TECHNICAL ASPECTS OF THE HIGH JUMP

1. The High Jump is one continuous RHYTHMIC motion.
   A. The High Jump Approach
      i. Uniqueness in the Approach
         a. Only Approach with a curve for a specific reason
      ii. Problems in the Approach
         RUNNING MECHANICS
         a. Start of the Approach must be consistent
         b. Purpose of the Straight portion is to generate horizontal velocity
         c. Drifting out to set up the curve
         d. Transition into the curve (Watch for Post Pattern)
         e. Running in the Curve is different than the Straight (More like a Hurdler)
         f. Getting the feet on the ground in the last 3 steps (Decrease flight time)
         g. Getting the Arms into the Jump (Vlasic’s Set-Up)
         h. Different styles of Penultimate Step (Still must be active)
            i. Stepping Down the Bar (Cueing the Shoulders thur Curve & Takeoff)
            j. Takeoff Position
      iii. Purpose of the Approach
           a. To allow the jumper to generate as much vertical velocity as possible
           b. Establishing the Approach
           c. Determining the Curve Width
           d. Drawing out the Curve
   B. Takeoff Position
      i. Arms and Drive Leg in the Takeoff
         a. Two-thirds of the Height Jumped is the height of COM at Takeoff
            This is based on the Position of the Arms & Drive leg at Takeoff
   C. Flight and Position over the Bar
      i. Parabolic Curve
         a. The depth of the Curve is based largely on Horizontal Speed
         b. The height of the curve is the product solely of vertical velocity
         c. The Drive Leg is Held and Takeoff Leg brought to it
         d. Shoulders Down, Hips Up
         e. How to clear the feet

PHYSICAL ASPECTS OF THE HIGH JUMP

2. Strength Training (Training CNS to Recruit Muscle Cells)
   A. Rate of Force Development
      a. When force application is .30 or Less, RFD is more important than
         Maximum Strength
      b. Takeoff time in the HJ is .17-.19. Maximum Force is developed in .44
      c. How to Develop RFD (3x3 @ 90% 5 min bet sets 4 times a week)
         Maintenance 2
      d. Maximally fast bursts of muscle action against high loads
i. Relative Strength Levels
   a. Back Squat & Clean 1RM added together divided by Body Weight
   b. Males should be 1.75-2.50 on BS & 1.20-1.50 Clean (Steffan Holm)
      Females should be 1.25-1.65 BS & .80-1.10 Clean
   c. The goal is to get strength per pound of body weight as high as possible

B. Golgi Tendon (What it does)
   i. Training Methods for Improving the Myotatic Stretch-Reflex Mechanism
      a. Rebound Jumps
      b. Box Heights (Speed X Force = Power)
      c. Sets, Reps and Rest for Rebound Jumps
      d. Depth Jumping (ONLY FOR EXPERIENCE ATHLETE-High BS Str.)
      e. Once every 10-14 Days only when the athlete is Rested
      f. Height 6-10'; 3-5 Reps per session with 5-10 min bet Reps

C. Using Strength Training to Teach the CNS to recruit muscle cells

WHAT THE TECHNICAL AND PHYSICAL ASPECTS OF THE HIGH JUMP TELL US ABOUT TRAINING

3. Objective is the have Males Jump 15-18” Over Their Head and Females to Jump 4-6” Over Their Head
   A. The High Jump is 90% Approach
      i. Perfecting the Approach
   B. Converting Horizontal Speed into Vertical Velocity
      i. Increasing Vertical Ground Reaction Forces
   C. Strength Training for Improving Rate of Force Development
      i. Maximizing the CNS Recruitment of Muscle Cells

STRUGGLE AND EFFORT-Athlete must understand these are the two requirements to achieve athletic success.