

Help I've Fallen and I Can't Afford to Get Up

"Promoting Active Lifestyles"

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National Senior Health & Fitness Day 2008

By Randy Eady, M.Ed, USSG Certified,
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What Comes Down and What Goes Up?

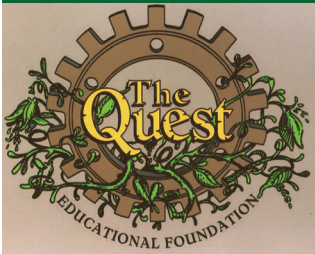
From a pragmatic viewpoint "**Fall Prevention**" in the U.S. today is analogous to the state of the trash collection business in the early 1980's: it touched everyone's life to some degree, but few gave it much thought. Those few, however, were visionaries that glimpsed a raising ecological concern (culminating with the infamous Love Canal neighborhood toxic waste exposure), coupled with an industry skewed set of regulations and legislation that financially favored early waste management "venturists". As much as the leaders in the waste management/disposal industry, as it is known today, recognized an economic boom would trigger consumer waste on a massive scale, the rate of the age-advanced population growth and sky rocketing medical costs are triggering a similar civic response in the later half of this decade...



A Perfect Storm

In essence, it's a "**perfect storm**" of **demographic, cultural and social factors** that compromise America's future quality of health and wellness. Or as David Walker, the U.S. comptroller general put it in USA Today, **the U.S. will be hit by "a demographic tsunami" that will "never recede."** The baby boomers total 77 million, and many crest the venerable age of sixty this year. Without some curtailing of boomer promised entitlements like Medicare and Social Security, the same article continued, "the national debt will grow more than \$3 trillion through 2010, to \$11.2 trillion." (The interest on that amount alone is about \$561 billion in 2010.) The U.S. Department of Commerce, Bureau of the Census, World Health Organization and the National Institute On Aging report as a whole, the older (60+) population will grow rapidly in the coming years. Again, in less than four years (2010), they say "the growth rate of the older population will be three times as high as the total population, and growth of the 75+ segment will be accelerating." These organizations project from 2006 until 2040 the number of people aged 65+ will swell from 35.2 million to over 77 million. To complicate matters, these same health professionals indicate this population will also achieve a commensurate robustness in girth as decades of sedentary and dietary habits place a greater strain on hip and knee joints and bring forward obesity and diabetes in record numbers.

According to the **American Academy of Orthopedic Surgeons**, the cost to Medicare in the past 10 years for *fall related hip fractures* has risen to \$24.2 billion -- over a 300% increase since 1995. Falls are now the leading cause of injury related visits to the emergency room as reported by the **American Academy of Family Physicians** and have become the leading cause of injury leading to death among older adults. Connect that with the fact the **American Medical Association** reports that 40% of the people over 65 have balance disorders sufficient to put them at risk of falling--all the while the population is growing heavier as they become increasingly inactive--and you have an explosion in fall risk. It's no wonder nearly one million Americans underwent joint replacement surgery in 2005 (2 1/2 times the number in 2000). And, that the four leading makers of orthopedic devices (**Zimmer, Johnson and Johnson's Biomet, Smith and Nephew and Stryker**) linked with knee and hip implants forecast double digit growth as nine out of ten Americans stand (or sit, as the case may be) to be Body Mass Index overweight by 2025.



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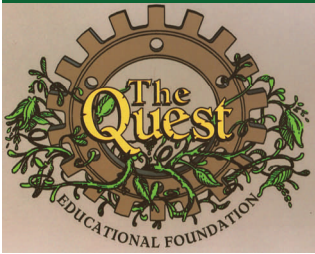
It's also no wonder increased demands are being made on healthcare systems that many are finding difficult to meet. The first evidence escalating financial costs have reached a tipping point arrives from the United Kingdom. Perhaps, in a portend of things to come across the Atlantic, the more socialized National Healthcare System (**NHS**) in Britain announced in late November due to a \$1.4 billion loss projection for 2007, overweight people will be denied replacement joints. Specifically, in certain regions, patients will no longer be considered for hip and knee replacement if they have a BMI index of more than 30, the clinical threshold of obesity.* Noting the rapid rise in costs fall related injuries have placed on the healthcare system in the U.S., Congress took action by passing the Fall Prevention Act of 2003. The Senate and House then approved the \$13 million Keeping Seniors Safe from Falls Act of 2004. The Joint Commission on Accreditation of Healthcare Organizations (**JCAHO**), in 2005 followed suit by issuing Patient Safety Goals to include Fall Risk Assessment and Action.

Whereas, withholding medical services such as joint replacement may be addressing an immediate symptom, there are positive measures that can be swiveled into play as part of a preventative wellness program. For instance, a recent study conducted in Connecticut by the **National Institute on Aging**, found component approaches that included balance and coordination as part of a fall intervention strategy resulted in a 36% reduction in the fall rate among the elderly. Further, this study found health care expenditures averaged \$2,000 less in the first year for those receiving a fall prevention program compared to those receiving usual care. Moreover, the argument for a preventative leisure~recreation~rehabilitation component approach to age-advanced wellness seemed particularly relevant when examined from an understanding about how the balance

"Stop Using and You Start Losing"

To understand how inactivity directly leads to being injury prone is simply to understand how the body's balance system operates. Equilibrium is maintained by the interplay of three systems--visual, vestibular and proprioceptive (sense of where our body parts are in time and space). These systems, whose functions are to integrate this information, constantly report their input to the brain. When the brain receives a conflicting message from one or more of these systems an episode of dizziness, vertigo or sense of disequilibrium occurs. In addition, many experts assert a reduced sense of proprioception is the primary cause of age-related falls. Sensitivity to the receptor cells (which tell the brain where you are in space) decreases and/or becomes contaminated with age. The brain--sometimes missing these messages about our posture and positioning--gets triggered into a loss of balance stimulation. Slower reflexes, decreased muscle strength, loss of eyesight and depth perception, and onset of conditions such as Parkinsonism, Meniere's Disease, and arthritis also contribute to a diminished sense of equilibrium.

All this, in turn, generates a lack of self-assurance in what it feels like to move with confidence, without a natural feeling of coordination. Feeling less secure will lead to smaller steps. Shorter stride leads to less mobility. Less activity leads to less movement familiarity. Yet it's precisely the wrong direction for older adults: the key to balance is imbalance. To recapture balance or reduce dizziness, you have to challenge it--which many people won't do because of a fear of falling or provoking a symptom they think is bad. What's really bad is arresting the very process that would build confidence to do more movement and ultimately improve the risk against falling. Significantly, the **Keeping Seniors Safe from Falls Act of 2004** recognized the importance of building this psychological and physical bridge and authorized an intensification of research on effective approaches to fall prevention and treatment. This landmark legislation also advanced the notion that recreation and rehabilitation will blend into a continuum of activity that should comprise a sizable portion of the elderly, family member and care giver daily routine.



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Lodging Leisure into Recreation and Rehabilitation

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This is not always an easy notion to accept even though there's a lot to be said about therapeutic recreation. Oftentimes, people in the U.S. equate the word leisure or "leisure activities" with torpor, or laziness. These activities are rarely viewed as "productive" and therein lies the challenge for those engaged in the promotion of adult play or leisure exercise as a preventative to falls. Fortunately, a great deal of scientific information and a handful of trends are emerging to allow people to accept the notion that leisurely physical pursuits can fill the chasm between recreation and rehabilitation.

Besides being sound health advice, it's a thought underscored in recent studies focused on specific physical activities that accentuate muscle balance development and bilateral coordination. These areas have come to the forefront as walking gait and asymmetrical posture--related to a lifetime of movement adjustments--have vexed those that want to be mobile but experience quite a bit of pain. Importantly, this concept of leisure rehabilitation also hits the scene on the heels of the social acceptance of healthy aging.

A book by Dr. Andrew Weil, sporting the same title emerged in 2005 as a NY Times #1 Bestseller and implores readers to do everything in their power to delay the onset of age-related disease, discomfort and loss of vigor by developing a grace toward aging. As Dr. Weil intones on his web site, "no matter how old you are, now is the time to *take your first steps* toward living an optimum lifestyle and growing old gracefully." Adding traction, findings reported in the journal **Lancet Neurology** in Oct '05 by the **Aging Research Center of Sweden's Karolinska Institute**, found people who engaged in "leisure time physical activity" at least twice a week as they passed through middle age, had a **50 percent lower chance of developing dementia**, and a **60 percent lower chance of developing Alzheimer's disease**. Dr. Miia Kivipelto, the study's main author, concluded that "if an individual adopts an active lifestyle in youth and at midlife, this may increase their probability of enjoying both physically and cognitively vital years later in life."

What's more, recreational activities provide a wonderful blend of physical and emotional stimulation that can significantly promote health and well being. Vital connections are formed and sustained between physical and spatial awareness; ways to coordinate movement in time and space securely situate people within the framework of their own limitations. This actually helps exercise participants understand the important integration of mind and body and allows them to maintain a finely tuned channel of thought~muscle communication. For example, skills learned in a balance and bilateral coordination refinement class offer a safe approach to increasing activity. Sensory input becomes more reliable; posture more upright; dynamic balance more consistent. So ultimately, when participants feel safer, they will desire more activity, which in turn builds the strength, flexibility, and endurance needed to maintain balance and prevent falls.

In the end, it's all about shifting "mindsets" and creating fun and affordable options in the realm of preventative leisure mobility. If we can do that then we'll achieve tremendous savings in medical costs and make a fantastic investment in the quality of health and well being of Americans. Maybe even reverse what goes up and what comes down!

Randy Eady, M.Ed, a former professor and counselor in Behavioral Sciences and Leadership at the USAF Academy, CO, is a big proponent of the wellness benefits of leisure recreation and integrative exercise. He's an intergenerational balance and coordination specialist who conducts Balance Bookends movement classes for the young (between the age of 4-9) and those "young at heart" hovering around 60. He's designed a curriculum pack (The Glider Rider Flight Plan) and booklet (Tommy and Grandpa Learn to Ride) to supplement his Glider Rider Series of Youth and Mature Adult Balance and Coordination Learning and Refinement Bikes.

He has consulted with the Consortium of Geriatric Research, Education and Clinical Centers of the Veterans Affairs Medical Centers (GRECC-VA), the National Council on Aging and the American Society on Aging. His work assists health care professionals implement socially facilitated, multi-generational wellness programs directed at leg muscle strength as the #1 factor in physical health for older populations. You can find out more about his classes at Generations United (www.gu.org).

* With the exception of this reference, taken from The Guardian newspaper article by John Carvel on Nov 23rd, 2005 (see www.societyguardian.co.uk/health), all attempts have been made to embed source/documentation for ease of reading/reference.