











KettleBell HIIT Training

Course Objectives

- Define High Intensity Interval Training
- Discuss Plyometric training
- Overview of KettleBell kinesiology and biomechanics
- Learn how to correctly hold a Kettleweight
- Review Kettleweight safety
- Learn a progressive HIIT program

Plyometrics Defined

Plyometric exercise does not use ATP to create a contraction, but instead relies on the elastic response of the muscle spindles caused by rapid stretching. The following points further clarify plyometric exercise.

- 1. Exercises that enable a muscle to reach maximum strength in as short a time as possible
- 2. Classified as muscle actions that use the stretch-shortening cycle.
- 3. Muscles briefly store the tension developed by rapid stretching so that they posses a potential elastic energy
- 4. The myotatic stretch reflex responds to the rate at which a muscle is stretched
- 5. Amortization phase is extremely fast

Plyometric Exercise Definitions

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Exercise	Definition		
Jump	Take off and land on both feet simultaneously		
Bound	Alternate feet: Take off on one foot, land on other		
Нор	Take off and land on same foot		
Throw	Concentric acceleration of an object with the upper extremity		
Catch	Eccentric deceleration of an object with the upper extremity		

Source: ACE Small Group Training Manual

Plyometric Drill Classifications

Depth Jumps		
Hops and Bounds		
Multidirectional Jumps		
Multiple Linear Jumps		
Single Linear Jumps		
Jumps in Place		



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Moderate-intensity drills

Lower-intensity drills

Adapted from Chu, 1998

Kettleweight Unique Biomechanics

- Kettleweight critical feature: U-shaped handle
- COG Displacement
- More Complex Leverage System
- Fluctuating Resistance Arm
- Centrifugal Force
- Increased Rotational Inertia
- Curvilinear Motion
- Environmental Similarity

Kettleweight Specifics

- Grind
- Ballistic
- Curvilinear
- Rectilinear

Kettleweight Safety

- Space: the minimum space is the participant's height squared.
- Warm Up: Always warm up before the main body of the workout.
- Flexibility: Dynamic flexibility is recommended as part of a warm up, and Static stretching at the end of the workout.
- Breathing: Ensure all participants continuously breathe.
- Progression: Progress resistance and skills slowly and safely; Use the law of individual differences-allow each individual to progress at his/her own pace, regardless of others' progress.
- Footwear: Athletic shoes that favor lateral stability are recommended
- Supervision: Beginners need to be well supervised
- Teaching New Skills: light resistance when teaching new skills
- Hands: Hands may develop calluses. Chalk can be used

Training Guidelines

- Intensity: Vary intensity by changing the lever length, load, or speed of movement
- Tempo: All movement techniques should be mastered before speed is added. If working with the rhythm of the music:130-135BPM
- Weight load: Different weight loads may be necessary for each exercise
- Reps: 8-20
- Frequency: 1-2 times per week
- Rest: 15-60 seconds rest between sets

Program Design – Tri-Set Training

Duel-Set	Grind/Ballistic	Plyometric/Kickboxing
Training		

Practical Application

- Work at your own pace
- Modify as needed
- Choose easiest variation before progressing
- Wristbands as a learning tool
- Take breaks, dry hands/bell handle
- Focus on technique

General Warm up and Range of Motion Activities

- Shoulder Circles
- Squat and reach
- Front Lunge with Lateral Reach and Rotation
- Hip Extension to Hip Hinge
- Hip Circles to Side Lunge
- Plank up to push up to Dynamic Beast
- Quick Feet to Burpee
- High Knees to Butt Kicks

Specific Warm up with KettleBell

Goblet Squat

Shoulder press, bottoms up

Squat and press

Push-press

Halo

Ribbon

Hand-to-hand pass

Satellite

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Program Design

Tri-Set #	Ballistic	Plyometric
Set # 1.	Goblet Squat and Press	Leap Forward and Shuffle Back
Set # 2.	Clean and Press	Lateral Shuffle Jump Squat x 2
Set # 3.	Rear Lunge Figure-8 with High Pull	1-2 Jump-switch lunge
Set # 4.	Renegade Row	Kickboxing Jab- Jab/Cross/Knee/Kick
Set # 5.	Alt Single Arm Swing	Long Jump Forward jack back
Set #6.	Dead Lift	Jab/Cross/Jab/Front Knee/Back Kick
Set #7.	Curvilinear High-pull	Diagonal Leap 2-Runs Back
Set #8.	Alt Side Lunge and Swing	Kickboxing Speed Bag-jab