

# Water Fitness Lesson Plans and Choreography

*72 lesson plans and  
576 activities for  
shallow and deep water*



**Christine Alexander**

# **WATER FITNESS LESSON PLANS AND CHOREOGRAPHY**

**CHRISTINE ALEXANDER**



Water Fitness Lesson Plans and  
Choreography

水上健身教案及编舞



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# PREFACE



In 2003, 1.9 million people were participating in water fitness, and that number keeps growing. People have been exercising in the water at least since the 1930s (United States Water Fitness Association [USWFA], 2007). Early participants were mainly older adults and special populations. Water fitness continues to appeal to baby boomers, but the market has grown to include recreational athletes, professional and elite athletes, younger adults, mind-body enthusiasts, and “prehab” clients, who are undertaking physical conditioning to prepare for surgery. Although women have been the predominant demographic for water fitness classes, that is changing as more men become involved, especially in personal training sessions. Facilities are trying to boost revenue by increasing their aquatic fitness programming to include additional formats. There is a high demand for instructors to teach these classes, but facilities report that good instructors are hard to find.

Aquatic certifications have been offered since the 1980s (USWFA, 2007; Young Men’s Christian Association [YMCA], 2000). These certifications give new instructors important basic information, but instructors still have to come up with their own ideas for how to organize their classes. Often they teach their favorite exercises in whatever order occurs to them at the time, until they settle on something that seems to work well. They then repeat that routine for all of their classes. Even experienced instructors sometimes find themselves in a rut, teaching the same routines over and over again. Continuing education training, which can provide fresh ideas, is available in some large markets, but it is not available everywhere. The purpose of *Water Fitness Lesson Plans and Choreography* is to bridge that gap.

This book provides all the information about lesson plans that I wish I had when I was starting out as a new instructor. It explains class objectives, the warm-up, the conditioning phase, and the cool-down as well as the purpose of each. It describes two strategies for organizing the conditioning phase if your class objective is cardiorespiratory fitness, and how to teach a circuit class if your objective is muscular strength and endurance. It takes the mystery out of choreography by describing four choreography styles that are easy to use and easy to remember. The troubleshooting tips were gleaned from years of teaching experience. This book clarifies the differences between shallow-water exercise and deep-water exercise. The exercise lists include both common names for the exercises and their anatomical movement terms as well as which muscles are most involved. Mastering anatomical movement terms such as *abduction* and *adduction* can be challenging for new instructors, and putting the terms together with exercise names simplifies the process. Understanding which muscles you are working is important for developing balanced workouts.

*Water Fitness Lesson Plans and Choreography* gives you practical information for translating your technical training into usable lesson plans. This book includes 36 shallow-water lesson plans and 36 corresponding deep-water lesson plans so you can avoid getting stuck in a tired routine. It is divided into two parts, the first part dealing with shallow-water exercise and the second dealing with deep-water exercise.

The first part will help you determine what your class objective is and explain the purpose of each of the three parts of every water fitness class. It has suggestions for classes that focus on cardiorespiratory fitness and for those that focus on muscular strength and endurance so that you can help your participants meet the recommendations of the American College of Sports Medicine in a variety of ways. Using the various choreography styles will keep your classes interesting. I include information about modifying your class for various populations, choosing music, and making pre-class preparations, as well as for dealing with some of the problems and surprises that might crop up while you are teaching. Descriptions and photos of the exercises used in shallow water and which muscles are used are followed by 36 lesson plans.

The second part deals with deep-water exercise. It includes a chapter containing information specific to deep water to help you meet the challenges of teaching deep-water classes. Descriptions and photos of the exercises and which muscles are used are followed by 36 lesson plans. Because deep-water exercise is very different from shallow-water exercise, not all of the exercises are the same, but the lesson plans are similar to the shallow-water lesson plans. That way, if you have to teach a shallow-water class followed by a deep-water class, you can use, for example, Shallow-Water Lesson Plan 5: Circuit Workout 1 for the first class, and Deep-Water Lesson Plan 5: Circuit Workout 1 for the second class. All you have to remember are the specific modifications for your deep-water class.

The tools provided in this book will help you understand the purpose behind everything you teach in your classes. This will make you just the kind of good instructor aquatic facilities are looking for!

## REFERENCES

- USWFA. (2007). *National Water Fitness Instructors Manual*. Boynton Beach, FL: United States Water Fitness Association.
- YMCA. (2000). *YMCA Water Fitness for Health*. Champaign, IL: Human Kinetics.



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# CONTENTS

Preface **vii** ■ Acknowledgments **ix**

## **PART I      SHALLOW-WATER EXERCISE      1**

<b>CHAPTER 1</b>	<b>INTRODUCTION TO SHALLOW-WATER EXERCISE . . . . .</b>	<b>3</b>
	Preparing Your Class . . . . .	3
	Determining Your Class Objective . . . . .	3
	Warm-Up Phase . . . . .	4
	Conditioning Phase . . . . .	5
	Cool-Down Phase . . . . .	10
	Modifying Your Lesson Plan for Different Populations . . . . .	11
	Music . . . . .	11
	Teaching Your Class . . . . .	12
	Putting It All Together . . . . .	14
	References . . . . .	14
<b>CHAPTER 2</b>	<b>SHALLOW-WATER EXERCISES AND CUEING TIPS . . . . .</b>	<b>15</b>
	Walk . . . . .	16
	Jog . . . . .	18
	Kick . . . . .	24
	Rocking Horse . . . . .	30
	Cross-Country Ski . . . . .	31
	Jumping Jacks . . . . .	33
	Jump . . . . .	35
	Upper Body . . . . .	38
	Abdominals . . . . .	44
	Obliques . . . . .	48
	Lower Body . . . . .	51
	Balance . . . . .	55
<b>CHAPTER 3</b>	<b>SHALLOW-WATER LESSON PLANS. . . . .</b>	<b>61</b>
	Linear Choreography . . . . .	61
	Shallow-Water Lesson Plan 1: Basic Moves . . . . .	62
	Shallow-Water Lesson Plan 2: Arm Moves, Change Legs . . . . .	62
	Shallow-Water Lesson Plan 3: Leg Moves, Change Arms 1 . . . . .	63
	Shallow-Water Lesson Plan 4: Leg Moves, Change Arms 2 . . . . .	64
	Shallow-Water Lesson Plan 5: Circuit Workout 1 . . . . .	65
	Shallow-Water Lesson Plan 6: Circuit Workout 2 . . . . .	66
	Shallow-Water Lesson Plan 7: Circuit Workout 3 . . . . .	67
	Shallow-Water Lesson Plan 8: Singles and Doubles . . . . .	68
	Shallow-Water Lesson Plan 9: Core Challenge . . . . .	69
	Shallow-Water Lesson Plan 10: Shallow-Water Running . . . . .	70

Shallow-Water Lesson Plan 11: Travel . . . . .	71
Shallow-Water Lesson Plan 12: Travel With Intervals . . . . .	72
Shallow-Water Lesson Plan 13: Travel Upright, Neutral Position and Suspended . . . . .	73
Shallow-Water Lesson Plan 14: Travel Upright and Seated With Noodles . . . . .	74
Shallow-Water Lesson Plan 15: All-Noodle Workout . . . . .	75
<b>Variations on a Theme . . . . .</b>	<b>76</b>
Shallow-Water Lesson Plan 16: Knee and Heel . . . . .	77
Shallow-Water Lesson Plan 17: Cross-Country Ski and Jumping Jacks . . . . .	78
Shallow-Water Lesson Plan 18: Kicks . . . . .	79
Shallow-Water Lesson Plan 19: Jog and Walk . . . . .	79
Shallow-Water Lesson Plan 20: Cross-Country Ski, Jumping Jacks, and Jump . . . . .	80
<b>Add-On Choreography . . . . .</b>	<b>81</b>
Shallow-Water Lesson Plan 21: Add-On Choreography 1 . . . . .	82
Shallow-Water Lesson Plan 22: Add-On Choreography 2 . . . . .	82
Shallow-Water Lesson Plan 23: Add-On Choreography 3 . . . . .	83
<b>Block Choreography . . . . .</b>	<b>84</b>
Shallow-Water Lesson Plan 24: Upright and Seated Moves . . . . .	84
Shallow-Water Lesson Plan 25: Upper Body and Sprints . . . . .	85
Shallow-Water Lesson Plan 26: Intervals With Knee-High Jog . . . . .	86
Shallow-Water Lesson Plan 27: Intervals With Kick Forward . . . . .	87
Shallow-Water Lesson Plan 28: Intervals With Cross-Country Ski . . . . .	88
Shallow-Water Lesson Plan 29: Intervals With Speed . . . . .	89
Shallow-Water Lesson Plan 30: Intervals With ROM . . . . .	90
Shallow-Water Lesson Plan 31: Intervals With Suspended Moves . . . . .	91
Shallow-Water Lesson Plan 32: Intervals With Power . . . . .	92
Shallow-Water Lesson Plan 33: Intervals With Speed and Suspended Moves . . . . .	93
Shallow-Water Lesson Plan 34: Intervals With Suspended Moves and Power . . . . .	95
Shallow-Water Lesson Plan 35: Intervals With Speed, ROM, and Suspended Moves . . . . .	96
Shallow-Water Lesson Plan 36: Intervals With Speed, ROM, Suspended Moves, and Power . . . . .	97

## PART II DEEP-WATER EXERCISE

99

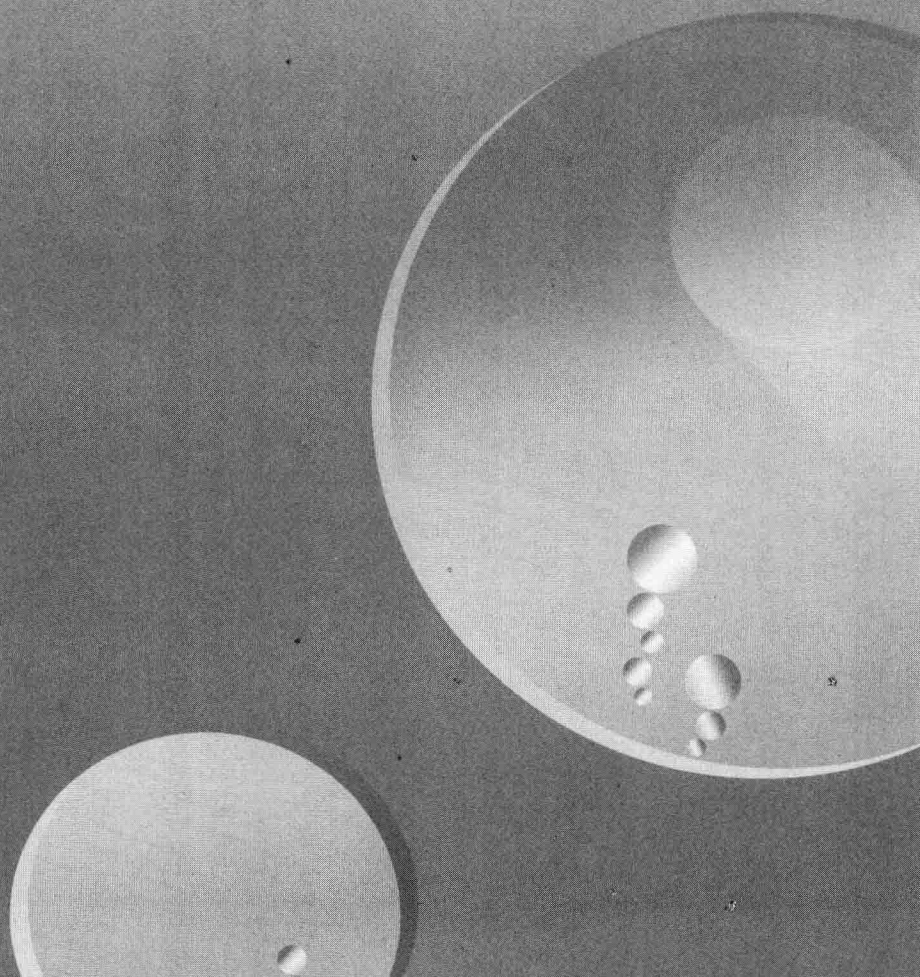
<b>CHAPTER 4 INTRODUCTION TO DEEP-WATER EXERCISE. . . . .</b>	<b>101</b>
Preparing Your Class . . . . .	102
Warm-Up Phase . . . . .	102
Conditioning Phase . . . . .	104
Cool-Down Phase . . . . .	108
Modifying Your Lesson Plan for Different Populations . . . . .	108
Music . . . . .	109
Teaching Your Class . . . . .	109
Putting It All Together . . . . .	111
References . . . . .	111
<b>CHAPTER 5 DEEP-WATER EXERCISES AND CUEING TIPS. . . . .</b>	<b>113</b>
Jog . . . . .	114
Bicycle . . . . .	121
Kick . . . . .	122
Cross-Country Ski . . . . .	127



<b>Jumping Jacks</b> . . . . .	<b>130</b>
<b>Travel Assisting Upper-Body Moves</b> . . . . .	<b>133</b>
<b>Abdominals</b> . . . . .	<b>138</b>
<b>Obliques</b> . . . . .	<b>142</b>
<b>Core Challenge</b> . . . . .	<b>144</b>
<b>Balance Exercises</b> . . . . .	<b>147</b>
<b>CHAPTER 6 DEEP-WATER LESSON PLANS</b> . . . . .	<b>149</b>
<b>Linear Choreography</b> . . . . .	<b>149</b>
Deep-Water Lesson Plan 1: Basic Moves . . . . .	150
Deep-Water Lesson Plan 2: Arm Moves, Change Legs . . . . .	150
Deep-Water Lesson Plan 3: Leg Moves, Change Arms 1 . . . . .	151
Deep-Water Lesson Plan 4: Leg Moves, Change Arms 2 . . . . .	152
Deep-Water Lesson Plan 5: Circuit Workout 1 . . . . .	153
Deep-Water Lesson Plan 6: Circuit Workout 2 . . . . .	154
Deep-Water Lesson Plan 7: Circuit Workout 3 . . . . .	155
Deep-Water Lesson Plan 8: Singles and Doubles . . . . .	156
Deep-Water Lesson Plan 9: Core Challenge . . . . .	157
Deep-Water Lesson Plan 10: Deep-Water Running . . . . .	158
Deep-Water Lesson Plan 11: Travel . . . . .	159
Deep-Water Lesson Plan 12: Travel With Intervals . . . . .	160
Deep-Water Lesson Plan 13: Travel Upright and Seated 1 . . . . .	161
Deep-Water Lesson Plan 14: Travel Upright and Seated 2 . . . . .	162
Deep-Water Lesson Plan 15: All-Noodle Workout . . . . .	163
<b>Variations on a Theme</b> . . . . .	<b>164</b>
Deep-Water Lesson Plan 16: Knee and Heel . . . . .	164
Deep-Water Lesson Plan 17: Cross-Country Ski and Jumping Jacks . . . . .	165
Deep-Water Lesson Plan 18: Kicks . . . . .	166
Deep-Water Lesson Plan 19: Jog and Log Jump . . . . .	167
Deep-Water Lesson Plan 20: Bicycle, Cross-Country Ski, and Jumping Jacks . . . . .	168
<b>Add-On Choreography</b> . . . . .	<b>169</b>
Deep-Water Lesson Plan 21: Add-On Choreography 1 . . . . .	169
Deep-Water Lesson Plan 22: Add-On Choreography 2 . . . . .	170
Deep-Water Lesson Plan 23: Add-On Choreography 3 . . . . .	170
<b>Block Choreography</b> . . . . .	<b>171</b>
Deep-Water Lesson Plan 24: Upright and Seated Moves . . . . .	172
Deep-Water Lesson Plan 25: Upper Body and Sprints . . . . .	173
Deep-Water Lesson Plan 26: Intervals With Knee-High Jog . . . . .	173
Deep-Water Lesson Plan 27: Intervals With Bicycle . . . . .	174
Deep-Water Lesson Plan 28: Intervals With Cross-Country Ski . . . . .	175
Deep-Water Lesson Plan 29: Intervals With Speed . . . . .	176
Deep-Water Lesson Plan 30: Intervals With ROM . . . . .	177
Deep-Water Lesson Plan 31: Intervals With Elevation . . . . .	178
Deep-Water Lesson Plan 32: Intervals With Power . . . . .	179
Deep-Water Lesson Plan 33: Intervals With Speed and Elevation . . . . .	180
Deep-Water Lesson Plan 34: Intervals With Elevation and Power . . . . .	181
Deep-Water Lesson Plan 35: Intervals With Speed, ROM, and Elevation . . . . .	183
Deep-Water Lesson Plan 36: Intervals With Speed, ROM, Elevation, and Power . . . . .	184
<b>Reference</b> . . . . .	<b>185</b>

**PART I**

# **SHALLOW-WATER EXERCISE**





# Introduction to Shallow-Water Exercise

**I**t's show time! Your first water fitness class is an exciting event. You may have taken a water fitness instructor course or gotten a national certification. You know where your trapezius is, you have figured out the difference between abduction and adduction, and you remember that the target heart rate for cardiorespiratory training is between 60 and 80 percent of the maximum heart rate. Now you have a class to teach! You want to make a good impression. You want to lead your participants in an effective workout, and you want them to come back for the next class. How do you use what you have learned in your certification course to organize your class?

## **PREPARING YOUR CLASS**

Your class will be most successful if you plan ahead. Begin by thinking about what you are trying to accomplish in your class time. This is your class objective, your goal for your participants. You will build your plan for the class around this objective. Your class plan will include a warm-up phase, a conditioning phase, and a cool-down phase.

## **DETERMINING YOUR CLASS OBJECTIVE**

The first step in planning for any water fitness class is to decide what your objective is. The class description in your facility brochure may state your objective. If the name of your class is Hydro Cardio Fit or Power Splash Dance (USWFA, 2007), then you know the participants coming to your class will be expecting cardiorespiratory fitness training. Often the objective is left up to the instructor. The two most common objectives are cardiorespiratory fitness and muscular strength and endurance. It is also possible to do both in the same class.

The second step in planning your class is to write a lesson plan that meets your class objective. A lesson plan is a list of the exercises you plan to use in your class. When choosing your exercises, keep in mind the three parts of every class—the warm-up, the conditioning phase, and the cool-down (Aquatic Exercise Association [AEA], 2006).

## WARM-UP PHASE

The average temperature of the water in an indoor multipurpose pool is 84 to 86 degrees Fahrenheit (29 to 30 °C) (USWFA, 2007). Your average body temperature is 98.6 degrees Fahrenheit (37 °C). This means that the pool temperature will be 12 to 14 degrees (around 7 °C) cooler than your body, and it always feels cold when you first get in the water. The purpose of the first part of your warm-up is to adjust participants' body temperatures to the water temperature. A vigorous, short-lever move, such as a knee-high jog, works well to start out the warm-up. Don't forget to cue good posture! As the water begins to feel more comfortable to participants, you can start to have them warm up their muscles and increase their heart rates in preparation for the workout. Use moves to the front, the sides, and the back of the body to make sure all the muscles warm up. Progress from short-lever moves to longer-lever moves. The entire warm-up should take between 5 and 10 minutes.

One way to have participants warm up is to have them jog in place for two to three minutes; then water walk the length of the pool and back. They should walk forward, backward, and sideways. Another idea is to have them do some light jogging with various arm moves. Have them use a knee-high jog, a straddle jog, and a heel jog to use different leg muscles as they warm up the upper body. You can also use the warm-up to introduce moves you are going to use in the conditioning phase that may be new to your participants. Have them begin with a knee-high jog; then introduce the new moves at half speed, increasing to regular water tempo as they catch on. The following two sample warm-ups will get you started.

### **FIVE-MINUTE WARM-UP**

Kick forward with shoulder blade squeeze (1 min.)  
 Knee-high jog, palms touch in back (30 secs.)  
 Run tires, reach to the sides (30 secs.)  
 Rocking horse to the right side (30 secs.)  
 Kick side to side (30 secs.)  
 Rocking horse to the left side (30 secs.)  
 Jumping jacks (30 secs.)  
 In-line skate (30 secs.)  
 Skate kick (30 secs.)

### **TEN-MINUTE WARM-UP**

Knee-high jog with jog press (1 min.)  
 Knee-high jog with shoulder blade squeeze (1 min.)  
 Straddle jog, palms touch in front (1 min.)  
 Straddle jog, palms touch in back (1 min.)  
 Kick side to side (30 secs.)  
 Ankle touch (30 secs.)  
 Hopscotch (30 secs.)  
 Jumping jacks (30 secs.)  
 Jacks tuck (30 secs.)

Tuck ski (30 secs.)

Cross-country ski (30 secs.)

Rocking horse right, travel backward (45 secs.)

Rocking horse left, travel forward (45 secs.)

Rocking horse right, travel sideways (30 secs.)

Rocking horse left, travel sideways (30 secs.)

By the end of the warm-up, the water will feel comfortable or even slightly warm to your participants, they will be breathing a bit harder, and their muscles will be ready for the increased intensity of the conditioning phase.

## CONDITIONING PHASE

The conditioning phase is the main section of your class, and it takes up the major portion of your class time. Your participants are there for a workout to maintain or improve their current level of physical fitness. Two of the components of physical fitness are cardiorespiratory endurance, and muscular strength and endurance (USWFA, 2007). The conditioning phase focuses on one or both of these components. Improving cardiorespiratory endurance means improving the ability of the heart and lungs to deliver oxygen to the working muscles (USWFA, 2007). The American College of Sports Medicine recommends moderately intense cardio work for 30 minutes a day, five days a week, or vigorously intense cardio work for 20 minutes a day, three days a week to accomplish this goal (American College of Sports Medicine [ACSM], 2007). To improve muscular strength and endurance, you must overload the muscles to the point that you achieve gains in the amount of force you can exert and improve your ability to exert force repeatedly (USWFA, 2007). The American College of Sports Medicine recommends 8 to 10 strength training exercises, with 8 to 12 repetitions of each exercise, twice a week to accomplish this goal (ACSM, 2007). Keep the recommendations of the American College of Sports Medicine in mind when you design the conditioning phase of your lesson plans.

### Conditioning Phase: Cardiorespiratory Fitness

Maximum heart rate is determined by using the formula  $220 - \text{age}$  (USWFA, 2007). For cardiorespiratory fitness, a heart rate of between 60 and 80 percent of maximum heart rate is considered appropriate (AEA, 2006). This range is referred to as the target heart rate (USWFA, 2007). Participants who want to do moderately intense cardio work, work out in the lower level of the target heart rate, and those who want to do vigorously intense cardio work, work out in the upper level of the target heart rate. New instructors are taught how to use the talk test and Borg's rating of perceived exertion scale to judge whether their participants are working at their target heart rates. Both of these methods are subjective but fairly accurate (AEA, 2006). If your participants want to know their exact heart rates, they need to use a heart rate monitor. A heart rate chart such as the one in table 1.1 can give them an idea of what their target heart rates should be.

The heart rate chart in table 1.1 takes into account the fact that the human heart has an estimate of seven beats per minute fewer in shallow water than on land. Heart rates are lower in water than on land, although the exercise intensity is the same. Various theories have been postulated to explain this. Certain medications and the fitness level of the participant also affect heart rate. Therefore, heart rate



TABLE 1.1

**Target Heart Rates in Shallow Water**Formula:  $[(220 - \text{age}) \times \% \text{ intensity}] - 7$ 

Age	% INTENSITY						
	55%	60%	65%	70%	75%	80%	85%
25	100	110	120	130	139	149	159
30	98	107	117	126	136	145	155
35	95	104	113	123	132	141	150
40	92	101	110	119	128	137	146
45	89	98	107	116	124	133	142
50	87	95	104	112	121	129	138
55	84	92	100	109	117	125	133
60	81	89	97	105	113	121	129
65	78	86	94	102	109	117	125
70	76	83	91	98	106	113	121
75	73	80	87	95	102	109	116
80	70	77	84	91	98	105	112

charts are not accurate for everyone and should be used only to establish general guidelines.

Target heart rates are achieved by working large-muscle groups continuously and rhythmically. The two options for meeting the objective of training for cardiorespiratory fitness are a continuous training format and an interval training format.

**Continuous Training Format.** In continuous training, you bring your participants up to their target heart rates and have them remain there for the duration of the conditioning phase. The conditioning phase should last at least 30 minutes to meet the American College of Sports Medicine's recommendations for moderate physical activity (ACSM, 2007). Your class should include exercises that use large-muscle groups continuously and rhythmically. Save exercises such as upper-body moves in a lunge position, lower-body moves seated on a noodle, and balance exercises for the cool-down portion of your class because they bring the heart rate down. The best way to see if your exercise selection is appropriate is to practice the moves yourself ahead of time wearing a heart rate monitor.

**Interval Training Format.** In interval training, you bring your participants up to the lower or midlevel of their target heart rates. Then you periodically increase the intensity so that their heart rates climb into the upper level of their target heart rates for a short time before decreasing the intensity to let the heart rates go back into the mid- or lower level. Interval training is great for improving cardiorespiratory fitness. The two things you need to know to lead an interval class are how

to increase and decrease intensity, and how long to have participants work in the upper level of the target heart rate.

Following are six factors you can address to increase intensity in shallow water:

1. Speed
2. Range of motion
3. Suspended moves
4. Power
5. Travel
6. Rebound

Increasing speed effectively results in performing the move faster without compromising range of motion. Often participants go faster but make the move smaller. Encourage them not to go so fast that they find themselves doing tiny moves at top speed because this is not an effective way to increase intensity. Increasing range of motion involves performing exercises with long levers (arms and legs slightly flexed) through their full range of motion. In suspended moves, participants pick up their feet and perform the moves without touching the bottom of the pool. Increasing power is about pushing harder against the resistance of the water. Travel involves moving through the water from one part of the pool to another. Participants can achieve some of their highest intensity levels by traveling through the water at maximum speed. They can travel forward, backward, or sideways. Rebounding means jumping. Some younger participants love to jump, but older adults, obese participants, and people with hip, knee, or feet issues should not rebound. If you choose to increase intensity by using rebounding, offer options for those who should avoid jumping, such as performing the same move in a neutral position with the hips and knees flexed and the shoulders at the surface of the water (AEA, 2006). In the lesson plans in this book, the exercises used to bring the heart rate up during interval sessions are labeled *interval high-intensity phase*.

To decrease intensity, participants can slow down, decrease their range of motion, allow their feet to touch the floor following a suspended move, ease back from the power moves, perform the exercise in place, or drop back from rebounding to a move that keeps one foot on the floor. In the lesson plans with intervals in this book, the exercises used to decrease heart rate following the high-intensity phase are labeled *interval active recovery phase*.

**Timing the Intervals.** How long you work your class in the upper level of the target heart rate depends on the fitness levels of your participants. A simple plan is to have them work in the lower to midlevel of their target heart rates for eight or nine minutes; then work really hard for one or two minutes. The cycle is then repeated three times in a 30-minute conditioning set or four times in a 40-minute conditioning set. You can shorten the cycle all the way down to four minutes in the lower to midlevel of the target heart rate with one minute of high-intensity work so that participants complete six cycles in a 30-minute conditioning set or eight cycles in a 40-minute conditioning set.

Some participants have difficulty working at a high intensity for one continuous minute. These participants can work in the lower to midlevel of their target heart rate for five to nine minutes, and then work really hard for 20 seconds, take a 10-second break during which they back off the intensity a little, and repeat.

They can repeat the cycle of 20 seconds of work followed by 10 seconds of active recovery two to four times. You can also play with the length of the work-and-active-recovery cycle depending on the abilities of your participants, or just to add variety. Try 30 seconds of work to 15 seconds of active recovery, or 45 seconds of work to 30 seconds of active recovery. The active recovery stage can also be longer than the work stage; for example, 45 seconds of work and 60 seconds of active recovery, or 30 seconds of work and 45 to 60 seconds of active recovery. The form and the duration of interval training have been left up to you in the lesson plans using intervals in this book.

## **Conditioning Phase: Muscular Strength and Endurance**

If your objective is muscular strength and endurance training, keep in mind that participants will tend to get chilled while remaining stationary and focusing on working with resistance unless they are in a warm-water pool. Because most recreational pools are not warm-water pools, you will want to intersperse strength training exercises with periods of moving around to keep the muscles warm. Participants need to overload their muscles with some kind of resistance for the exercise to be effective. They can do this without equipment by pushing hard against the resistance of the water. The more force they use, the greater the resistance (YMCA, 2000). They can also use arm moves or leg moves that pull the body either forward or backward while traveling in the opposite direction. For example, they can do a breaststroke, which pulls the body forward, while traveling backward.

Another option is to add equipment. Many facilities have noodles or foam dumbbells, and some participants like to bring their own webbed gloves. Avoid doing an entire class with foam dumbbells, though, because that puts too much strain on the shoulder joint. Alternate upper-body strength training using noodles for resistance with lower-body strength training using noodles for flotation. Participants can keep warm by traveling while doing the upper-body strength training.

**Circuit Format.** The circuit format is one of the most popular ways to do muscular strength and endurance training in the water. A typical circuit class has stations set up around the edge of the pool. Place a sign with the name of a strength training exercise at each station; then lead your class in a few rhythmic exercises to keep their muscles warm. Next, have participants go to a station and do the exercise described on the sign. They can divide up among the stations, or they can all go from station to station as a group. If they are going from station to station as a group, the signs are not essential.

You may have different types of equipment at each station, but this is not required. A circuit class that alternates rhythmic exercise sets to keep warm and strength training sets without equipment is sometimes called a modified circuit class. Because facilities vary widely in the type of equipment they have on hand, this book includes only one circuit lesson plan that uses dumbbells, but they are optional. Feel free to use whatever equipment you have available, but make sure you know how to use the equipment before you try it out on your class.

**Core Strength Training.** You may want to teach a class that focuses on core strength. See Shallow-Water Lesson Plan 9: Core Challenge. Working out in the water is great for improving core strength because the properties of water are constantly challenging balance. You can increase the challenge for the core muscles by having