

# Active Young Adults Are Slimmer in Middle Age

BY MARY ANN MOON

FROM JAMA

Maintaining a high level of physical activity throughout young adulthood curbed both the weight gain and the expanding waistline characteristic of middle age, according to a report in the journal.

That finding, from a longitudinal study that tracked men and women during the 20-year transition from young adulthood to middle age, “highlights the value of incorporating and maintaining at least 30 minutes of activity into daily life,” said Dr. Arlene L. Hankinson of the department of preventive medicine at Northwestern University, Chicago, and her associates (JAMA 2010;304:2603-10).

The investigators undertook their study because public health guidelines recommending regular exercise have been “largely based on cross-sectional observational and short-term clinical evidence that cannot account for the changing risk of weight gain with in-

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**Major Finding:** Men with high activity levels in young adulthood gained 2.6 fewer kilograms and 3.1 fewer centimeters in waist circumference per year than did men with low activity levels; women with high activity levels gained 6.1 fewer kilograms and 3.8 fewer centimeters in waist circumference per year than did women with low activity levels.

**Data Source:** Secondary analysis of data on 3,554 subjects in the CARDIA multicenter, longitudinal (20-year), cohort study.

**Disclosures:** The National Heart, Lung, and Blood Institute supported the study. No financial conflicts of interest were reported.

creasing age,” the study investigators noted.

Moreover, it had never been shown that federal guidelines advocating 30 minutes of moderate to vigorous daily activity are sufficient to prevent weight gain during the transition to middle age, “when the highest risk of weight gain occurs,” they said.

Dr. Hankinson and her colleagues examined the issue using data from CAR-

DIA (Coronary Artery Risk Development in Young Adults), a multicenter, longitudinal, cohort study of the development of coronary risk factors in young adults.

They assessed data collected for 3,554 subjects who were 18-30 years of age at baseline in 1985-1986 regarding self-reported participation in 13 specific sports, exercise, home maintenance, and occupational activities.

At all activity levels, men and women alike showed gains in weight, body mass index, and waist circumference during the study’s 20 years of follow-up.

“Some age-related weight gain may be unavoidable in our society, as it has been observed even among a population of vigorously active runners through middle age,” the researchers noted.

However, habitual daily vigorous physical activity was associated with smaller increases in mean weight, BMI, and waist

circumference, compared with moderate, inconsistent, or low activity, the investigators added.

Men with high activity levels gained 2.6 fewer kilograms, and women with high activity levels gained 6.1 fewer kilograms per year than did men and women with low activity levels.

Similarly, men with high activity levels gained 3.1 fewer centimeters and women with high activity levels gained 3.8 fewer centimeters in waist circumference per year.

However, only a small proportion of the study subjects (11% of men and 12% of women) maintained that high level of vigorous activity over 20 years.

Approximately 37% of the study cohort participated in regular activity equivalent to the levels recommended by the U. S. Department of Health and Human Services.

At that level of activity, men gained 1.8 fewer kilograms and women gained 4.7 fewer kilograms during follow-up than did study subjects who had lower levels of activity. ■

# Seniors’ Walking Speed May Predict Their Life Expectancy

BY MARY ANN MOON

FROM JAMA

Gait speed correlated with expected years of life remaining to people aged 65 years and older, with increased walking speed predicting longer life expectancy, according to a report in the Jan. 5 issue.

For both sexes and at any age older than 65 years, a gait speed of 0.8 meters per second correlated with the median life expectancy for a person’s age and sex. Faster walking speeds consistently correlated with extended survival, said Dr. Stephanie Studenski of the division of geriatric medicine at the University of Pittsburgh and her associates.

They assessed the relationship between gait speed and survival in a pooled analysis using



Predicted years of life remaining correlated with gait speed.

data from nine cohort studies of community-dwelling adults. Each study included at least 400 people, gait speed data at baseline, and follow-up for at least 5

years. All of the studies measured gait speed by having subjects walk at their usual pace from a standing start for 6-8 feet indoors.

There were 34,485 study subjects, including “substantial” numbers of African American and Hispanic patients, as well as 1,765 who were older than 85 years. Gait speed ranged widely, from less than 0.4 meters per second (in 1,247 people) to more than 1.4 meters per second (in 1,491 people). There were 17,528 deaths during follow-up.

Predicted years of life remaining correlated with gait speed for patients of both sexes and all ages.

A walking speed of approximately 0.8 meters per second was associated with the predicted median life expectancy for a

VITALS

**Major Finding:** For patients older than 65 years, a gait speed of 0.8 meters per second correlates with the median life expectancy for their age and sex, while faster gait speeds predict longer life expectancy.

**Data Source:** A pooled analysis of nine cohort studies that assessed gait speed in older adults and followed them for 6-21 years to track survival.

**Disclosures:** The study was supported by the National Institute on Aging and by Merck. Dr. Studenski also received support from Merck, Novartis, and GTX, and royalties from “Hazzard’s Geriatric Medicine & Gerontology,” Sixth Edition (McGraw Hill, 2009).

subject’s age and sex. Gait speeds faster than that rate predicted longer-than-average life expectancy, while slower gait speeds predicted shorter-than-average life expectancy. Gait speeds of 1.2 meters per second and faster predicted “exceptional” life expectancy, the investigators said (JAMA 2010;305:50-8).

Gait speed “was especially informative after age 75 years” in patients who had no, or only minor, functional limitations. It may be less helpful in predicting life expectancy for patients who already report functional impairments and dependency on others for performing the activities of daily living, the investigators noted.

The data allowed Dr. Studenski and her colleagues to calculate survival estimates for a broad range of gait speeds, and to calculate absolute rates and median years of survival. “Compared with prior studies that were too small to assess potential effect modification by

age, sex, race/ethnicity, and other subgroups, we were able to assess multiple subgroup effects with substantial power,” the researchers said.

However, they emphasized that the survival estimates must be validated in additional data sets before being used in clinical practice.

“Because gait speed can be assessed by nonprofessional staff using a 4-meter walkway and a stopwatch, it is relatively simple to measure compared with many medical assessments,” they added.

In practice, gait speed can be used to identify elderly patients with a high probability of living 5-10 more years, who can then be targeted for preventive interventions that require a long time before benefits are realized. It can also identify patients at increased risk for early mortality, who can then be targeted for interventions to maximize health and survival, the researchers explained. ■

## Gait Speed May Become a New ‘Vital Sign’

The study establishes the validity of gait speed testing, which is inexpensive, objective, easy to interpret, and easy to adopt into clinical practice, said Dr. Matteo Cesari.

In the near future, gait speed may become considered a new “vital sign” that is specifically sensitive in older patients.

The study by Studenski and her colleagues demonstrates that, taken together

with patient age and sex, gait speed estimates life expectancy with the same predictive value reported for more complicated models that require much more clinical data, such as concomitant disease, body mass index, blood pressure, and medical history.

The usefulness of assessing gait speed is obvious for geriatricians and primary care physicians, but other specialists may also find it helpful. In particular, oncol-

ogists and cardiologists can use gait speed to identify which patients may be eligible for more aggressive interventions because they are chronologically, but not biologically, “old.”

DR. CESARI is at Università Campus Bio-Medico, Rome. He reported no financial conflicts of interest. These comments were taken from his editorial accompanying Dr. Studenski’s article (JAMA 2010;305:93-4).