

Just move it

By LindaMcSweeney

Albert Einstein is widely revered for his scientific equations but perhaps it's time we all heeded his simple theory for keeping good health: "Life is like a bicycle. To maintain your balance, you must keep moving."

Sedentary lifestyles are now commonplace and are killing us early, via heart disease and diabetes, conditions made worse when we are idle. Many of us sit all day at work or study, ensconced in technology or stuck in meetings that can drag on for hours.

The medical evidence is in and it's clear that even if we pour our early morning or evening energy into a jog, swim or gym session, none of does much good if we've been sitting for nine hours with minimal movement and a lack of blood flow.

Researchers say there are a lot of associations with prolonged sitting time – classified as many blocks of just 20 to 30 minutes or more – and adverse health outcomes.

"Studies show that people who are spending higher amounts of time sitting compared to those spending lower amounts of time sitting, have an increased risk of early death," says Professor David Dunstan, head of physical activity research at Baker IDI Heart and Diabetes Institute.

"Now that's a very hard end point.

"But importantly in most of those studies, that relationship of too much sitting exists even when you factor in people's leisure time, physical activity levels, which is a bit disheartening because what it's saying is that potentially, you may not be able to offset the harmful effects of sitting simply by doing lots of physical activity in your leisure time."

The verdict is that people need to up their NEAT – or non-exercise activity thermogenesis – which is essentially time spent moving other than intense workouts.

Dunstan says his message is simple: stand up, sit less, move more, more often. He says he prefers to liken prolonged sitting to sun exposure – some is good but too much isn't normal.

Incidental exercise, such as walking while taking a phone call, taking the stairs instead of the lift or standing while working at your desk, is a habit now being encouraged in Australian workplaces. Macquarie Bank and the Commonwealth Bank of Australia, among other companies, have introduced activity-based workplaces to encourage well-being and to enhance productivity.

Such workspaces can include standing or treadmill desks, where there's room to stand and walk while working, as well as standing meetings.

Baker IDI recently invited office workers into a simulated domestic environment in their laboratory which housed a comfortable sofa and television placed near a treadmill.

On the first occasion the workers sat only, for seven hours. A week later the same people returned but got up for a two-minute walk on the treadmill every 20 minutes, engaging in three bouts of two-minute walking every hour. Walking intensity was increased for the same time periods. They were fed a high-glucose, high-fat meal each time they went to the lab and a blood sample taken. The result was a lowering of blood glucose by a significant 25 per cent with the introduction of activity, irrespective of whether it was light or moderate.

As part of my own bid to find new ways to move while working, I recently conducted a 20-minute interview on an Infiniti treadmill desk. I had to contain myself from building up speed from the optimal 1.5 kilometres per hour that seemed to keep me stable and also able to read a computer file atop the desk.

For somebody who spends a lot of time sitting in the name of work I found it a luxury to allow myself a gentle stroll to the soft humming of the treadmill itself while still being productive. Once I found my balance, there was no sweating, instability or annoying noise but certainly some sort of endorphins rush and desire to keep moving.

Dr James Levine, co-director of the Mayo Clinic/Arizona State University Obesity Solutions Initiative says “there is a debate about whether it is the chair or the knife and fork that have caused the increase in obesity rates” globally. In Australia, the Sustainable Australia 2013 reports says an estimated 28 per cent of adults were obese in 2012.

Levine says food intake has remained relatively stable in the past 150 years while obesity rates have shot up, with a progressive decline in energy expenditure.

“When a person engages in multiple low level activities throughout the day this can aggregate to a significant amount of energy expended,” Levine says.

People need to exploit opportunities to be up and walking, he says. A person improves their lot simply by being upright, with a doubling in their metabolic rate when they walk “at shopping speed” and tripling it with “rushed walking”.

A person could return from work at 5pm and sit in front of the TV until falling asleep at 11pm, Levine says. “That entire evening of leisure activity will expend approximately 50 calories. Conversely, a person could return from work at five in the evening and start raking leaves or paint the basement and in doing so, can expend 100 to 150 calories an hour,” he says.

Levine says productivity improves in activity-based workplaces, educational attainment improves in students from schools with active-based learning programs.

The Heart Foundation has issued a fact sheet urge people to sit less, saying the electronic age and time we spend sitting has been directly linked to an increase in health problems such as poor nutrition, obesity and insulin resistance, as well as an increased risk of coronary heart disease.

“As sitting is a large part of many people's workday, we recommend workplaces implement strategies to reduce the amount of time their employees spend sitting,” The Heart Foundation advises.

“The benefits of encouraging employees to sit less include lower rates of obesity and chronic disease and in turn, reduced absenteeism and increased staff participation.”

Heart Foundation tips to reduce sitting time include moving while using the telephone, taking a break from the computer every 30 minutes, drinking more water to encourage movement and moving bins away from desks.

On public transport, stand or offer your seat to a person more in need, the

Foundation advises, or walk or cycle at least part of the way to work.

At home, the foundation suggests people do household chores while watching television, or wash the car by hand rather than a drive-through car wash.

Ridge Films video director Chris Schwager says he started using a treadmill desk about four months ago and no longer reaches 3pm desperate for rest, with more “spring in my step” and improved posture as well as better sleeps at night after spending each day on and off the treadmill and clocking up more than 10 kilometres daily.

“I have a lot of people coming through the edit suite here and they can't get their heads around how I can balance on the treadmill, focus and still edit videos,” Schwager says.

“The easiest way to explain it is it's like riding a bike – you get used to it.”

University of NSW Associate Professor Steve Boutcher, whose research advocates high intensity interval sprinting for weight loss and improved metabolism, says starting with just one hour of exercise throughout the week can be productive for people who say they don't have time to exercise.

“A lot of it initially should be psychological – do they feel more relaxed when they've done some of these workouts, when they've walked up the stairs, walked to the bus and so forth. Do they feel a change in their mood? Less anxiety, for example. Do they feel differences in their sleep? “
Boutcher says.

“That's what we teach people because if we're saying we'll get you fit, we'll reduce your blood lipids to prevent heart disease, none of these things are really too obvious early on. We want them to see the benefits of making physicality a part of their life, and seeing the benefits.”

Mobile phone applications may also help, he says.

A recent Cochrane review of data surrounding interventions to encourage physical exercise said more evidence was needed to determine whether face-to-face or technology-based interventions were more effective in helping people move.

One such app I tested recently certainly encouraged me to up the amount of time I walk instead of drive and surprised me, pleasantly, with its determination that my 20-minute dash to the supermarket – considered a “moderate pace” - burned 253 kilojoules.

The Mayo Clinic's Levine says walking is “a feat of glorious engineering”.

“Humans have been compressed into chairs,” Levine says.

“It is an unnatural position . . . it is an unhealthy way of spending our days. Simply put, we are not designed to do it.”

HOW TO GET OFF YOUR BACKSIDE

The Heart Foundation recommends:

AT WORK

Take a break from your computer every 30 minutes

Take breaks in sitting time during long meetings

Stand to greet visitors

Use the stairs

Stand during phone calls

Walk to talk to colleagues instead of phoning or emailing

Drink more water – walk to the kitchen to get it

Move bins away from desks

Use height-adjustable desks so you can also stand while working

AT HOME

Walk during commercial breaks while watching TV

Do household chores while watching TV

Stand to read the morning newspaper

Hand-wash the car instead of taking it to a drive-through wash

Walk while taking phone calls and/or texting and emailing

WHILE TRAVELLING

Use public transport instead of the car and walk to and from stops or stations

Walk or cycle part of the way to your destination

Plan regular breaks during long car trips

Stand up on public transport and offer your seat to a person more in need

Get on and off public transport at earlier stops and walk the rest of the way to your destination

Source: heartfoundation.org.au/SiteCollectionDocuments/HW-PA-SittingLess-Adults.pdf