



ACSM Sports Medicine Basics

STRENGTH, POWER AND THE BABY BOOMER



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We currently face many challenges relating to the health and fitness of a rapidly aging society. The baby boomers are the largest generation in U.S. history, representing nearly one quarter of our present population. By 2050, the population aged 65 and over is projected to reach around 84 million. At that time, boomers will make up all of what we classify as the “oldest-old” (those over 85 years), a population projected to grow, to 18 million.

Baby boomers are not aging quietly. Boomers have economic and political influence as well as the power to reject the stereotype of ageism, frailty and inactivity. They are continuing to pursue vigorous, active lives well into old age. Life extension is an admirable goal, but not at the expense of good health and quality of life. Crucial to the boomers’ enjoyment of their golden years is maintaining and improving muscular strength and power through resistance training. Whether performing daily chores or playing a round of golf, muscular strength and power significantly impact the boomer’s ability to function with vigor, enjoying life to the fullest.

Muscular Strength

Strength refers to the muscle’s ability to generate force at a given velocity. Adequate strength levels are necessary to perform activities of daily living (e.g., carrying groceries or laundry, gardening, shoveling snow) and to participate in recreational and

fitness activities such as walking, hiking or carrying golf clubs. Increased strength also reduces cardiovascular stress while lifting and carrying a given weight and increases muscular endurance during work or play.

Muscular Power

Power is the product of force and velocity and represents the amount of work a muscle can produce per unit of time. Power is strongly related to many functional activities that require strength with speed such as lifting boxes, climbing stairs, rising from a chair, walking or preventing falls. Many recreational pursuits of baby boomers are also strongly related to muscle power (e.g., golf, tennis, bowling, playing with grandchildren).

As the baby boomers move into the sixth and seventh decades of life, the decline in muscle strength and power typically associated with aging is a matter of great importance. Loss of muscle strength and power leads to declining activity, increased frailty and functional dependence—a vicious cycle that can often lead to nursing home admission. Further consequences include gait and balance problems, risk of falls and fractures, and an increased risk of chronic diseases such as osteoporosis and diabetes. On the positive side, resistance training has proven to be a safe, economical and beneficial addition to the older adult’s fitness regimen. Research has consistently shown that if the basic requirements of intensity and duration are

met, resistance training results in similar gains in strength and power in older and younger adults. These results mean that for the boomer it is never too late to start a well-designed, individualized resistance training program.

The benefits of starting a resistance training program outweigh the risks, but to help decrease risk, the American College of Sports Medicine (ACSM) recommends taking into consideration your current level of physical activity, any signs, symptoms, or presence of disease, and your desired intensity of resistance training (see below). As personal situation warrants, a medical checkup may be a good idea before starting a resistance-training program.

The American College of Sports Medicine (ACSM) recommends the following resistance training regimen for the average healthy adult who wants to achieve basic muscular fitness:

- One to three sets of 8 to 12 repetitions (10 to 15 repetitions for older or more frail persons), performed two to three days per week, involving 8 to 10 exercises for all major muscle groups.
- Determine the amount of resistance by choosing a weight that can be moved the desired number of times. (e.g., 8 to 12 repetitions).
- Always use proper technique, performing each exercise through the full range of motion in a controlled motion while maintaining normal breathing.

- Always perform both a warm-up period before and cool-down period after the workout. Five to 10 minutes is adequate.
- Seeking out a degreed (e.g. Bachelor of Science in Kinesiology) and certified (e.g., ACSM Certified Personal Trainer) exercise professional to learn proper resistance training technique and get an appropriate individualized exercise prescription is also a good idea.

When greater levels of muscular strength and power are desired by the healthy adult, ACSM recommends the following:

- Performing progressive resistance training in a periodized fashion, gradually manipulating training variables over time; variety in training variables (e.g. one to three sets per exercise, single- and multiple-joint exercises, one to 12 repetitions at various intensities

and velocities, two to four days per week) helps ensure optimum stress to meet the individual's health and fitness goals for strength and power.

As the baby boom generation heads into the third decade of the new millennium, they look forward to enjoying the fruits of their labor. Instead of sitting on a chair watching life go by, boomers can meet life's challenges head on, becoming stronger and more powerful through resistance training. In addition to enhancing their health and quality of life, boomers again have the chance to help the next generation by setting an example of a new, active view of the aging lifestyle. In the past century, baby boomers fueled the greatest economic expansion in the history of the world. In the new millennium, boomers can fuel a revolution—a revolution on how society views aging!

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