

# Big Strides And Giant Steps

By: Robert F. Otto

The way older people view themselves affects how they walk. There is new evidence in a recent Harvard study showing that boosting the self-image of our elderly could result in a mind-over-matter improvement in their stride. The study suggests the importance of psychological factors in physical performance. In the study one intervention - tapping into participants' subconscious by flashing words on a computer screen so fast they cannot be read - increased walking speed by nearly 10 percent in the elderly. There were 47 participants between the ages 63 and 82, who described themselves as healthy. They were randomly assigned to one of two groups, to participate in a thirty-minute computer word game in which the words flashed briefly on the screen. While the words appeared too quickly to be read - they looked like dark flashes - they stayed long enough to deliver a subconscious message to the mind. Before and after the computer game the participants were timed walking 300 feet to determine walking speed. Swing time was also measured for two minutes using special equipment. Swing time is an important characteristic that affects our balance. It is the amount of time spent with one foot off the ground.

When the researchers compared walking patterns, the group exposed to positive words about aging, such as "wise," "astute" and "accomplished" showed a significant increase in walking speed and swing time. The group receiving negative reinforcement words such as "senile," "dependent" and "diseased" showed no significant differences in either walking speed or swing time.

The team concluded that "negative self-stereotypes of aging" likely play an important role in the loss of walking speed and swing time as people grow older.

The experimental approach in this study - testing the effects of stereotypes in the elderly by tapping into their subconscious - was developed by Becca Levy, a social psychologist, who was at Harvard when the study was conducted and is now an assistant professor at Yale University School of Medicine. She had earlier used the same technique to show that positive subliminal words improved memory while negative ones led to memory decline in the elderly, but not in younger participants.

More recently, Levy has shown that this approach can influence handwriting, self-confidence and even the will to live. She said that a soon-to-be-published study found that elderly individuals who received positive psychological reinforcement without being aware of it "had a stronger will to live than those shown negative images." Jeffrey M. Hausdorff, an assistant professor of medicine at Harvard Medical School and a researcher at Beth Israel Deaconess Medical Center in Boston, hopes that the new study, funded in part by the National Institute on Aging and the National Institute of Mental Health, will promote further efforts to improve self-image and maximize walking ability in the elderly by using psychological as well as physical resources. The improvement found in the short computer experiment is similar to the amount of walking speed improvement seen in studies in which the elderly participated in weeks or months

of rigorous physical exercise and weight training to improve walking speed. Follow-up research may seek to identify how long the improvement in walking lasts after positive input and what benefits there might be with less-healthy groups, such as Parkinson's disease patients. The findings suggest that positive reinforcement helps to improve functioning in the elderly.