Older Adults
The Need for Exercise and the Benefits of Aquatics

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The ever-growing population of older adults and the associated age-related physiological changes that occur are increasing the need for physical therapy and exercise in this group. This article will describe some of these physiological changes, review the changes that exercise can make on these changes, as well as provide information about principles and benefits of aquatic exercise. There are a number of standardized outcome measures that can be used to quantify improvements in health, which will also be discussed. A case study at the end ties all of the information together for a practical demonstration of the benefits of aquatic exercise.

Key words: aquatics, exercise, older adult

How does one define “old”? The AARP (formerly known as the American Association of Retired Persons) allows membership in their organization at the age of 50 years, and part of their mission is to “enhance quality of life for all as they age.” Medicare, the nation’s largest health insurance program, is primarily for individuals older than 65 years. According to the US Census Bureau, in 2000, there were more than 281 million people in the United States. Of that number, 35 million (12%) people were older than 65 years. It is estimated that by the year 2030, this population will double to 70 million as the “baby boomers” (those born between 1946 and 1964) turn 65. While “old” is simply a state of mind, it is typically thought of to be those individuals older than 65 years.

Why physical therapy? The American Physical Therapy Association’s Position on Physical Therapy for Older Adults (HOD 06-95-08) states, “Health and wellness promotion and preventive programs should be supported for the older adult to prevent or delay the development of many chronic problems which often result in the utilization of more costly services. Such programs should include a physical therapy component.”

The purpose of this article is to describe common physiological changes associated with aging, outline the importance of exercise in the older population, and provide information to the reader about the principles of aquatic exercise and how aquatic exercise can be beneficial, especially in this population. In addition, outcome measures that can be used to quantify improvements in health following an aquatic exercise intervention program are described.

Age-Related Changes with Aging

With more than 70 million individuals in the United States expected to be older than 65 years in the next 20 years, it is important to look at the normal physiological changes that occur as a result of aging. In the cardiovascular system, there is a decrease in cardiac output, an increase in systolic blood pressure, and an increase in peripheral vascular resistance. In the musculoskeletal system, decreases in strength are related to loss of