## FIVE FOR LIFE

# circuit training



SECOND EDITION



## Five for Life Program CIRCUIT TRAINING

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> Second Edition Revised March 2012

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Focused Fitness, LLC First edition published 2004, Second edition published March 2012

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Printed in the United States of America

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CONCERNENCE Circuit

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## circuit training

## **Circuit Training Introduction**

Circuit training was first introduced as an intentional form of exercise in 1953 by R.E. Morgan and G.T. Anderson at the University of Leeds in England. Morgan and Anderson's original circuits had 9-12 stations, focusing primarily on aerobic endurance. Circuit training has since evolved into a complex and dynamic activity that uses a variety of aerobic, anaerobic, resistance and flexibility exercises to improve cardiorespiratory endurance, muscular strength, muscular endurance, flexibility and overall body composition.

**Circuit training** is an organized exercise training model that employs a wide variety of functional, locomotor, and motor movements into one traditionally, fast-paced workout. It is a versatile tool that gives participants the freedom to combine aerobic, anaerobic, resistance, and flexibility exercises to meet individual or group needs.

Circuit training can improve the components of fitness as well as strengthen the aerobic and anaerobic systems. Through bouts of exercise and low intensity (or rest) intervals, people are able to exercise for longer periods of time and improve fitness levels. This combination of exercise and low intensity/ rest is an integral concept within circuit training known as the **exercise-to-rest ratio**. Circuit training allows people to exercise for longer periods of time with shorter rest breaks due to two factors:

- (1) a cardiorespiratory system that transports oxygen and carbon dioxide more efficiently throughout the body, and
- (2) the muscles' ability to store adequate amounts of energy.

The popularity of circuit training is evident throughout gyms and health clubs across the United States. People choose to exercise using circuit training programs because of the enjoyment of group exercise, the ability to maintain individual intensity levels, and the variety in exercise selection. Above all, many students and adults claim that circuit training is one of the most enjoyable and fun modes of exercise they have ever done.



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## **Circuit Training Advantages and Benefits**

Circuit training is one of the most popular modes of exercise; it offers variety, promotes social interactions, and allows participants to exercise at individual intensity levels. Due to these factors, people are exercising more in circuit training programs and are experiencing positive health and fitness benefits from sustained participation. With this in mind, teachers can use circuit training as a tool to deliver intentional fitness and help students become more active. Here are some reasons why circuit training works:

- Circuit training is fun, motivating and different. It can incorporate:
  - Exercise variety
  - Music
  - Sports skills
  - An obstacle course
  - ▶ Themes: Holidays, Reality TV, and Game show
- Circuit training can be individualized:
  - It provides opportunities for differentiated instruction to meet students at their ability level.
  - It allows students to exercise at their intensity level while exercising with others.
- Circuit training does not require equipment.
- Circuit training can be done with a large or small class size.
- Circuit training allows instructors to assess and work individually with students.
- Circuit training incorporates the exercise of several parts of the body within one comprehensive workout.

- Circuit training allows partner and small group dynamics:
  - Advantages of exercising with partners or in small groups:
    - Teachers can pair students who are proficient in exercise movements and techniques with students who lack the skills to safely and adequately perform specific exercises. Pairing students of varying ability levels promotes social/emotional interactions and can help students improve exercise form, technique and knowledge.
    - Students feel that it is more enjoyable to exercise with their peers.
- Circuit Training is challenging
  - Students can exercise and see personal improvements that are relevant to them.
  - Students can wear pedometers to track their steps and, at the conclusion of the circuit, determine who achieved the most steps.
  - Students can work in small groups or teams to compete during circuits.
- Circuit training can be customized based on program variables or for desired student outcomes with:
  - Body weight exercises
  - Fitness components
  - Cognitive fitness activities
  - Fitness measurements
  - Sports skills
  - Fun and creative circuits

Above all, students enjoy circuit training because it's fun and yields fitness results. The following sections explain the implementation, management, and design of purposeful circuits.



## circuit training

## **Detailed Instruction of Exercises (continued)**

The in-depth descriptions are a resource for teachers to ensure students know and use proper techniques for each exercise. Special safety considerations for each piece of equipment are also provided in this section.

## Dumbells

Dumbbells are safe and fundamental tools used to teach resistance exercises.

### Safety Considerations:

- Carry dumbbells at the sides of the body
- Provide 5 feet between students
- · A potential injury may occur if dumbbells are dropped

#### **Dumbbell Front Squat**

#### **Proper Technique:**

- 1. Feet shoulder width apart, toes pointed forward
- 2. Hold dumbbells at shoulder level
- 3. Back flat, chest high
- 4. Feet flat on floor with knees directly over feet
- 5. Proper squat depth is thighs parallel to the floor with knee joint at a 90-degree angle
- 6. Return to starting position using proper form
- 7. Inhale on downward movement, exhale on upward movement

## **Components of Fitness Trained:** Muscular strength and muscular endurance





#### Teaching Cues:

- Feet shoulder width apart
- Back flat
- Chest high
- · Feet flat on the floor
- · Thighs parallel to the floor

#### Vocabulary/Muscles Trained:

- Gluteals
- Quadriceps
- Hamstrings





## **Medicine Ball**

Medicine balls are used to develop explosive power, increase core strength and can be used to mimic many sport skills.

### **Safety Considerations:**

- Provide at least 12 feet of space
- A potential injury may occur if the medicine ball is dropped
- · Clear all obstructions before throwing the medicine ball

#### Medicine Ball Over/Under

#### **Proper Technique:**

- 1. Stand back-to-back two feet from partner
- 2. Feet shoulder width apart
- Person with ball raises it above his/her head and hands it to partner
- 4. The partner brings the ball forward and passes it back between legs
- 5. Reverse direction on signal
- 6. Steady breathing throughout exercise

## **Components of Fitness Trained:** Muscular strength and muscular endurance



#### **Teaching Cues:**

- Ready position
- Stand two feet from partner
- Partner must be ready to receive the ball before it is passed

#### Vocabulary/Muscles Trained:

- Deltoids
- Abdominals
- Quadriceps
- · Gluteals
- Hamstrings



## FITNESS FRENZY

#### **Objective(s):**

- 1. Perform exercises at the appropriate Intensity Levels.
- 2. Correctly demonstrate all exercise movements.
- 3. Name benefits of stretching.

#### Equipment:

- Cones
- **Circuit Cards**

#### Key Safety & Management Tip(s):

Monitor the exercise-to-rest ratio 1. closely, this is a challenging circuit.

Station/ Exercise	Fitness Component(s)
1. Burpees	Combination
2. Jumping Jacks	CRE
3. Rocket Blasters	Combination
4. Pelican Stretch	Flexibility
5. Squat Thrusts	Combination
<ol> <li>Side-to-side Skier Jumps</li> </ol>	CRE
7. Mountain Climbers	Combination
8. Standing Leg Swings	Flexibility

#### **Student Explanation:**

Fitness Frenzy is a circuit that contains moderate to vigorous activities. Burpees, rocket blasters, squat thrusts, and mountain climbers should be performed at Intensity Level 4 or 5. Jumping jacks and side-to-side skier jumps should be performed at Intensity Level 3. The flexibility exercises have been inserted into the circuit to provide a short rest between high intensity, combination exercises. Remember to perform flexibility exercises at Intensity Level 2. We can improve flexibility by stretching. Being flexibility helps us prevent injuries, reduce stress and decrease muscle soreness. The movements should be slow and controlled. Overall, this is a challenging circuit with several high intensity exercises; try your best and apply appropriate modifications if necessary.

#### Direction(s):

- 1. Lead students through a warm-up so they are prepared to complete high intensity activities.
- 2. Explain the circuit using the student explanation above.
- 3. Review proper form for all exercises.
- 4. Rotate students every 20-30 seconds.

#### Assessment(s):

1. While exercising at the flexibility stations, have students discuss some of the benefits of stretching.

Modification(s): Please refer to page 5 for exercise modifications.



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**BODY WEIGHT CIRCUITS** 

### FIGURE-IT-OUT

#### Objective(s):

- 1. Perform exercises at appropriate Intensity Levels.
- Perform various exercises for each component of fitness and identify the component of fitness.

#### Equipment:

Completely at the discretion of the teacher. Possible equipment could be:

- Cones
- Circuit Training Cards
- Weight bars
- Stretch bands
- Medicine balls

#### Key Safety & Management Tip(s):

- 1. This is a cognitive circuit that should be done once students understand the basic elements of circuit training, components of fitness and Intensity Levels.
- Equipment demands are at the discretion of the teacher. For instance, place stretch bands or weight bars at the muscular strength and muscular endurance stations so the students have more choices in exercises they could perform.

#### **Student Explanation:**

Figure-It-Out is a circuit training activity that will test your knowledge and ability to perform exercises at appropriate Intensity Levels. There are five stations in this circuit; each clearly marked with a component of fitness (Cardiorespiratory Endurance, Muscular Strength, Muscular Endurance, Flexibility and Body Composition). Your task at each station is to perform an exercise at an appropriate Intensity Level reflective of the specific component of fitness. For instance, if you arrive at the cardiorespiratory endurance station, you might perform jumping jacks at Intensity Level 3 or 4 to indicate your understanding that cardiorespiratory endurance exercises should be performed at a higher Intensity Level to be sustained for long periods. We will rotate through the circuit three times. Use your knowledge of body weight and functional exercises and perform different exercises the second and third time through.

The body composition station will be completed by performing high intensity, anaerobic movements such as mountain climbers, squat jumps, jumping lunges, or rocket blasters. These movements work the entire body, thus representing body composition and should be performed at a high Intensity Level.

#### Direction(s):

- 1. Explain the circuit objectives using the student explanation above.
- 2. Clearly label all five stations, each with one component of fitness.
- 3. Remind students that they can select any exercise that reflects the correct component of fitness and to perform exercises at the correct Intensity Level.
- 4. Rotate students every 30 seconds.

#### Assessment(s):

1. As students complete the circuit, evaluate their exercise selection and Intensity.





- 4. Muscular Endurance
- 5. Body Composition
- \* Stations do not have to be in this order

#### **PUSH THE FLOOR** (MUSCULAR STRENGTH/MUSCULAR ENDURANCE)

#### Objective(s):

- 1. Correctly demonstrate the pushup fitness measurement protocol.
- 2. Reflect and analyze push-up scores.
- Demonstrate cooperation skills at the push-up and basketball stations.

#### Equipment:

- Circuit Training Cards
- Cones
- Step Boxes
- Basketballs

#### Key Safety & Management Tip(s):

 Students must understand the protocols to correctly administer a push-up test. Review protocols prior to starting the circuit.

Station/ Exercise	Fitness Component(s)
1. Progressive Knock Out	Sports Skill
2. Push-ups	MS/ME
3. Step Box Skier	CRE
4. Basketball Keep Away	Sports Skill
5. Push-ups	MS/ME
6. Step Box Step-ups	CRE

#### Student Explanation:

Push-ups are an indicator of muscular strength and muscular endurance and can be one of the primary fitness measurements evaluated throughout the school year. To assess our push-up scores to see if we have improved since the last fitness measurement.

There are two identical push-up stations in this circuit. This allows one partner to perform the test and the other to administer the test, enforcing proper protocol. You will switch roles at the other push-up station. You will also notice the cardiorespiratory endurance exercises and basketball stations. Please perform the cardiorespiratory endurance exercises at Intensity Level 3. Have fun and cooperate with your peers at the basketball stations.

#### Direction(s):

- 1. Lead students through a warm-up so they are prepared to complete aerobic activities and push-up tests. Within that warm-up, include dynamic stretching movements that engage the upper body and abdominal muscles.
- 2. Inform students that they will work in partners at the push-up stations and remind them that they should exercise at Intensity Level 3 at the cardiorespiratory endurance stations.
- 3. If students finish their push-up test, they should keep exercising using the next easiest movement so they can remain active for the duration of that station.
- 4. Remind students that the basketball stations are for fun but they need to cooperate and demonstrate sportsmanship skills with their classmates.

#### Assessment(s):

- 1. Ask students to reflect on their previous push-up measurement and their progress.
- 2. Have students share strategies to improve their push-up scores.

#### **Modification(s):** Please refer to page 5 for exercise modifications.







## OFF THE WALL (VOLLEYBALL SKILLS)

#### Objective(s):

- 1. Demonstrate basic skills of volleyball.
- 2. Self-assess exercises Intensity.
- 3. Explain how the components of fitness apply to volleyball.

#### Equipment:

- Circuit Training Cards
- Cones
- Volleyballs
- Stretch Bands
- Medicine Balls
- Agility Rings
- Step Boxes
- Stability Balls
- Mats
- Dumbbells
- Weight Bars

#### Key Safety & Management Tip(s):

- 1. Complete a warm-up prior to the circuit.
- 2. Use circuit training cards for station identification, instructional content, and quick reminders for proper form and technique.
- 3. Create volleyball skills cards.
- 4. Make sure students have plenty of room to use equipment.
- 5. Adjust the number of stations to accommodate teaching space.

#### **Student Explanation:**

This circuit combines volleyball skills with fitness exercises and should be performed at Intensity Level 3 or higher. Stations will either elevate your heart rate to improve cardiorespiratory endurance or build muscular strength and endurance in the muscle groups used in volleyball. Other stations will give you the opportunity to practice basic volleyball skills.

#### Direction(s):

- 1. Introduce circuit using the student explanation above.
- 2. Clarify circuit rotation (clockwise, counterclockwise).
- 3. Explain and demonstrate the stations.
- 4. Time 30-50 seconds and then rotate students.
- 5. Complete circuit more than once.

#### Assessment(s):

- 1. Self-assess their Intensity Level at various points throughout the circuit.
- 2. Explain what Components of Fitness will benefit volleyball players the most and why.

#### **Modification(s):** Please refer to page 5 for exercise modifications.

Station/Exercise	Fitness Component(s)			
1. Forearm Pass to self or partner				
2. Step Box Knee-Ups	CRE			
3. Dumbbell Front Squat	MS/ME			
4. Stretch Band Shoulder Press	MS/ME			
5. Volleyball serve to wall				
6. Step Box Lateral Hop	CRE			
7. Stretch Band Seated Row	MS/ME			
8. Medicine Ball Pumpkin Smashers	MS/ME			
9. Volleyball Spikes to wall				
10. Agility Rings Straddle Jumps	CRE			
11. Weight Bar Bicep Curls	MS/ME			
12. Stability Ball Wall Squat	MS/ME			
13. Set Pass to self or partner				
14. Step Box Jumps	CRE			
15. Medicine Ball Wall Chest Pass	MS/ME			
16. Stability Ball Crunch	MS/ME			





#### Objective(s):

- Complete non-traditional tasks and activities to improve gross and fine motor skills.
- 2. Cooperate with classmates.

#### Equipment:

- Circuit Training Cards
- Cones
- Hula Hoops
- Stacking Cup Sets
- Scarves
- Balance Boards
- Bean Bags
- Gymnastic Mats

#### Key Safety & Management Tip(s):

1. Create circuit training cards for the stations.



#### **Student Explanation:**

Circus Act is a circuit training activity that will give you an opportunity to practice non-traditional skills. Our class goal is to cooperate amongst each other, have fun, and improve our gross and fine motor skills.

#### Direction(s):

- 1. Explain circuit objective using student explanation from above.
- 2. Divide class into six groups.
- 3. Rotate students every minute.

Modification(s): Please refer to page 5 for exercise modifications.







## UPPER AND LOWER

#### **Objective(s):**

- 1. Perform upper and lower body exercises.
- 2. Add or decrease resistance to perform 10 repetitions.

#### Equipment:

- **Circuit Training Cards**
- Cones
- Weight Bars
- Dumbbells
- Stretch Bands

Station/

#### Key Safety & Management Tip(s):

1. Review proper form, technique, and safety expectations for each exercise.

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#### **Student Explanation:**

Upper/Lower is a circuit training activity to build muscular strength and muscular endurance. As you rotate through the circuit, notice how the exercises alternate between upper and lower body. Our goal is to perform 10 repetitions of each MS/ME exercise; add or decrease resistance accordingly to perform 10 repetitions with mild to moderate muscular fatigue.

#### Direction(s):

- 1. Explain the circuit objectives using the student explanation above.
- 2. Perform a full-body workout using dynamic movements.
- Review proper form, technique, and safety considerations for all 3. exercises.

#### Assessment(s):

1. Have students name a variety of upper and lower body exercises that could be used in another upper and lower body circuit.

Modification(s): Please refer to page 5 for exercise modifications.

	Exercise	Component(s)						
1.	Push-ups	MS/ME- Upper						
2.	Weight Bar Front Squats	MS/ME- Lower	Push-ups			Squat Thrusts	 $\bigtriangleup$	Stretch Band Lateral
3.	Weight Bar Bicep Curls	MS/ME- Upper						Raise
4.	Dumbbell Suitcase Lunges	MS/ME- Lower						
5.	Stretch Band Lateral Raise	MS/ME- Upper						
6.	Squat Thrusts	ME/ Combination- Lower						
			Weight Bar Front Squa	ts	Weig Bice	ght Bar p Curls		Dumbbell Suitcase Lunges

ADDITIONAL CIRCUITS

