

July 2008 – sports science

CPD questionnaires must be completed online via www.cpdjournals.org.za. After submission you can check the answers and print your certificate. Questions may be answered up to 6 months after publication of each issue.

CRITICAL PERCEPTIONS FOR OPTIMAL PERFORMANCE IN SPORT

- Perceptions as internal representations are closely linked to the following paradigm (choose one):**
 - Sport psychology
 - Cognitive psychology
 - Humanistic paradigm
 - Neurolinguistic programming (NLP)
 - Psychodynamic model.
- Which one of the following perceptions in sport does not correlate with the other?**
 - To perceive competition as a challenge
 - A mistake is only a mistake when you refuse to correct it
 - The opponent is a constructive force
 - Stress (eustress) can facilitate performance
 - I see criticism as unnecessary.
- True (A) or false (B) – fill in only block A or B:**

If you perceive stress symptoms negatively and interpret them as indicators that you cannot handle stress, you will obviously experience eustress or unpleasant stress that will negatively affect your performance.

SLEEP FOR PERFORMANCE AND RECOVERY IN ATHLETES

- True (A) or false (B) – fill in only block A or B:**

Jet lag is known as circadian arrhythmia.
- True (A) or false (B) – fill in only block A or B:**

Jet lag is worst after flying eastwards compared with westwards.
- Which one of the following statements is false?**
 - Exposure to light inhibits the release of melatonin
 - Sleep onset normally occurs when core body temperature starts to rise
 - Athletes should be encouraged to take a mid-afternoon nap about 8 hours after termination of the night's sleep
 - Music with a tempo slower than heartbeat can be used as part of a winding down routine before the athlete goes to sleep.

STRIVING FOR FAIRNESS IN PARALYMPIC SPORT: SUPPORT FROM APPLIED SPORT SCIENCE

- The purpose of a classification system is to (choose one):**
 - Separate athletes into categories based on their disability
 - Encourage participation of athletes from different disability groups
 - Identify what kind of modifications may have to be made in the equipment for an event
 - Group athletes together according to the impact that their impairment has on their sport performance
 - Provide athletes with an incentive to train harder so that they can improve the class in which they are competing.
- The Minimum Eligibility Requirement refers to (choose one):**
 - The types of disabilities athletes must have in order to compete in the Paralympics
 - The number of athletes that must be in each class during a competition in order to consider the competition to be valid
 - The degree of impairment that must be present in an athlete in a particular sport in order to be eligible to compete in that sport
 - The number of points that a wheelchair basketball team can have on the floor at any one time
 - The level of success in past disability sport competitions that makes an athlete eligible to compete in the Paralympics.
- True (A) or false (B) – fill in only block A or B:**

The Paralympics is for athletes with disabilities and the Olympics for athletes without disabilities.

BODY COMPOSITION IN WOMEN WITH HIV/AIDS: THE RELEVANCE OF EXERCISE

- Elevated circulating cytokines in patients with HIV are related to (choose one):**
 - Only the presence of tuberculosis
 - The ubiquitin syndrome
 - Hypermetabolism
 - Elevated dihydroepiandrosterone
 - Hyperphagia.

- Lipodystrophy in HIV-positive patients on ART is associated with (choose one):**
 - A good appetite
 - Nucleoside reverse transcriptase inhibitors
 - Non-nucleoside reverse transcriptase inhibitors
 - Non-nucleoside reverse transcriptase inhibitors and protease inhibitors
 - None of the above.
- True (A) or false (B) – fill in only block A or B:**

HIV-positive patients who do not lose body mass are in a stable condition.

FAT AS FUEL DURING EXERCISE

- Which one of the following is not an adaptation to a prolonged (>5 days) high-fat diet that results in an increase in fat oxidation?**
 - An increase in intramuscular triglyceride stores
 - An increase in CPT-1 and 3-HAD enzyme activity
 - An increase in hexokinase and pyruvate dehydrogenase enzyme activity
 - An increase in intramuscular triglyceride oxidation
 - An increase in insulin resistance.
- For which one of the following events would you possibly recommend/suggest to a well-trained athlete to experiment with a fat-adaptation dietary strategy?**
 - The Two Oceans half marathon
 - The Double Century (200 km) cycle race
 - The Spar Ladies 10 km road race
 - The Midmar Mile open water swim event
 - The Argus Cycle Tour.
- True (A) or false (B) – fill in only block A or B:**

Although the ingestion of a high-fat diet for 5 - 6 days is sufficient to enhance fat oxidation during subsequent exercise, even after muscle glycogen levels have been restored, this dietary strategy is associated with compromised high-intensity sprint performance.

TIMING OF NSAID TREATMENT AFTER MUSCLE INJURY OR TRAINING

- True (A) or false (B) – fill in only block A or B:**

NSAIDs will effectively reduce pain and swelling, without having a negative effect on muscle recovery if their use is limited to a maximum of 3 days post injury, while treatment for even 2 days longer has definite detrimental effects.

TALENT IDENTIFICATION IN SPORT: PRACTICES AND ISSUES

- True (A) or false (B) – fill in only block A or B:**

Sport talent can be identified by means of gene testing only.
- Which one of the following statements is not true:**
 - TI has thus far been more successful with individual sports than with team sports
 - Psychological and environmental factors could influence the success of TI
 - There is some support for the legitimacy of gene testing, but the ethical issues limit its application
 - A large number of genes associated with performance and health-related fitness have already been identified
 - All gene therapies currently available are safe.

RESPIRATORY MUSCLE FATIGUE DURING EXERCISE

- True (A) or false (B) – fill in only block A or B:**

During strenuous exercise the oxygen cost of breathing in highly fit individuals can rise to 16% of VO_{2max} .
- Respiratory muscle fatigue (choose one):**
 - Is only observed in untrained individuals
 - Occurs only during short-term, high-intensity exercise
 - Occurs during exercise to exhaustion at intensities higher than 80% of VO_{2max}
 - Is more prevalent in men than in women
 - Is unlikely to affect athletic performance significantly.

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