Session 512: Glute Training: From Science to Application

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Couse Description: In this evidence-based workshop, Len will present the latest research on optimal systems for training the glutes. Mindy and Tricia will provide inspiring and practical exercises and progressions to integrate into your glute training programs. Whether you are a group fitness instructor or a personal trainer, this session will give you a systematized approach for creating maximal muscle activation. Get ready to combine theory and practical application like never before?

Theory Part I

I. Training for function

A. The evolution of exercise
B. Function with the lower body
C. Isolation to integration
D. Spinal stabilization: precedes movement by the extremities
E. Deep abdominal wall activation: 'Hollowing or Bracing'
F. Overall goal: keep the spine from 'buckling' or 'slipping'
G. Sufficient stability: balance between stability and mobility
H. 3 systems.1) Non-contractile tissues, 2) Contractile muscles, 3) Neural control centers

II. Let's talk Squats

A. >230,000 articles on squat
B. 'Checkered' history of the squat with the most common myth: Never go below parallel (originated 60+ years ago)

   1. Original paper: Full deep back squat had a 'debilitative effect on the ligament structures of the knee.' To combat this, the researchers recommended that exercisers squat to parallel and no further. Klein, K. et al. The deep squat exercise as utilized in weight training for athletes and its effects on the ligaments of the knee. Journal of Physical Medicine and Rehabilitation. 15(1): 6-11, 1961.
   2. Sports Illustration magazine feature
   3. American Medical Association (AMA) position stance on squat
   4. 'Lifting' community split

C. Research challenges 1961 publication: "The Biomechanics of Squat Depth'

   1. Point, counter point publication in 2012
   2. Final implication: Consider what is functional for each individual, and proceed progressively

From Theory to Practice

III. Mindy: How to teach the perfect squat

IV. Tricia: All about lunges

V. Mindy: Adding jumps to your program

VI. Tricia: Bridging for the glutes

VII. Len: Answers to key questions about lower body training

A. Question 1) Do I need to train for hours to attain a firm buttocks and shapely legs? Answer: No, effective training involves choice of exercises, intensity of training, sequence of exercises, proper exercise technique and sufficient rest between sets and workouts.

B. Question 2) If I stop exercising, will my muscles turn into fat? Answer: No, muscle and fat are two different types of tissue in the human body. People who stop exercising tend to burn fewer calories, and thus start to store more fat. Simultaneously, with less exercise, muscles will start to shrink, a process called atrophy.

C. Question 3) Are squats bad for the knees? Answer: No, squatting is a foundation exercise that is a component in everyday life such as when standing up and ascending or descending stairs. The squat strengthens the muscles in the lower limb and improves the ability to counteract a medial or lateral displacement of the knee.

D. Question 4) Do you burn calories doing thigh and buttocks exercises? Answer: Yes, a big component of calories burning is the actual amount of muscle mass activated continuously during the exercise. Secondly, the energy cost of lower body exercise raises linearly with intensity, so always challenge yourself as you do your lower body exercises for optimal calorie burning.

E. Question 5) Is it O.K. for the knees to go past the toes when doing a squat? Answer: Yes, although restricting forward movement of the knees may minimize stress on the knees, it is likely that forces are inappropriately transferred to the hips and low-back region.

VIII. What is the BEST scientific training method for the lower body? Periodization

A. Systematic changes to an exercise program will consistently lead to the greatest results: Vary each of the following factors:
   1. Exercises
   2. Sets
   3. Tempo
   4. Type of contraction
   5. Resistance
   6. Position and plane
   7. Repetitions

B. Maximal muscle activation periodization strategies: Vary each of the following factors:
   1. Intensity
   2. Stabilization
   3. Complexity
   4. Directions of movement

5. Unilateral and bilateral movements
6. Explosiveness
7. Combinations

From Theory to Practice

IX. Mindy: Brazilian lunges with variations

X. Tricia: Bridge variations

XI. Mindy: Intensity quad pull in

XII: Tricia: Single leg deadlift

XIII: More lower body training ideas from Mindy and Tricia

XIV. Your Questions: Our Answers

Thank you for coming to this session!