**Revision questions muscle fibre and movement**

1. **Name one muscle in the trunk which works to maintain good posture and core stability during the biceps curl. (1 marks)**

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1. **Identify two structures of a synovial joint and describe the role of one during physical performance [3 marks]**

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**The Role of Muscular Contraction**

1. **During the upward and downward phases of a press up. Explain the role of the triceps brachia in both the upward and downward phases of a press up. (4)**

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1. **Name the type of contraction occurring at the agonist and give one exercise that could be used to improve the strength in that muscle. [2 marks]**

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1. **What type of muscle contraction is occurring in the biceps brachia during the downward phase of the bicep curl? (1)**

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1. **Identify the type of contraction occurring at the agonist and give one exercise that could be used to strengthen the agonist muscle. [2 marks )**

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1. **Describe and explain the type of muscular contraction occurring in the rectus abdominis and the pectoralis major muscles as the athlete performs this test. (5 marks)**



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1. **Describe the type of contraction taking place at the hip in the downward phase of a squat.**

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| --- | --- | --- | --- |
| Type of contraction | Agonist  | Antagonist | Movement  |
|  |  |  |  |

1. Describe the type of contraction taking place at the shoulder in the **downward phase** of a wide grip pull up.



|  |  |  |  |
| --- | --- | --- | --- |
| Type of contraction | Agonist  | Antagonist | Movement  |
|  |  |  |  |

1. Describe the movement occurring at the knee in the upward phase



|  |  |  |  |
| --- | --- | --- | --- |
| Type of contraction | Agonist  | Antagonist | Movement  |
|  |  |   |  |

**Muscle Fibre Types in relation to choice of PA**

1. **A performer's mix of fast and slow twitch muscle fibres is genetically determined. (5 marks)**

**(i) Identify three functional characteristics of slow twitch (slow oxidative) muscle fibres .**

**(ii) Explain how a performer's mix of muscle fibre types might influence their reasons for choosing to take part in particular types of physical activity.**

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1. **. In terms of fibre type, the composition of muscle is largely genetically determined and can influence the activities in which people participate.**

 **Identify two structural and two functional characteristics of a slow oxidative muscle fibre.**

 **If a person has a high percentage of slow oxidative fibres what type of physical activity are they more likely to participate in? (5 marks)**

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1. **A hurdler will have a different muscle fibre type distribution in their hamstrings to that of a marathon runner. Name the three types of muscle fibre found in the body. Explain why the percentage of each muscle fibre type found in the hamstrings of a hurdler is likely to differ from that of a marathon runner. (6 marks)**

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1. **The long jumper would use fast glycolytic fibre type (llb) during the take-off phase. Identify the reasons why this fibre type would be used. [2 marks]**

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1. **How did the sprinter produce the force and speed of contraction required during the race? [2 marks]**

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1. **A performer's mix of fast and slow twitch muscle fibres is genetically determined.**

**How might the mix of muscle fibre types determine the success of a performer? (6)**

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**The muscle fibre type that would be used during a maximal strength contraction is fast glycolytic (type lib). Give one structural and one functional characteristic of this fibre (2 marks)**

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1. **Identify two structural characteristics of muscle fibre types associated with athletes participating in endurance events. (2)**

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1. **During sub-maximal (aerobic) exercise the predominant muscle fibre type would be slow oxidative (type 1). Give one structural and one functional characteristic of this fibre types [2 marks]**

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**Warm up / Cool-down**

* Analyse the effect of a warm up and cool-down on skeletal muscle tissue in relation to the quality of performance of physical activity.
1. **How would a warm up affect the contraction of a skeletal muscle? (3 marks)**

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1. **Why should a performer warm up before a training run? (3 marks)**

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