring exercises like long-distance.   *Iron*- Formation of red-blood cells, allows a more efficient aerobic system by being able to carry more oxygen.   * Vit B1- Releases Carbohydrates, Vit C- maintenance of bones, Vit D- Absorption of Calcium (see above) |
| **Water** | Very important element to long-distance runner performer. Need it as lose lots during exercise and replenish electrolytes lost. Need to control temp/offset dehydration. |
| **Fibre** | Needed to get rid of waste products so don’t feel ill on the day of performance. |

**Changes to Diet before competition (Carbo-loading)**

1. **Make maximum use of athletes energy resources**
2. **Start of the week reduce training/rest and recover and low CHO high protein**
3. **Mid-week- very high CHO, short distances fast pace training.**
4. **Day before “pasta-parties” loading CHO for energy (glycogen stores)**
5. **After event lots of CHO to replenish lost stores.**

**1.2.1 Physical Activity and your healthy mind and body**

Describe and classify the following body types, and explain how they are suited to their sport or physical activity?

1. [](http://www.google.co.uk/imgres?imgurl=http://katedeering.com/wp-content/uploads/2011/02/sumo-wrestler1.jpg&imgrefurl=http://katedeering.com/archives/591&usg=__mp7OhB92LKPiDxMIJFz3zRfzQ-s=&h=425&w=400&sz=25&hl=en&start=2&zoom=1&itbs=1&tbnid=L-8f_KF6JQ61ZM:&tbnh=126&tbnw=119&prev=/images?q=sumo+wrestler&hl=en&safe=active&sout=1&biw=1276&bih=587&gbv=2&tbm=isch&ei=QDOcTfOMFY2LhQfx1pjWBg) b) [](http://www.google.co.uk/imgres?imgurl=http://i2.cdn.turner.com/cnn/2009/images/05/12/blanka.jpg&imgrefurl=http://insidethemiddleeast.blogs.cnn.com/category/qatar/&usg=__HQwU0VYUwDUcNR26-zKXdQhuuN0=&h=1964&w=2904&sz=1100&hl=en&start=4&zoom=1&itbs=1&tbnid=OLYciqbiku4RMM:&tbnh=101&tbnw=150&prev=/images?q=high+jumper&hl=en&safe=active&sout=1&biw=1276&bih=587&gbv=2&tbm=isch&ei=YDOcTffxJYaAhQelx6nJBg) c) [](http://www.google.co.uk/imgres?imgurl=http://3.bp.blogspot.com/_wLy5VnVPGS4/SKsOYC4FDJI/AAAAAAAADcM/3zRA3NWTkWU/s400/6_3_michael_phelps.bmp&imgrefurl=http://hickchic.blogspot.com/2008/08/looking-at-michael-phelps-and-thinkin.html&usg=__NW-g5_r6Jj7L5DN_pUyP0_sKup0=&h=400&w=263&sz=19&hl=en&start=7&zoom=1&itbs=1&tbnid=qIYlHeId3n2w-M:&tbnh=124&tbnw=82&prev=/images?q=michael+phelps&hl=en&safe=active&sout=1&biw=1276&bih=587&gbv=2&tbm=isch&ei=kDOcTYD4LsOxhQfVgMnBBg)
2. **Endomorph** (wide hips, narrow shoulders, characterised by fatness).

Suited to his activity using power, extra body fat allows them to get more weight behind them and their actions i.e. pushing the opponent out of the ring/Rugby tackling/equiv.

1. **Ectomorph** (Narrow shoulders/narrow hips, characterised by thinness)

Suited by being tall and thin, allowing to get a higher reach over the bar and jump higher. Also being more agile over the bar (bending back etc)

1. **Mesomorph** (Wide shoulders and narrow hips, characterised by muscularity)

Suited to activity by having high level of strength allowing high level of power to propel themselves through the water. Suited to anaerobic energy (i.e. swimming sprinter).

**1.2.2 Healthy active lifestyle and your cardiovascular system**

Describe and explain, using examples, both the immediate effects, and the long term effects of regular exercise on the cardiovascular system

Immediate effects to include;

* Increased Heart Rate (example of resting HR – 60-80bpm).
* Increased Blood pressure as greater amounts of blood is pumped around the body, increasing the pressure on the blood vessels.

Long term effects to include;

* Decreased resting heart rate
* Decrease in Heart’s recovery rate.
* Increased Stoke Volume.
* Cardiac Output can increase (CO = SV x HR).
* Reduced blood pressure.
* Greater number of capillaries and blood vessels become more flexible and efficient.

Knowledge and understanding of reasons why should be shown and examples used where appropriate.

**1.2.3 Healthy active lifestyle and your respiratory system**

Describe and explain, using examples, both the immediate effects, and the long term effects of regular exercise on the respiratory system.

Immediate effects to include;

* Breathing rate quickens and deepens.
* Oxygen debt can occur.

Long term effects to include;

* Lung capacity increases.
* Improved efficiency of the lungs – allowing better delivery of oxygen to the working muscles.
* Carbon Dioxide removed more efficiently.
* Vital Capacity is increased.
* More Alveoli become available for gaseous exchange.
* VO2 Max increases.

Knowledge and understanding of reasons why should be shown and examples used where appropriate.

**1.2.4** **Healthy active lifestyle and your muscular system**

Describe and explain, using examples, both the immediate effects, and the long term effects of regular exercise on the muscular system.

Immediate effects;

* Muscles need more fuel to function so oxygen and glycogen demand increases.
* Extra waste products are created when muscles work harder than normal.
* Extra blood needs to be pumped around the body to take these waste products away.
* If demand for oxygen is high (through anaerobic exercise) lactic acid can be produced which can lead to cramping.

Long term effects;

* Core stability and Posture can increase and improve.
* Increased muscle size – (must include ‘Hypertrophy’ in the answer).
* Can increase strength which can in turn increase power (strength x speed = power).
* Increased muscular endurance.
* Muscular tone and stronger ligaments and tendons.
* Bones can increase in strength (must include example of impact training e.g road running)
* Reduced risk of injury in these areas.

Knowledge and understanding of reasons why should be shown and examples used where appropriate.

**1.2.5** **Healthy active lifestyle and your skeletal system**

Describe and explain, using examples, both the immediate effects, and the long term effects of regular exercise on the skeletal system.

Immediate effects;

* Young people should not do too much of certain activities for example weight training and long distance running as it can cause bones to develop unevenly.

Long term effects;

* Regular exercise helps bones to develop and become strong.
* Bone density can increase; as they become heavier they become stronger.
* Ligaments and tendons become thicker and stronger. This increases joint flexibility and allows more power in movement.

Knowledge and understanding of reasons why should be shown and examples used where appropriate.

**1.2 Your Healthy, Active Body**

Louise is a sprinter and long jumper and she is taking GCSE Physical Education and has to plan, perform, monitor and evaluate her own personal exercise programme (PEP) during her PE course. Although she plans to do some specialist training to improve her sprinting and long jumping, she also plans to include some circuit training in order to maintain and improve her all round fitness. Two of the exercises she has included are press ups and step ups onto a bench.

Identify and describe which specific aspect of Health-Related Exercise this will improve. Then identify, describe and explain – making sure that you use the correct terminology – which muscles are working and how they work together during each exercise.

* Press ups test – HRE = muscular endurance.
* Must include description e.g muscular endurance is the ability to use the voluntary muscles many times without getting tired.
* Must explain and give examples as to why this is important to help Louise with her sprinting and long lumping.
* Step up test – HRE = Cardiovascular fitness.
* Must include description e.g cardiovascular fitness is the ability to exercise the entire body for periods of time.
* Must explain and give examples as to why this is important to help Louise with her sprinting and long lumping.