

## Designing and Implementing Circuit Training

## What's a Circuit

- A Collection of Exercises
- Circuits Are Scripted
- Circuits Have a Defined Purpose
- Circuits May Involve Stations ... or Not?

## Common General Circuit Modalities

- General Strength Exercises
- Medicine Ball Exercises
- Regional Weightlifting Exercises

## Circuit Design – Key Parameters

- Exercise Choices
- Exercise Sequence
- Work Times
- Rest Times
- Add Ins
- Ease of Administration

## Lactate Basics

- Lactate Shock
- Lactate Benefits - Endocrine Fitness
  - Hormonal Responses and Restoration
  - Hormonal Responses and Training Reception
- Lactate - Periodization
- Implications for Circuit Training
  - Lactate Production – Challenging Work
  - Maintaining Power Output

## Power Output

- Balancing Fatigue and Performance
- Maintaining Power Outputs
- Rest Needs
- Trial and Error and Workout Alterations

## Fitness and Restoration – A Blurry Line

- Glycolytic Work and Lactate
- Lactate and Growth Hormone Responses
- Power Output Maintenance – The Key Factor
- Resultant Philosophies
  - Short Workouts – Short Rests
  - Work : Rest Ratio Is Important and Might Need Adjustment
  - Circuit Duration Is a Key Factor
  - Exercises Must Be Simple and Gross to Produce the Lactate Needed

## Restoration Recipes

- Mild to Moderate Glycolytic Work and Lactate
- Volume Based Endocrine Stimulation
- Mild Eccentrics
- Training Diversity

## Advantages of Circuit Training

- Developing Aerobic/Anaerobic Fitness
- Developing Endocrine Fitness
- Accelerating Recovery
- Enhancing Glycogen Storage
- Driving Coordination Improvements and Activation
- Minimizing Repetitive Movements and Injury Risk
- Bad Weather and Space Options

## General Strength Circuits

- General Strength Exercises
- Types of General Strength Circuits
  - Calisthenics
  - Specialized Calisthenics
    - Abdominal/Spinal
    - Lower Leg Mobility and Conditioning
  - Stability Circuits

## General Strength Circuit Constructs

- Rotational Constructs
  - Better When Athletes are Untrained
  - Better In Restoration Situations
- Bunched Constructs
  - Better to Challenge Fitness at High Levels

## General Strength Exercise Examples



## Calisthenic Circuit Construction

- Exercises for all Body Parts – Rotational or Bunched
- Calisthenics and Specialized Calisthenics
- Gross, Simple Movements – Lots of Muscle Tissue
- 12-16 Total Sets of Work
- Mix Hard, Medium, and Easy Exercises
- Work Intervals of 15-30 seconds
- Work to Rest Ratio 2:1 or 1:1
- Total Circuit Duration is 10-12 minutes
- Multiple Circuits (or a Mix) Are a Possibility

## Scramble Circuit Construction

- Exercises for all Body Parts – Rotational or Bunched
- Use Calisthenics - Gross, Simple Movements – Lots of Muscle Tissue
- 12 Total Sets of Work
- Mix Hard, Medium, and Easy Exercises
- Work Intervals of 20 Seconds
- Complete Each Set with a 10 meter Sprint and Walkback / Coastout
- Work to Rest Ratio 1:2
- Total Circuit Duration Doesn't Exceed 12 minutes
- Followup Circuits are a Possibility

## Sample Callisthenic Circuits

### Taurus

Pushups  
Prisoner Squats  
V-Sits  
Back Hypers  
Pushups w/Clap  
Rocket Jumps  
Dips  
Cossack Extensions  
L-Overs  
Wrestler's Bridge  
Swimming  
Burpees

### Leo

Single Leg Squat (L-R)  
Stationary Lunges (L-R)  
Lunge Jumps (L-R)  
Incline Pushups  
Dips  
Decline Pushups  
Lateral Squats  
Prisoner Squats  
Rocket Jumps  
Kneeling Good Mornings  
Yogis (Front/Back)  
Alternate Pelvic Tilt Heel Slides  
V-Sits  
L-Overs  
Crunches  
Squat Lunge Walks

## Sample Specialized Callisthenic Circuits

### Pillar

V-Sits  
Back Hypers  
Side Ups (L-R)  
Leg Toss/Toe Touch/Hip Lifts  
Crunches  
Side Lifts  
Back Hypers w/Twist  
Crunches w/Twist  
L-Overs  
Russian Cossacks (L-R)  
Wrestler's Bridge  
Pelvic Tilt Isometric  
Pelvic Tilt Bicycle  
Pelvic Tilt Crunches

### Gemini

Single Leg Toe Raises (L-R)  
Squat Toe Raises  
Side Foot Toe Raises (L-R)  
Closed Everted Toe Squats  
Toe Lunge Walk (L-R)

## Stability Circuit Construction

- Use Specialty Exercises
- 10-12 Total Sets
- Mix Body Parts/Positions
- Work Intervals of 15-30 seconds
- Work to Rest Ratio 1:1:1 (L:R:Rest)
- Total Length 10-12 minutes
- Cautions about Overuse

## Sample Stability Circuit

### Cancer

Prone Elbowstand Leg Lifts (L-R)  
Supine Elbowstand Leg Lifts (L-R)  
Prone Handstand Leg Lifts (L-R)  
Supine Handstand Leg Lifts (L-R)  
Side Elbowstand Top Leg Lifts (L-R)  
Side Handstand Top Leg Lifts (L-R)  
Side Elbowstand Bottom Leg Lifts (L-R)  
Side Handstand Bottom Leg Lifts (L-R)  
Supine Elbowstand Hip Arch  
Supine Shoulder Bridge Hip Arch  
Low Reach Crunches  
Low Reach Crunches w/Twist

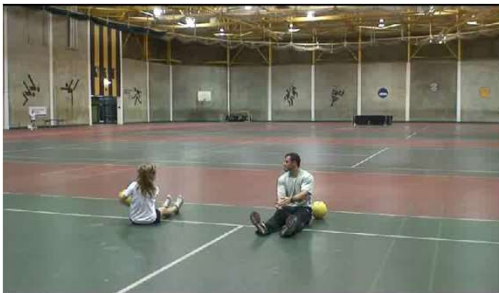
## Medicine Ball Circuits

- Purposes
  - Fitness Gains
  - Endocrine Fitness
  - Coordination, Strength, Mobility Improvements
  - Accelerated Recovery
  - Injury Buffer
  - Advanced Impact and Core Training

## Medicine Ball Circuits

- Advantages of the Medicine Ball
  - General Strength Type Benefits
  - Specific Core and Impact Acceptance Development
- Types of Medicine Ball Work
  - Calisthenics
  - Catch – Toss Work
- Circuits Should Contain a Mix of Each

## Medicine Ball Exercise Examples



## Medicine Ball Circuit Construction

- 10-15 Sets of Work
- Exercises for all Body Parts
- Mix Hard, Medium and Easy
- Mix Callisthenic and Catch-Toss Work
- Work Intervals of 20-40 seconds
- Work to Rest Ratio 2:1 or 1:1:1
- Total Length 10-12 Minutes
- Multiple Circuits and Repetition Prescriptions are a Possibility

## Medicine Ball Circuit Construction

- Recovery Enhancement
  - Exercises for all Body Parts
  - 10-15 Sets
  - Mix Hard/Easy and Callisthenic/Catch-Toss Work
  - Work Intervals of 20-30 seconds
  - Work to Rest Ratio 2:1 or 1:1:1
  - Repetitions (8-15) – A Better Option
  - Keep Power Output High
  - Multiple Circuits a Possibility

## Sample Medicine Ball Circuits

### Auriga

Standing Overhead Forward  
V-Sits  
Good Mornings  
Kneeling Shoulder (L-R)  
Seated Hip (L-R)  
Reach & Hike  
Rotation Exchange (CW-CCW)  
Medial Knee Toss (L-R)  
Lateral Knee Toss (L-R)  
Toe Toss  
Prone  
Seated Roll

### Bootes

Standing Shoulder (L-R)  
Back Toss  
Kneeling Good Morning  
Kneeling Overhead Forward  
Standing Hip (L-R)  
Medial Kicks (L-R)  
Lateral Kicks (L-R)  
Hurdle Reach (L-R)  
Leg Ad-Abs  
Kneeling Overhead Back Exchange  
Knee Squeezers  
Prone Overhead Back

## Bodybuilding Circuits

- Weight Training Circuits
- Featuring Regional Exercises
- Characteristics of Bodybuilding Exercise Circuits
  - Diverse Patterns of Movement - Mix of Flexions, Extensions, and Rotations
  - Exercises Use a Variety of Body Parts
  - Exercises Use Smaller Muscle Groups
  - Exercises May Be Simple or Complex

## Bodybuilding Exercise Examples



## Bodybuilding Circuit Construction

- Exercises for all Body Parts
- Mix Flexions, Extensions, Rotations
- Exercise Order Should Enhance Difficulty
- 24 Total Sets
- 10 Repetitions
- Loads - Feel Number 10
- Recoveries of 60-90 seconds

## Weight Training Bodybuilding Circuits

- Purposes
  - Fitness Gains
  - Coordination and Strength Improvements
  - Accelerated Recovery and Endocrine Fitness
  - Glycogen Depression and Compensation
  - Program Cleanup – Allowing Higher Intensities on Other Days

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