

research update

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Walking 10,000 Steps/Day: Are There Benefits?

Practitioners and the media often recommend walking 10,000 steps per day. This recommendation is easy to remember and gives people a goal for increasing their activity (Tudor-Locke & Bassett, 2004). Given the popularity of this message, it's important to know whether or not people get health benefits from walking 10,000 steps.

WILL I GAIN HEALTH BENEFITS FROM WALKING?

Physical benefits have been linked to walking. For example, researchers have shown that sedentary, hypertensive women who walked 9,700 steps per day at a self-selected pace reduced their systolic blood pressure and body mass after walking for 24 weeks (Moreau et al., 2001). (However, in another study, sedentary adults who walked twice a week for 45 minutes at a self-selected pace decreased their systolic blood pressure, but showed no change in fitness, body mass, waist/hip circumference, or diastolic blood pressure (Murphy, Murtagh, Boreham, Hare, & Nevill, 2006).)

Mental health benefits have also been linked with physical activity (Fox, 1999). For example, sedentary women who engaged in a walking program reported improved mental and emotional satisfaction and a decrease in stress (Nies & Moryka, 2006). Another study measured 128 sedentary ethnic-minority women and found that walking more had led to improved vigour, indicating an increase in positive mental health and well being (Lee et al., 2001).

FACTORS THAT MAY AFFECT HEALTH BENEFITS

Many studies have allowed participants to walk at a self-selected pace. It is thus important to determine if walking pace is an important contributor to improved health.

Walking at a moderate intensity, i.e., 60–70% of maximum heart rate (Canadian Society for Exercise Physiology, 1997) may provide greater health benefits than walking at a light intensity (Ghosh & Das Chaudhuri, 2005; Paillard et al., 2002; Woolf-May et al., 1998).

Researchers at the University of Alberta compared a 10,000 step walking program (self-selected intensity) to a traditional exercise program (moderate intensity). Their study reported a significant increase in aerobic fitness only in the traditional fitness group. Although both groups decreased their systolic blood pressure, the traditional group reported the greatest change (Harber, Bell, Rodgers, & Courneya, 2006).

People's health status is also important in looking at the health outcomes of a walking program. One study found that obese people walked at 70% of their maximum heart rate, while non-obese people walked at 59% of their maximum heart rate. The study's researchers concluded that walking for pleasure may not improve cardiovascular fitness in normal-weight people, but may be sufficient for obese people (Hills, Byrne, Wearing, & Armstrong, 2006).

Another study of people with Type 2 diabetes found that study participants walked an average speed of 3.3 km/h, which does not meet the walking speed considered to be moderately intense. Participants walked close to the recommended 10,000 steps, but because of the low walking



speed, may not have received health benefits (Johnson, Tudor-Locke, McCargar, & Bell, 2005). Thus, walking at a brisk pace for some of the 10,000 steps may enhance certain health benefits (Duncan, Gordon, & Scott, 1991; Ghosh & Das Chaudhuri, 2005; Paillard et al., 2002; Woolf-May et al., 1998).

CONCLUSION AND RECOMMENDATIONS

Walking 10,000 steps per day is a good starting point or goal, but to maximize health benefits, 2,000–4,000 of the steps should be done at a brisk pace (Harber et al., 2006).

Walking prescriptions tend to be carried out at low intensity and may not provide the health benefits that normal-weight, active people can achieve with higher intensity programs (Harber et al., 2006). Tudor-Locke & Bassett (2004) suggest that when prescribing a 30-minute walk as a way to meet physical activity guidelines, e.g., at least 30 minutes of moderately intense physical activity on most days of the week (Health Canada, 1998), it is important to recommend walking at a brisk pace.

Messages to the population promoting the 10,000 step target have not emphasized the importance of intensity (Le Masurier, Sidman, & Corbin, 2003). Moderate intensity is a necessary part of the 10,000 steps per day target and of the current physical activity guidelines (Le Masurier et al., 2003).

Harber and colleagues (2006) believe that the 10,000 step walking program is great for people because it provides a good starting point for an activity program. They also believe that to increase the effectiveness of walking 10,000 steps, a person must add some intensity or 'huff and puff' to their exercise.

Jenny Burgess, MA, Research Coordinator, Alberta Centre for Active Living. References for this article are available on the centre's website (www.centre4activeliving.ca).