VOLUME 12 • ISSUE 4 • JULY/AUGUST 2006 • $5.00

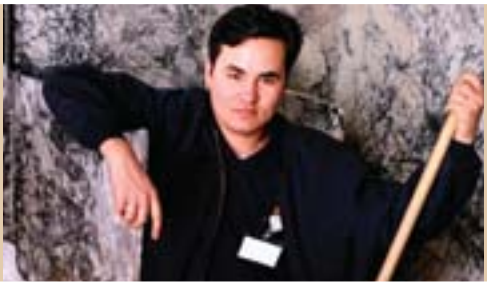
fitness matters

American Council on Exercise
A Non-profit Organization

Do You

Do 10K

a Day?



Exclusive ACE study examines on-the-job physical activity of 10 common occupations

ACE-sponsored
STUDY

Do You Do 10K a Day?

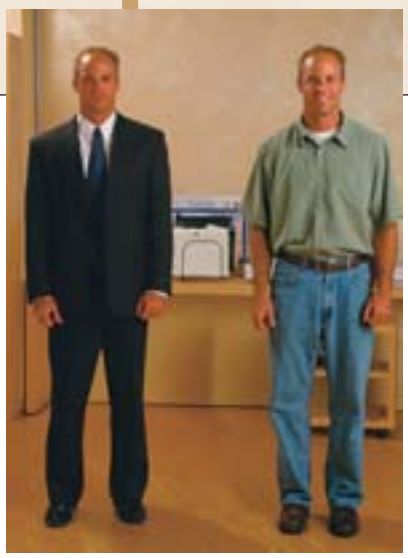
By Mark Anders

Exclusive ACE study examines on-the-job physical activity of 10 common occupations

Ten thousand is a big number: 10,000 miles, $10,000 bucks, 10,000 years—10,000 of anything is a heck of a lot. So it's no surprise that some folks are a bit daunted when they hear about Shape Up America's physical activity recommendations in their 10,000 Steps Program.

Equivalent to roughly four to five miles of walking, 10,000 steps in a single day is a great exercise prescription for the nearly 70 percent of the U.S. population that isn't getting enough exercise. But for most, the question is when does one fit that kind of activity into his or her day? Given that as a society we spend at least half of our waking hours on the job, the answer lies in the workplace.

Continued on page 10



Casual Day Equals Boosted Calorie Burn:

Results from another ACE pedometer-based study

The type of clothes you wear to work may directly affect your daily physical activity level. For this ACE-commissioned study, released in 2004, researchers from the University of Wisconsin, La Crosse, used pedometers to track the activity levels of 53 healthy men and women from 25 companies during regular workdays as well as casual days, when they were allowed to wear jeans and more comfortable shoes.

Study results showed an 8 percent increase in physical activity levels and an extra 25 calories burned on casual clothing workdays versus those days when conventional office attire was worn. The elevation in activity levels may seem minor, but extrapolate that increase across an entire year and it's easy to see the benefits. Wearing casual clothing every day for 50 weeks of work would translate into burning an additional 125 calories per week or 6,250 calories per year—the equivalent of almost two pounds.

This study was funded solely by the American Council on Exercise (ACE) and conducted by John P. Porcari, Ph.D., and Reem Ekhwan, M.A., at the La Crosse Exercise and Health Program of the University of Wisconsin, La Crosse.

"What you do in the workplace really can have an impact on your physical activity levels and your overall health," says John Porcari, Ph.D., of the University of Wisconsin, La Crosse. "A lot of the research done on mail carriers and people that are active in the workplace shows that they tend to have lower body weight, higher HDL blood cholesterol [the good kind] and lower blood pressure."

If you had to guess, how many steps a day do you think you rack up in a normal day at the office? "Many people have misconceptions about how much they move in a day," says Cedric X. Bryant, Ph.D., F.A.C.S.M., chief science officer for the American Council on Exercise. "We wanted to raise the awareness level of how much they are actually moving and give them encouragement to move more."

So for this latest study, ACE enlisted Porcari and his team of exercise scientists at the University of Wisconsin, La Crosse, Exercise and Health Program, to measure the amount of workday physical activity one can expect from a variety of common occupations.

The Study

Led by Porcari and Reem Ekhwan, M.A., the researchers recruited 98 volunteers from businesses in the local La Crosse area. The volunteers represented 10 different occupations (with roughly 10 volunteers per occupation) including secretaries, restaurant servers, construction workers, mail carriers, flight attendants, lawyers, police officers, nurses, teachers and factory workers. There was a wide range of ages represented in the various occupations, with factory workers being the youngest (average age: 26) and secretaries being the oldest (average age: 52).

Each participant was assigned a basic pedometer and asked to wear it during work hours for three consecutive days. To ensure that the pedometer was calibrated to accurately count steps, each subject had his or her individual stride length inputted into the pedometer. Once back on the job, the subjects went about their workdays as usual. At the end of each day they completed a daily log recording the number of steps taken, total distance covered, and a brief description of the duties they performed on that day.

Table 1. Average steps and distance walked by people in the different occupations over the course of an average working day.

Occupation	Total Steps	Total Distance (mi)
Secretaries	4,327 ± 1,671	1.7 ± .66
Teachers	4,726 ± 1,832	1.9 ± .73
Lawyers	5,062 ± 1,837	2.0 ± .73
Police officers	5,336 ± 1,767	2.1 ± .70
Nurses	8,648 ± 2,461	3.4 ± .98[a]
Construction workers	9,646 ± 2,719	3.8 ± 1.08[a]
Factory workers	9,892 ± 2,496	3.9 ± .99[a]
Restaurant servers	10,087 ± 2,908	4.0 ± 1.15[a]
Custodians	12,991 ± 4,902	5.2 ± 1.94[a,b]
Mail carriers	18,904 ± 5,624	7.5 ± 2.23[a,b,c]

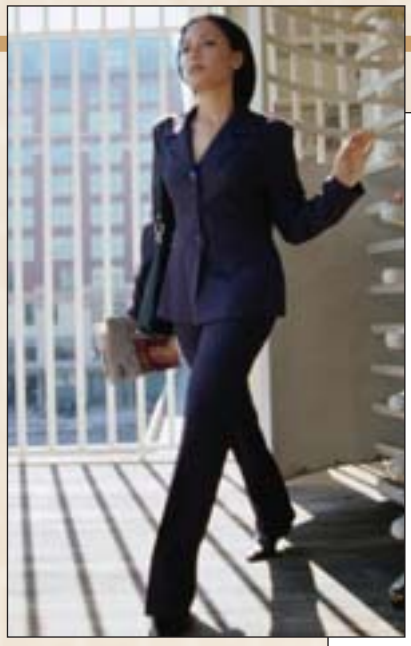
[a]Significantly different than secretaries, teachers, lawyers and police officers ($p<.05$).

[b]Significantly different than nurses, construction workers, factory workers and restaurant servers ($p<.05$).

[c]Significantly different than all other occupations ($p<.05$).

The Results

After all the data were collected, the researchers started crunching the numbers. Across the board for each occupation, researchers found that the number of steps taken per day by each volunteer remained consistent over the three recording days. Therefore, the data presented in Table 1 (page 10) represent an average of the three days for each occupation. The table illustrates that secretaries, teachers, lawyers and police officers walked significantly fewer steps and less distance than the other occupations. At the low end, secretaries were shown to walk only an average of 4,327 steps (1.7 total miles). On the other end of the spectrum, custodians and mail carriers showed significantly more daily steps and mileage, with mail carriers topping the list at 18,904 daily steps (7.5 miles), nearly double Shape Up America's minimum recommendation.



Since there is some difference in the length of an average workday across occupations, the researchers sliced and diced the numbers again to "normalize the data." This time it reflected both the average steps and mileage per hour as well as for a traditional eight-hour workday. The results came out approximately the same as above. In Table 2 you can see three distinct groups appeared: Least active were secretaries, teachers, lawyers and police officers; nurses, factory workers and construction workers were moderately active; while custodians, restaurant servers and mail carriers were highly active.

The Bottom Line

With a fourfold difference in the number of steps taken by the least active occupation (secretaries) and the most active (mail carriers), it's clear that workplace physical activity varies widely among occupations. Some exceeded the 10,000-steps-a-day goal during their average workday alone, while workers in other occupations—like nurses, construction workers and factory workers—came close enough to that goal that they would undoubtedly attain a total

Continued on page 16

Buy a Pedometer

When it comes to pedometers, simple and cheap is best

Rule number one: Resist the temptation to buy a pedometer with lots of bells and whistles, such as calorie counters, stopwatches, clocks and memory functions. "People tend to get confused by these pedometers that convert steps to calories and miles. All of these conversions are approximations anyway and it makes the pedometer that much more complicated," says Barbara Moore, Ph.D., president and chief executive officer of Shape Up America. "A pedometer that just counts steps is perfectly fine."

Three good options:

- **Activity Technologies AT-70** ($10; www.thepedometercompany.com) counts steps only

- **Yamax Digi-Walker SW-200** ($17; www.digiwalker.com) counts steps only

- **Shape Up America combo set** ($18; www.shapeup.org) includes both a logbook and pedometer (counts steps only)

Table 2. Average steps and distance per hour for each occupation.

Occupation	Hours Worked	Steps/hour	Steps/8 hours	Distance/8 hours
Secretaries	8.0 ± .82	538 ± 199	4,300 ± 1,595	1.7 ± .66
Teachers	8.1 ± .32	584 ± 231	4,675 ± 1,844	1.9 ± .73
Lawyers	8.0 ± .00	633 ± 230	5,062 ± 1,837	2.0 ± .73
Police officers	8.1 ± .32	663 ± 227	5,304 ± 1,819	2.1 ± .72
Nurses	8.8 ± 1.69	986 ± 248	7,889 ± 1,984	3.1 ± .79[a]
Factory workers	10.0 ± .00	989 ± 250	7,914 ± 1,997	3.1 ± .79[a]
Construction workers	8.0 ± .00	1,206 ± 340	9,646 ± 2,719	3.8 ± 1.08[a]
Custodians	8.0 ± .00	1,624 ± 613	12,991 ± 4,902	5.2 ± 1.94[a,b]
Restaurant servers	5.8 ± .63	1,772 ± 587	14,175 ± 4,693	5.6 ± 1.86[a,b]
Mail carriers	9.8 ± 1.55	1,906 ± 443	15,251 ± 3,542	6.0 ± 1.40[a,b]

[a]Significantly different than secretaries, teachers, lawyers and police officers ($p<.05$).

[b]Significantly different than nurses, construction workers and factory workers ($p<.05$).

Do You Do 10K a Day?

Continued from page 11

of 10,000 steps by carrying out their normal activities at home.

On the other hand, those occupations that came in well short of the 10,000 steps goal, such as secretaries, teachers, lawyers and police officers, must make a concerted effort to get more physical activity outside of their job. "A good chunk of Americans out there who aren't in very active jobs, like the typical office worker, will fall far short of that goal," says Bryant. "Those people need to get some kind of supplemental exercise. They need to be more mindful and thoughtful of how to add activity into their daily lives."

Though these averages can give you a good idea of the amount of daily activity a certain occupation can expect, Porcari warns against making broad generalizations. For instance, the factory workers in this study were primarily welders, and their job involved a lot of lifting of metal objects. Many times people associate factory workers with someone sitting at a machine and doing repetitive tasks, so had that sort of factory worker been studied here, says Porcari, the results may have been markedly different.

Here's the take-home message: It's time to take an honest look at your life and your activity levels at work. Get a hold of a pedometer and track your steps for a few days. Sure, for some occupations it's easy to reach the 10,000 steps goal. For others, it'll require a handful of minor lifestyle adjustments. Try taking the stairs rather than the elevator. Go for a walk at lunch. Switch that happy hour at the bar to a game of squash at the gym. Rather than sending an e-mail to a colleague, walk to her office and deliver the message in person.

"When you look at the level of steps that most of these people in this study achieved, it's clear that you don't have to make major wholesale lifestyle changes to get your 10,000 steps and make a difference in your overall health status and physical fitness level," says Bryant. "It only takes small steps—no pun intended."

AMERICAN COUNCIL ON EXERCISE
4851 Paramount Drive
San Diego, CA 92123

Non Profit Org.
U.S. Postage
PAID
Permit No. 15
St. Joseph, MI