Are Modalities Effective in Athletic Training? : Quiz Questions and Answers

1. Describe the role of the Clinician in an evidence-based medicine model:
   a. Investigate and test whether modalities are effective
   b. Disseminate results in published documents
   c. Examine outcomes in practice
   d. Test various parameter sets of ultrasound or other devices

2. Which of the following is false regarding the application of therapeutic modalities?
   a. They comprise a comprehensive treatment program to heal athletic injuries
   b. They are applied following an evaluation to determine specific treatment goals
   c. They have limited ability to facilitate a complementary rehabilitation program
   d. They are used for targeted goals during specific stages of the inflammatory process

3. Which of the following is incorrect regarding the effects of ultrasound on tissue heating:
   a. Examinations on tissue healing have primarily been done on the gastrocnemius muscle
   b. Tissue heating is affected by the frequency, intensity, duration, duty cycle and treatment area
   c. 3MHz Ultrasound results in greater heating of tissues compared to 1MHz ultrasound with the same intensity
   d. Tissue heating is consistent with various ultrasound devices and heating characteristics are similar in contractile and non-contractile tissues

4. Which of the following is correct regarding phonophoresis:
   a. Most coupling media and medications for phonophoresis effectively transmit ultrasound energy
   b. Ultrasound energy results in cavitation at the skin, allowing whole molecules of medication to penetrate for a local effect
   c. Research show that phonophoresis is an effective method to reduce inflammation, particularly for chronic conditions
   d. There are clearly defined parameters that should be used to maximize the effects of phonophoresis

The following questions are True/False:

3. Thermal modalities (including cryotherapy) have an ability to influence blood flow to deep tissues, including the vascular beds in skeletal muscle. T F

4. Cryotherapy may reduce swelling in the acute inflammatory condition and has a beneficial effect on pain. T F

5. Cryotherapy, low level laser therapy and pulsed ultrasound may reduce pain and have subtle influences on acute inflammation so that therapeutic exercise becomes more effective. T F

6. There is substantial evidence that cold water immersion post exercise facilitates recovery between exercise bouts. T F

8. TENS has been scrutinized in early systematic reviews, but when parameter selection is better controlled, TENS has been shown to be an effective method to reduce pain in musculoskeletal pathologies. T F

10. Therapeutic modalities can be used to facilitate rehabilitation by disinhibiting the reflex inhibition of muscle function. T F