

It's Never Too Late

Historically the elderly population has been neglected in the measurement, evaluation, and prescription of fitness. Combined with the increasing risks of cardiovascular disease, osteoporosis, and other degenerative factors what is the resultant? **A population of people who are nearly left out of the equation.** One roundtable discussion I recently reviewed noted every eight seconds another human being reaches the age of 50. Soon to be one of the largest populations in society, the senior adult has many extensive medical and healthcare related needs. In confronting this issue with authority over the last 10-12 years the medical and fitness communities have worked in collaboration to devise viable options or solutions. The impetus behind this month's **Physically Speaking** is to educate the senior population of the bowling community as to their options or availabilities for improved wellness and promoting bowling performance.

Many researchers in the area of degenerative processes and the physiological effects of aging have noted differences between chronological age and physiological age. As the scientific community begins to unlock some of the closed doors surrounding the aging process, it has been noted that, "regardless of how old you are, you can strive to be the best you can be for your age and ability." The key to exercise within the senior population is not so much the concern with chronological age but rather physiological age. There are various disease conditions or physical frailties that might preclude an exercise program, but it is apparent that healthy individuals generally have no contraindications to exercise at any age. This is not to say appropriate preliminary check-ups and medical exams should be avoided. On the contraire, many experts agree individuals beyond the age of forty should undergo a graded exercise test with an EKG and blood pressure monitoring prior to initiating any sort of exercise program. "Dad, I hope you are listening."

All body movements are produced by basic contractions of skeletal muscle. Consequently, any impairment in muscular function will result in some degree of hindered movement or quite possibly immobility. Partial mobility inhibits participation of sport and is also devastating to the functional capacity of everyday life. **For this discussion functional capacity should be defined as the physical capacity of the individual to meet to the ordinary or unexpected demands of daily life, safely and effectively. (Osness '87).** Physical frailty, according to research, is described as the effects of muscle atrophy, declining strength, fatigue, and injury to the human body. The increase in physical frailty in our society has become a widely accepted phenomena while all along the very culprit of the problem lies within the **sedentary lifestyle.** It's no secret physical frailty accompanies the aging process and functional fitness is impaired along the way. Previous studies have documented declines in physiological functioning and motor capacity as a result of aging and a sedentary lifestyle.

Science has shown us increases in VO2 max of previous sedentary people reflect similar changes noted in younger individuals following exercise training. Studies conducted in the last few years imply the responses to both anaerobic and aerobic training are similar between the ages. It should be understood the decline in functional capacity with age is in large part due to declining activity levels and we lack current necessary data to conclude physical activity reverses the effects of the aging or most disease processes. Though there are strong correlations drawn and proven that exercise lowers the risk of developing many diseases including cardiovascular disease, osteoporosis, hypertension, diabetes mellitus, and some forms of arthritis.

In 1986 the American Association of Health, Physical Education, Recreation, and Dance (AAHPERD) was assigned the task of developing functional fitness tests for individuals over the age of 60. (AAHPERD) along with many other national and international organizations (AMA, ACSM, & IDEA) are constantly researching and proactively addressing senior issues concerning fitness, wellness, and sport performance. Other work by Blair & Connelly '96, Brooks & Faulkner '94, Osness '87, as well as the National Strength & Conditioning Association (NSCA), and the efforts of Wayne Westcott for the National YMCA and Nautilus are addressing the needs of the senior population from a wellness and fitness standpoint. Many of these same organizations are beginning to recommend, design, and program safe and effective exercise or activity for the senior community. **The general group consensus is that you're never too old to exercise,** and research has shown that people in their nineties can make significant strength and performance gains when placed on a medically sound and safe exercise program.

Progressive Programs to Guide Your Exercise Attentions

The following assessment of two specific exercise programs available to the senior community should help all of us understand:

- **What is being done to assist the development and maintenance of safe and effective exercise programs for the active older adult?**

YMCA Aquaerobics - Many YMCA's across the globe offer an outstanding water exercise class called aquaerobics. Aquaerobics is a combination of aerobic activity in the shallow ends of a swimming pool. **The water acts as a cushion to the joints and promotes lubrication while alleviating nearly all compression factors associated with dry land exercise.** The participant is usually in water no deeper than waist to chest high performing basic movements to the rhythms of music. A certified instructor instructs progressive exercise using the water as a medium for resistance. Often the facility provides small styrofoam kickboards or slightly filled water jugs as devices to push and pull in the water for increased movement activity and resistance. The traditional class lasts anywhere from 30-60 minutes in duration with short rest periods for fluid breaks and socialization. **I recommend sampling a YMCA aquaerobics class if there is one accessible to you.** The costs are minimal usually affording nonmembers the opportunity to attend for a specific price. Give your local YMCA or YWCA a call and inquire about their aquaerobics or water exercise classes for adults and seniors. I guarantee you will enjoy it.

Senior Strength Training - Recently attending a workshop designated to address the issue of specific training, I was pleased to be informed the impetus behind it was a group known as One-On-One Training. One-On-One Training is a chain of health clubs and a form of training designed to accommodate the needs of the mature adult. **Very simply, guaranteeing results to the individual who has specific time restraints.** One-On-One Training is a form of higher intensity one set to failure strength training exercising the entire body three days a week in only 30 minutes. The concept employs personal training to every member or visitor of the facility for a 30-minute segment. **The exerciser is guided through a line of strength training machines (Nautilus, Med-x, Hammer Strength, as examples) working the entire body from head to toe, anterior and posterior in only 30 minutes.** The exercise guide (trainer) has been trained to adjust the machines to appropriate settings specifically for the individual. After adjusting the seat heights and resistance factor, the exerciser is appropriately motivated and trained for one single set to near failure on the machine. Then moving to the next machine with a 30-60 second time frame allowing only enough time to catch breath or fluids. The trainer maintains a training log for the exerciser and adjusts the resistance according to analytical criteria and the exercisers adaptations. **I recommend this type of programmed exercise as an extremely proven form of effective strength training to the senior or aging adult.** Though this specific chain or club may not be present in your area, you have an option to hire a personal trainer or select one within the club setting of your choice.

Though both recommendations of quality senior exercise programming are financially obligated, being selective and particular with this issue is of extreme importance to me. I strongly urge you to look to your community and seek out an exercise professional either at a YMCA or One-On-One Training Facility to ensure complete safety and medically sound training. Do not entrust your health and fitness needs to anyone who says they know exercise. Rather entrust the name the person or people represent through their established credibility and experience.