Increasing Walking Speed and Step Count for Longevity

Empower clients to walk more and move a little faster.

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Advances in technology have made it convenient for a big part of society to sit most of the waking day. Although long periods of seated inactivity have become the norm, there are risks of prolonged sitting—and research shows that these risks are independent of the volume of exercise being performed during workouts. This column explores why increasing client daily step count and walking speed is an important and worthwhile goal for all fitness professionals.

The Perils of Prolonged Sitting

Consider this as a first step in understanding the risks: People who meet established exercise guidelines, such as 150 minutes per week of moderate-intensity exercise, are still vulnerable for developing cardiovascular disease if their lifestyle includes prolonged periods (up to 10–12 hours per day) of sitting and a low number of steps per day (Burton & Coyle 2021).

Burton & Coyle summarize several studies that indicate a reduction in daily step count is associated with health risks including endothelial dysfunction (leading to constriction of the large blood vessels of the heart), decreased insulin sensitivity (thus requiring greater amounts of insulin to lower blood glucose levels) and increased abdominal fat.

Clearly, it's time to step it up! Research gives us some guidelines about how to help your clients take their own steps toward better health.

See also: Stretches After Sitting All Day

How Many Steps Per Day Is Best?

The optimum step count per day for favorable health benefits is beginning to be elucidated with new research. The *2018 Physical Activity Guidelines Advisory Committee Scientific Report* asserted that 10,000 steps per day is a popular health message, yet it is not an evidence-based public health recommendation (DHHS 2018; Jayedi, Gohari & Shab-Bidar 2022).

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Consequently, Jayedi, Gohari, & Shab-Bidar conducted a dose-response meta-analysis on studies (of men and women) published since 2015 investigating the association between device-based step count per day and all-cause mortality risk in the general population. A major finding of this research was that each 1,000 steps per day increment is associated with a 12% lower risk of all-cause mortality in the general adult population and a 13% lower risk in adults older than 70 years.

Jayedi, Gohari, & Shab-Bidar concur with previous research that shows a greater number of steps per day is correlated to a lower risk of type 2 diabetes and cardiovascular events.

Overall, the findings denote that more steps per day is quite beneficial in combatting all causes of mortality. From this research, the evidence suggests that for health, a goal of >12,000 steps per day is a new target for fit pros to encourage clients to progressively work up to.

Stepping Through Commercials

Walking in place during TV commercials is a creative and effective idea to help clients become more active.

According to research cited by Steeves, Thompson, & Bassett (2012), TV viewing is the most dominant leisure time activity in the United States; American adults spend about 38 hours per week watching television. Steeves, Thompson, & Bassett assert that this sedentary leisure time activity negatively impacts body-weight status and the risks of chronic diseases—but they also suggest a fresh approach: Instead of trying to reduce viewing hours, people can turn TV time into an active process.

Steeves, Thompson, & Bassett submit that creating small changes in physical activity behaviors may be a modern method for increasing client daily physical activity. Their recommendation—based on their investigation—is having participants step in place during TV commercials.

Walking in Place and Calorie Expenditure

For their study, the team recruited 23 sedentary men and women volunteers, ages 18–48. Participants had their energy expenditure measured in stages that involved sitting, standing, stepping in place and treadmill walking at 3 miles per hour. Each stage lasted 5 minutes, and there was a 1-minute transition period between stages. For the stepping-in-place stage, participants self-selected a “moderate pace” (100–120 steps per minute) with each foot stepping up about 6–8 inches off the ground. Participants took 106 steps per minute while stepping in place compared with taking 112 steps per minute at a 3-mph speed on a treadmill.

From the energy expenditure data collected, the researchers calculated that the average number of calories (165 kcal) for 1.5 hours of TV viewing with commercial stepping (~38 minutes of actual stepping) is roughly equivalent to the number of calories expended during 30 minutes of treadmill walking at a pace of 3 mph (150 kcal). Interestingly, the energy cost of TV commercial stepping was nearly twice that of viewing TV in a seated position. This makes stepping in place during commercial breaks an innovative new movement option for clients.

Walking Speed and Health Outcomes

In terms of program design, encouraging clients to walk at a faster pace will likely result in more meaningful health benefits; studies show that walking at a faster pace elicits greater physiological responses (Stamatakis et al. 2018). Less is known, however, about the long-term health benefits of habitual walking speed. Therefore, Stamatakis et al. examined the associations between self-reported walking pace with all-cause, cardiovascular disease and cancer mortality in a population of 50,225 walkers in Great Britain.

Results indicate that fast-paced walking is associated with an impressive reduced risk of all-cause and CVD mortality compared with walking at a slower pace. However, there was no evidence of a similar relationship with cancer mortality. The researchers hypothesize that the association between walking pace on CVD mortality may be due to a greater stimulus for physiologic adaptations in functions known to influence CVD mortality.

See also: Walking Speed: A Predictor of Functional Health

Walking Speed and Longevity in Older Adults

A review of nine studies with 34,485 women and men participants showed that gait speed (walking speed) is associated with survival, health, functional status and well-being with older

adults (Studenski et al. 2011). This strong correlation is likely because walking requires body support, movement control and energy and thus puts demands on multiple organs and organ systems, including the lungs and heart and the circulatory, musculoskeletal and nervous systems.

From their research, Studenski et al. suggest that usual walking speeds less than 1.3 mph may indicate the risk of early mortality for older adults. Healthy older adults walk about 1.8 mph, while usual walking speeds of 2.2 mph suggest a better-than-average life expectancy. Studentski and colleagues hypothesize that older adults with usual walking speeds greater than 2.7 mph may experience exceptional life expectancy.

This hypothesis needs more scientific research.

Next Steps

To empower adult clients to walk more and a little faster, fit pros may choose to regularly incorporate motivating phrases for walking such as, “brisk is better,” “put some spring in your step,” “faster feet, faster heart, more health,” “a faster stride equals a longer life” or “get up and go.”

Total walking steps of >12,000 steps per day appears to be a new guideline for optimizing health. Let’s get our clients to “step on it”!

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Factors That Influence Walking Speed

Physical

- musculoskeletal conditions/muscle strength
- aerobic endurance
- sensory function
- flexibility
- agility
- balance

Psychological

- mental health
- motivation
- cognitive function

Behavioral

- vitamin D intake
- physical activity level
- vegetable protein intake

Environmental

- public transport accessibility

Source: Wu & Zhao 2021.

10 HIIT Walking Workouts

Here are 10 HIIT walking workouts from Len Kravitz’s, *Anybody’s Guide to Total Fitness.*

Notes for all workouts:

- **Intensity:** Use the rating of perceived exertion scale and talk test to determine appropriate walking intensities for warmup, work and recovery intervals. For the 10 HIIT workouts in this column, we are using the original 6–20 RPE scale. An RPE level of 10–13 is light to somewhat hard; level 15 feels hard or challenging.
- **Warmup:** Complete a 5- to 7-minute progressive walking warmup at a light-to-mild intensity.
- **Work/Recovery Ratio:** The title of each workout indicates its work/recovery ratio and whether it’s in seconds (s) or minutes (m). There are many interval training apps that clients can get for their mobile devices to set times for these HIIT walking workouts.
- **Number of Intervals:** Determine the number of interval bouts for each workout based on each client’s fitness level and goals.

- **Cooldown:** Complete a 3- to 5-minute walking recovery at a mild intensity after each HIIT walking workout. Conclude the cooldown with individualized stretching.

Workout	Interval	Duration	Intensity
1. 60s/90s	work	60 seconds	RPE: 15 (moderate difficulty talking)
	recovery	90 seconds	RPE: 10–13 (mild to no difficulty talking)
2. 60s/60s	work	60 seconds	RPE: 15 (moderate difficulty talking)
	recovery	60 seconds	RPE: 10–13 (mild to no difficulty talking)
3. 60s/30s	work	60 seconds	RPE: 15 (moderate difficulty talking)
	recovery	30 seconds	RPE: 10–13 (mild to no difficulty talking)
4. 90s/30s	work	90 seconds	RPE: 15 (moderate difficulty talking)
	recovery	30 seconds	RPE: 10–13 (mild to no difficulty talking)
5. 30s/30s	work	30 seconds	RPE: 15 (moderate difficulty talking)
	recovery	30 seconds	RPE: 10–13 (mild to no difficulty talking)
6. 30s/60s	work	30 seconds	RPE: 15 (moderate difficulty talking)
	recovery	60 seconds	RPE: 10–13 (mild to no difficulty talking)
7. 3m/3m	work	3 minutes	RPE: 15 (moderate difficulty talking)
	recovery	3 minutes	RPE: 10–13 (mild to no difficulty talking)
8. 3m/4m	work	3 minutes	RPE: 15 (moderate difficulty talking)
	recovery	4 minutes	RPE: 10–13 (mild to no difficulty talking)
9. 3m/6m	work	3 minutes	RPE: 15 (moderate difficulty talking)
	recovery	6 minutes	RPE: 10–13 (mild to no difficulty talking)
10. 4m/2m	work	4 minutes	RPE: 15 (moderate difficulty talking)
	recovery	2 minutes	RPE: 10–13 (mild to no difficulty talking)

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