

HOW MUCH EXERCISE DO WE NEED?

We have seen that exercise is akin to a wonder drug, and yet around the world, 1 in 3 women and 1 in 4 men don't do enough physical activity to stay healthy. What is the ideal dose?

DESPITE everything we know about the benefits of exercise, lifts and escalators are jammed with people who wouldn't consider taking the stairs. In fact, the average person in the US takes fewer than 5000 steps a day and in the UK it isn't much more. Our governments and health agencies strive to put numbers to how much exercise we should do, which can serve as an initial

guide, but what should we really aim for?

According to standard advice issued by the World Health Organization, adults should in general be getting at least 150- 300 minutes of moderate physical activity or 75-150 minutes of vigorous activity per week, or a combination of both, to extend their lives, get fit, have stronger muscles and be a healthy weight. If that didn't already sound a lot, the WHO says to increase that if you want to reap further benefits. And strength training is additionally recommended for adults over 65.

The good news for the exercise-averse is that it's possible to stick to these guidelines without entering a gym or breaking into a jog. The WHO's definition of moderate exercise includes domestic chores and gardening, and active recreation.

This idea fits with evidence from a study of more than 130,000 people in 17 countries, which found that walking to work and household chores such as vacuuming or scrubbing the floor are activity enough to reduce the risk of early death by 28 per cent, as long as you do 150 minutes a week.

If you aren't one for housework, you will be pleased to hear that your weekly dose of exercise can be

“Just 15 minutes a day of moderate exercise was enough to reduce the risk of death”



Why walk up the stairs when the stairs can move for you?

crammed into the weekend with no ill effects, says Gary O’Donovan then at Loughborough University, UK. Most governments urge people to do a little every day, or at least spread their exercise over the week. But his team analysed data from more than 63,000 adults in the UK spanning 18 years and found that people who opted for a “weekend warrior” regime had pretty much the same reduced risk of early death from all causes, including cardiovascular disease and cancer, as those who spread out exercise. “One weekly bout is usually sufficient to reduce mortality and morbidity,” O’Donovan says. Even weekend warriors who did less than the recommended amount for the week fared better than inactive people.

Even a small amount of exercise brings significant health gains. This was the case in a massive study from 2011 that followed more than 400,000 people in Taiwan over an average of eight years, noting their exercise habits and the number of deaths from different causes. This showed that just 15 minutes a day of moderate exercise such as fast walking was enough to reduce risk of death by 10 per cent compared with sedentary participants. This effect could also be gained by around 5 minutes of vigorous exercise such as running, giving a time-versus-benefit ratio between running and walking of three to one.

Yet it seems you can do too much exercise. Many large studies reveal that extreme exercisers have slightly higher mortality rates than people who work out a couple of times a week. We also know that the rigorous regimes of elite athletes can lead to overtraining syndrome, a constellation of problems including reduced immunity and fertility. White >

blood cell counts crash, colds last longer, libido drops, women stop ovulating. Exercise stops being healthful and starts being harmful.

So how do we judge the amount of exercise that would be best for us? One way to work out how much of this marvellous medicine we need is once again to look to traditional hunter gatherer communities, such as Tanzania's Hadza, who live an active life foraging for food and are afflicted by very few of the diseases that plague more industrialised ways of life. After all, our body's response to exercise evolved to meet the physical demands of hunting and gathering.

In communities like the Hadza, adults get about 2 hours a day of moderate-and-vigorous physical activity – meaning anything more strenuous than a casual stroll. This stacks up as far more than the WHO guidelines, and most of this comes in the form of hard walking: moving fast over hilly terrain, while scouring the landscape for food. They do plenty of other activities too, though. Women often spend an hour or more digging starchy wild tubers from rocky ground. Men climb trees and chop into branches to expose bees' nests and take honey. Children drag firewood or haul buckets of water back to camp. Other indigenous communities have similar workloads.

Men and women in these communities regularly live into their 60s and 70s without any sign of the problems we often see as the inevitable consequences of ageing. They have the healthiest hearts on the planet, never develop diabetes, and stay strong and spry into old age. They are getting the daily dose of exercise that humans evolved to require, and the health benefits are apparent.

Two hours of exercise each day might seem like a lot. But people who manage it do get huge benefits. A study of postal workers in Glasgow, UK, found that those who clocked more than 15,000 steps a day carrying the mail, which equates to about 2 hours of brisk walking, had cardio-metabolic health on a par with hunter-gatherers

– and this in a city with the lowest life expectancy in the country. A much larger study in the US followed 4840 adults to see whether physical activity reduced the risk of dying over the next five to eight years. No surprise, it found that more active people had lower mortality rates. Just 25 minutes of moderate-and-vigorous activity a day reduced the risk of dying within this timeframe by 25 per cent compared with the least active people. And more was better. Adults who were active for 100 minutes or more each day had the lowest mortality rates: 80 per cent lower than the couch potatoes.

These and other similar studies suggest that current public health guidelines set the bar too low, and we should strive for more. Benefits continue to accrue with more exercise, and the optimal dose seems to be closer to the levels we see with the Hadza. Higher exercise workloads may be particularly important for people who spend their days at a computer. A recent study of nearly 150,000 Australian adults found that it took over an hour a day of vigorous exercise to cancel out the ill-health effects of sitting during work hours.



For more on the perils of sedentary behaviour turn to page 89

But if 15,000 steps a day/2 hours' brisk walking is a distant goal for you, don't be discouraged. A little of this medicine is still far better than none. Studies consistently show that even modest amounts of exercise confer huge health benefits compared with a slothful existence. For the most sedentary among us, an extra 30 minutes a day of activity that elevates our heart rate would halve our mortality rate, adding high quality healthy years to our lives. If you find a way to stay active that tickles your brain's reward centres, you are doing it right. The best dose of exercise is the one that gets you coming back for more. ■