BARBELL and KETTLEBELL LIFTING TECHNIQUE
Master’s Degree in Strength & Conditioning
Certified Athletic Trainer
Certified Strength & Conditioning Coach
Certified Personal Trainer
USA Weightlifting Club Coach
Where I work

- Next Level Elite Training Center
- Athletes Equation
Importance to The Athletic Trainer

- Your Athletes are using them
- You can instruct Technique
- You can implement for Rehab
What is a Barbell

• Old Reliable
• Iron bar with Iron weights at the ends
• Standard bar
  • 45 lbs
  • Different bar thickness & weights exist
  • Can get bars as light as 10 lbs. or lighter.
What is a Kettlebell

• “Cannon Ball with a Handle”
• Sizes can range from 5 lbs up to 106 lbs
• Usual intervals are 8 lbs or 4 kgs
• Can find them know in light weights and smaller intervals
Why Integrate Kettlebells

• Have great influence on the Glutes
• Can dynamically stretch the Hip Flexors
• Promote Back extensor endurance
• Encourages abdominal bracing for spinal stability
• They are fun!!!
• And if This guy can use them anyone can!
What Size Kettlebell to Use

- Average Woman
  - Start with 18 lbs
- Strong Woman
  - Start with 26 lbs
- Average Man
  - Start with 35 lbs
- Strong Man
  - Start with 44 lbs
- Freak of Nature
  - Start with 53 lbs
Break into Groups

- Sizes of 3 to 5 people
- Pair up by strength level
- Spread out
SQUAT TECHNIQUE

EATA Workshop 2010 Boston
Why Squat?

- Engages the “core”
  - Musculature of the low back, upper back, the abs, lateral trunk, costals & shoulders all involved
  - Fuses the Pelvis and Spine
- Done correctly the forces at the hip and knee are balanced the way the bodies biomechanics dictate
  - Partial vs. past parallel
- CNS is active and coordinated
  - They require a conscious effort for adequate recruitment of the musculature needed to perform properly
- Primary focus is on the bodies Power center
  - The squat is a hip exercise above all
Why Squat

- **Skeletal Loading**
  - Increases bone density and strength
- **Muscular growth stimulated**
  - Large muscle multi-joint exercises result in release of HGH and Testosterone
  - This aids in overall muscular development
- **Stress on the connective tissue**
  - Greater joint stability because of ligament and tendon strength increases
- **Teaches good Mechanics for other Lifts and skills**
  - i.e. Olympic lifts, jumping, athletic stance, plyometrics, etc.
- **Psychological Toughness**
- **Trains the legs!!**
Review of Basic Technique

- Four segments
  - Preparation
    - Getting ready to lower the barbell
      - Tightening the torso
      - Lifting chest
      - Controlling breathing
      - Assume proper stance
  - Descent
    - Lowering the barbell
      - Initiated with the hips
      - Weight is on rear of the foot
      - Chest is maintained up
      - Breath is held
  - The Bottom (AKA “the Hole”)
  - Ascent
    - Raising the barbell
      - Hip drive
      - Chest is maintained up
      - Breath is continued to be held
One can perform many different styles of squats in unique ways with Kettlebells

- Over head squats (both one handed and two)
- Front squats
- Goblet Squats
- Single Leg Squats
- Etc.

Great for working on functional stability and strength!!
Why Deadlift?

• Builds back strength better than any other exercise
• Forces the body to maintain a rigid torso as force is developed with the legs
• It is a simple movement
• Trains grip strength
• It is a great leg strengthening exercise when injury prevents squatting
• Large CNS activation
• Prepares the body for other lifts
  • i.e. the O-lifts
• They are hard!! And easy to do!!
Review of Basic Technique

- Two major styles of pulling a barbell from the floor
  - Conventional – feet stance is under the hips and grip is outside the knees
  - Sumo – Feet stance is very wide and the grip is inside the knees
- There is no way to cheat a deadlift
- Leg strength is seldom the limiting factor in the deadlift for athletes
- A strong grip is important
  - Different grips, straps and/or chalk can be used as grip aids
Correct Pulling Position

- Bar is touching shins with feet flat on the floor
  - Stance should have feet 10-15” apart
- Grip is outside the knees
  - This is for conventional grip and stance
- Back is in good lumbar and thoracic extension
  - Keeping the chest up
- The spine of the scapula is directly over the bar
  - Places the shoulders in front of the bar
- The elbows are straight
- Eyes should be focused on a position 6-10 feet away
  - Keeping the cervical spine in a neutral position
- Breath is held during the deadlift and the belly button should be pulled tight to the spine
Angles to Consider

- Three angles to focus on
  - Knee angle – formed by the tibia and femur
  - Hip angle – formed by the femur and the torso
  - Back angle – formed by the torso and the ground
The Basic Movement

• Lift Off
  • Push the floor away
  • Knee angle should be first to change
  • Keep the hips and shoulders rising together
    • This will cause the hip angle not to change until the bar clears the knees

• Knee Clearance
  • Transition from lift off to lock out
  • Once clear the hip angle should start to increase
    • Hip extensors take over for the quads as the prime mover of the weight
    • Back is maintained in a neutral spine

• Lock out
  • Occurs when the Hip and knee is fully extended
Lowering

- Lowering of the barbell is the direct opposite of the lift off
- It begins with pushing the hips back and into flexion keeping the torso rigid
- Once the bar clears the knees they may bend to return the barbell to the floor.
- Each rep returns the barbell to the floor
Enter the Kettlebell

• Great for instructing or re-educating pulling weight from the floor.
• Can use one or two kettlebells
• Emphasizes pulling mechanics that can then be utilized to learn O-lifts, barbell deadlifts and etc.
Kettlebell Sumo Deadlift

• Keep arms straight
  • Lift with legs
• Keep your knees lined up with your feet
• Your weight should be on your heels
• Keep your spine in neutral and maintain that neutral position through out the lift
• Keep eyes focused straight ahead.
• Focus on lifting the weight by moving hips and shoulders up together then stand up.
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EXPLOSIVE EXERCISE TECHNIQUE
Examples of Explosive Exercises

• Olympic Style Weightlifting
  • Cleans
  • Snatches
  • Variations of the Classic Lifts
    • From the Hang position
• Plyometrics with implements
  • Jump Training
  • Medicine Ball tosses
  • Weight throws
  • etc
Review of Basic Technique

• Brief overview of Explosive Lifts and Jump Training
  • “An Athlete can’t finish right if the start is wrong!”
    • Without perfection of a solid base the lift will be flawed
      • All Body levers should be “TIGHT”
      • Feet are hip width
      • Hips are above the knees
      • Low back is in the “set” position
        • Flat or slightly curved
      • Scapulas are retracted towards the spine
      • Chest is inflated and abdomen is tight
      • Head is up and eyes are focused ahead or slightly angled up
Review of Basic Technique

• Insert a barbell to that position this way
  • Barbell is over the mid foot
  • Hands are hook griping the bar
    • Snatch grip – hands are wide
    • Clean grip – hands are outside the knees
  • Hips are above the knees
  • Shoulders are out over the bar

*This holds true for O-lifts from Hang and Classic position*
Review of Basic Technique
Enter the Kettlebell

- Cleans, Snatches and Swings oh my!
  - Can be easier to teach than the classics
  - Very effective conditioning tools
  - Very Functional for Athletes
The Swing

- Maintain Neutral spine!
- Keep your head up
- Hinge at the hips
  - Sit back at hips rather than down
- Extend your hips and knees fully
  - Keep your arms relaxed and allow the momentum of the hips to cause the kettlebell to move
- Hips and knees must get to full extension
  - NOT to be confused with back hyperextension
- Do Not allow the Kettlebell to go above parallel to the ground
  - If the kettlebell wants to go higher you need to get a heavier one
The Clean

• All rules of the Swing apply but
• Allow the kettlebell to stay close to the body
  • “the Kettlebell and the elbow must be one”
• Generate upward momentum of the kettlebell then “rack” it.
  • Don’t dip down to catch the weight or curl the weight up.
• Keep the arms loose and relaxed
• The kettlebell must stay close to the body
The Snatch

• All the points of the swing and clean apply except
• “rack” the kettlebell overhead with the elbow fully extended.
• Catch the kettlebell in at the top softly
  • Don’t allow it to bang into your forearm or jarring the elbow and shoulder down
• “Tame the Arc”
  • Control the kettlebell don’t let it control you.
Потянув осуществлять техника
PULLING
TECHNIQUE
Common Pulling Exercise

- Bent Over Row
  - Horizontal
- Upright row/High Pull
  - Vertical
    - Down to up
- Pull ups
  - Vertical
    - Up to down
Kettlebells allow for a multitude of dynamic pulling movements

They can create new and interesting movements

Examples

- Single leg Bent Over Rows
- One Arm High Pulls
- Single Leg RDL to Row
- Push Up to Row
- etc.
PRESSING
TECHNIQUE
Common Pressing Exercises

- Bench Press
  - Horizontal
- Push Up
  - Horizontal
- Standard Press (AKA Military Press)
  - Vertical
- Push Press & variations
  - Vertical
Enter the Kettlebell

• Why A Kettlebell and not a Dumbbell?
  • Different COG
  • COG can change
  • Looks way cooler!!

• Can be performed strict and explosive
  • i.e. push press or “military” press

• Allows for integration of pressing movements with other movements
  • i.e. clean and press, squat and press, etc
QUESTIONS?
Thank You!