

# Finding the 'Sport' in Sport Diving

For the physically fit, recreational scuba diving or sport diving can be a lifelong physical activity. Although diving can be quite relaxing, donning full scuba gear and climbing back onto the boat or shore definitely qualifies as physical exertion. Physical fitness can maximize the safety, enjoyment and longevity of your diving. The higher your fitness level, the more prepared you are to deal with unexpected challenges brought on by scuba diving. As for customs, divers use special hand signals, belong to organizations and may even have interesting pre-dive or post-dive rituals.

Preparing to dive involves instruction, practice, experience and physical training. Instruction takes the form of initial certification and continuing education courses. Practicing basic skills in benign conditions can increase a diver's level of comfort in the water. Divers gain experience by diving safely within their training and comfort zones. Many dive operators require a diver to be supervised by a divemaster for profiles deeper or longer than previously logged dives. To improve diving performance and overall health and safety, integrate physical training into your daily life.

Safety and preparation are crucial to an enjoyable dive. Letters published in previous issues of Alert Diver demonstrate that readers understand the importance of these facets of diving. Divers are concerned with safety and optimizing time underwater. We have buddies, follow dive plans, keep dive logs and complete routine maintenance of our gear. Unfortunately, many of us neglect our most vital piece of equipment – our bodies. Taking preventive measures to increase fitness may increase diver safety and enjoyment. As an added bonus, your quality of life may improve.

The human body responds directly to physical training. When challenged, the body adapts physiologically to deal with similar situations in the future. Almost anyone can improve his or her level of physical fitness. The primary exception would be elite athletes who are already in peak physical condition. To begin any fitness program, participants must address their initial fitness. Use the chart at left to identify physical fitness levels.

The Houston rating of physical activity is a pencil-and-paper estimate of aerobic capacity. When used in conjunction with age, gender, height and weight, this scale correlates well with laboratory exercise estimates of aerobic capacity in the general population (Jackson et al., 1990). Next, set a realistic goal based on your current fitness level. A realistic goal involves elevating your physical activity rating by one point. Maintain each goal for as long as it takes for that activity to become a regular part of your daily routine. Once the increased level of physical activity becomes a habit, set a new goal.

The best advice is to simply start moving your body a little bit more today than you did yesterday. Each day take "baby steps" to slowly increase physical activity. The perfect exercise is one that will be a part of your life forever. By trying various physical activities, you will find some that you enjoy more than others. The activities listed in the table at left are merely suggested; feel free to substitute activities with comparable levels of exertion. Ideally, the activities that you enjoy will become a part of your lifestyle. Millions of physical activities are available, but you need only to find a few that you enjoy. Fitness is almost too simple; just keep moving a little more each day.

As in diving, proper planning is necessary to safely and effectively reach your goals. The challenge of each exercise should gradually increase. If you can do 10 push-ups this week, shoot for 11 next week. In the fitness world, stressing the body just beyond normal limits is called an overload. To prevent injury, overload the body in small increments (approximately 2 percent per week). As a trained scuba diver, you already have many attributes necessary to integrate fitness into your life. You probably enjoy new challenges: You have already succeeded in applied training, planning and focus to meet the demands of your certification. If you apply these skills, your fitness level should improve over time.

Minor modifications to your lifestyle can have a huge bearing on lifelong health and performance. Being physically active can positively affect your physical and emotional well-being and enhance your overall performance. Provided you are physically fit, you may be able to participate in diving for many decades to come.

Table 1: HEALTH BENEFITS OF REGULAR PHYSICAL ACTIVITY	
•	reduces risk of premature death
•	reduces risk of heart disease
•	reduces risk of diabetes
•	reduces risk of high blood pressure
•	reduces risk of colon cancer
•	reduces feelings of depression/anxiety
•	helps control weight
•	helps build and maintain healthy bones, muscles and joints
•	promotes psychological well-being
•	improves performance of work, recreational and sport activities

Table 2: HOUSTON NON-EXERCISE RATING OF PHYSICAL ACTIVITY	
Score	Activity
0	Avoid walking or exertion, e.g. always use elevator, drive whenever possible instead of walking

1	Walk for pleasure, routinely use stairs, occasionally exercise sufficiently to cause heavy breathing or perspiration
2	Participate regularly in recreation or work requiring modest physical activity: e.g., golf, bowling or yard work for:
3	10 to 60 minutes per week
4	More than 1 hour per week
5	Participate regularly in heavy physical activity: e.g., running, cycling, swimming, tennis, basketball, soccer:
6	1 mile per week or less than 30 minutes per week in comparable physical activity
7	1 to 5 miles per week or 30 to 60 minutes per week in comparable physical activity
8	5 to 10 miles per week or 1 to 3 hours per week in comparable physical activity
9	More than 10 miles per week or more than 3 hours per week in comparable physical activity

Table 3: TIP FOR LIFESTYLE MODIFICATION

Tips	Is this you?
Park far away: There are usually more vacant parking spots anyway.	You scout the parking lot for the closest parking spot at the gym.
Take the stairs instead of the elevator: You will have more personal space.	You wait several minutes to cram into a packed elevator to go up one floor.
Drink water: You will stay hydrated and feel satiated without the extra calories.	You would have to run more than a mile to burn the calories in a 16 oz. bottle of soda or juice.
Eat a reasonable portion of a healthy breakfast: It will elevate your metabolism for the day.	Skipping breakfast to cut calories may actually slow your metabolism for the day.
Take a few minutes to stand and stretch throughout the day: It has been shown to reduce stress levels by increasing oxygen delivery to the brain and body.	Are you too busy to get up from your desk? Note: Short breaks may actually increase your productivity.
Don't use the arms of your chair to stand up: It is a good exercise for your legs, so count how many times you stand up each day.	Use arms and momentum to get out of a seated position at your desk.

Maintain good posture: Lift your shoulders to your ears and drop them back to a comfortable position.	Over years at the office, people tend to take the shape of their chairs (hunched back, stiff legs, sore lower back).
Use commercial breaks to rise from your chair and do SOMETHING: stretch, walk, crunches.	Walking to the kitchen for a refill on chips, popcorn or ice cream does NOT count.
Take regular walks or bike rides with family or friends.	Spend family or social time watching movies.
Treat yourself to lessons: Learning a new sport not only increases your physical activity, but it also stimulates your brain.	You don't know if you enjoy an activity until you give it a fair try.

### About the Authors

**Jessica B. Adams**, M.S., has a graduate degree in exercise physiology and experience as both a diving instructor and personal trainer instructor. In 2004 she was a DAN research intern based at Sunset House in Grand Cayman; in 2005 she interned at the Center for Hyperbaric Medicine and Environmental Physiology, Duke University Medical Center. She is, with Jaime, co-author of Fit for SCUBA.

**Jaime B. Adams**, M.S., has a graduate degree in exercise physiology and experience as both a diving instructor and a personal trainer. He served at the Center for Hyperbaric Medicine and Environmental Physiology, Duke University Medical Center, Durham, N.C. as a DAN research intern in the summer of 2005.