



PREVENTING AND MANAGING CLIENT INJURIES

This talk, *PREVENTING AND MANAGING CLIENT INJURIES*, was designed to further educate trainers on proper biomechanics of the joints and implementing that knowledge into designing a safe, yet effective, exercise program. We will discuss the pros and cons (risk to benefits) for doing certain exercises that are known to be potentially “dangerous”. The trainer will learn how to be an extension of the health care provider and achieve maximum results while decreasing injury risk.

GENERAL CONSIDERATIONS OF INJURY PREVENTION RELATED TO STRENGTH & CONDITIONING

- I. Overview of the entire Lecture Series
- II. Biomechanics of Resistance Training Basics
 - I. Alternating Pattern of Joint Mobility and Stability
 - II. Moment Arms, Force Angles, Resistive Forces and Lever Systems
 - III. Poor mechanics and exercises that can lead to degeneration and injury
 - IV. Open Chain vs. Closed Chain exercises- Pros and Cons of each
- III. Repetitive Injury cycle and how it causes over-use injuries
- IV. Muscular Imbalances
- V. Postural Syndromes that lead to injury
- VI. Computer Athlete- Ergonomics at the workstation
- VII. Stretching Techniques
 - a. Self Stretches
 - b. Active Isolated Stretching
 - c. PNF Stretches
 - d. Foam Roller Self Myofascial Release
- VIII. Warning signs and causes for immediate referral to a physician.
- IX. First aid in the gym.
- X. Utilize proper technique to eliminate injury.
- XI. How to train with a doctor’s prescription and progress from post rehab to performance.

TRAINING THE BACK FOR PERFORMANCE AND INJURY PREVENTION

- I. Anatomy of the spine. Review muscles of the spine that should be trained and why.
- II. Biomechanics of the spine. How joints, disks, vertebrae, etc. are affected during exercise.
- III. Abdominal Bracing, Neutral Spine and Hip Hinge Mechanics
- IV. The Muscular Corset of the Lumbar Spine- CORE
- V. Lower Cross Syndrome-Causes and postural changes
 - I. Flexibility and strengthening for Upper Cross Syndrome.
- VI. Common diagnosis' unique to the spine that trainers will see at the gym.
- VII. Potentially Dangerous Exercises
- VIII. Analyzing the Squat- Low Back Considerations
- IX. Screening the Core- Corrective Solutions will be given for the uninjured client
- X. Sport specific back strengthening exercises
- XI. How to strengthen the muscles to increase performance and decrease injury.
- XII. How to design an effective sports performance program.

TRAINING CONSIDERATION OF THE SHOULDER GIRDLE

- I. Anatomy of the Shoulder Girdle
- II. Biomechanics of the Shoulder
 - I. Three levels of stability
 - II. Scapular Stability
 - III. Gleno-humeral rhythm
 - IV. Force Couples of the Shoulder
 - V. Kinetic Chain Considerations
- III. Upper Cross Syndrome-Causes and postural changes
 - I. Flexibility and strengthening for Lower Cross Syndrome.
- IV. Potentially Dangerous Exercises
 - V. Common diagnosis' unique to the shoulder that trainers will see at the gym.
- VI. Screening the Shoulder- Corrective Solutions will be given for the uninjured client
- VII. Stabilizing the shoulder through strength training

TRAINING CONSIDERATIONS FOR THE LOWER EXTREMITY

- I. Anatomy of the Lower Extremity. Review muscles of the legs that should be trained and why.
- II. Biomechanics of the Hip, Knee and Ankle/Foot.
- III. Common diagnosis' unique to the Lower Extremity that trainers will see at the gym.
- IV. Potentially Dangerous Exercises
- V. Analyzing the Squat- Lower Extremity Considerations
- VI. Screening the Lower Extremity- Corrective solutions will be given for the uninjured client
- VII. Sport specific strengthening exercises
- VIII. How to strengthen the muscles to increase performance and decrease injury.
- IX. How to design an effective sports performance program.

