Weightlifting Training and Hormonal Responses in Adolescent Males: Implications for Program Design

1. A method to evaluate an individual's anabolic/catabolic condition is to determine the ratio of which two serum hormone concentrations?
   A. testosterone and cortisol
   B. luteinizing hormone and growth hormone
   C. cortisol and luteinizing hormone
   D. growth hormone and testosterone

2. How does the ratio of the hormones from question #1 change as the amount of training stress increases?
   A. increases
   B. decreases

3. In comparison to adult males, why is the ratio of the hormones from question #1 NOT an accurate measure of training stress in less-mature males?
   A. pubertal males have lower cortisol levels
   B. pubertal males have higher growth hormone levels
   C. pubertal males have lower testosterone levels
   D. pubertal males have higher luteinizing hormone levels

4. Testosterone breaks down in the bloodstream if it is not bound to which of the following substances?
   A. HGH
   B. IGF-1
   C. cortisol
   D. SHBG

5. When does the concentration of serum testosterone first begin to increase in males transitioning from pre-puberty to puberty?
   A. just before a resistance training workout
   B. during sleep
   C. just after a high-protein meal
   D. during a resistance training workout

6. All of the following training variables are indicated by the article as influencing the hormonal response of resistance exercise EXCEPT:
   A. exercise frequency
   B. exercise choice
   C. exercise load
   D. exercise order

7. How does the serum testosterone response to a resistance training workout change as an individual gains resistance training experience?
   A. increases
   B. decreases

8. What is bound to testosterone when testosterone acts on its target tissue?
   A. nothing
   B. globulin
   C. cortisol
   D. SHBG

9. Which of the following is an indicator of high training stress (in addition to hormonal changes)?
   A. improved training experience
   B. decreased branched-chain amino acid uptake
   C. enhanced training volume capacity
   D. digressed exercise technique

10. Which of the following branched-chain amino acids (BCAAs) reduced the symptoms of high resistance training stress?
    A. leucine
    B. isoleucine
    C. valine
    D. no BCAAs were effective

The answers to this quiz will appear in Vol. 24(6).
Answers to the CEU Quiz in Vol. 24(4) of the Strength and Conditioning Journal
**CSCS and NSCA-CPT CEU Quiz Answer Form**

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Instructions: Fill in the circle that represents your selection of the best answer for each of the previous questions. To receive 0.5 CEUs, you must (1) answer 70% of the questions correctly, (2) complete the form below (a photocopy is acceptable), (3) include a $15 (U.S. funds) payment to the NSCA Certification Commission, and (4) mail by December 1, 2002, to:

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