

Faster walking speed of 4 km+/hour linked to significantly lower type 2 diabetes risk

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Walking at a speed of 4 or more km an hour is linked to a significantly lower risk of type 2 diabetes, suggests a pooled data analysis of the available evidence, published online in the *British Journal of Sports*

Medicine.

Moreover, the faster the [speed](#) above 4 km/hour, the lower the risk seems to be, with every 1 km increase in speed associated with a 9% reduction in risk, the findings suggest.

While regularly nipping out for a stroll is associated with a lower risk of developing type 2 [diabetes](#), it's not clear what the [optimal speed](#) might be to ward off the disease, say the researchers.

The global number of adults with type 2 diabetes is currently 537 million, but is expected to reach 783 million by 2045, so a simple and inexpensive physical activity that is also associated with several other social, mental, and physical health benefits might be an easy way of helping to stave off the disease, they add.

They looked for relevant long-term studies published up to May 2023 and found 10 that were eligible for inclusion. These had all been published between 1999 and 2022 and included monitoring periods ranging from 3 to 11 years for a total of 508,121 adults from the U.S., Japan, and the UK.

Pooled data analysis of the results showed that compared with strolling at less than 2 miles or 3 km/hour, an average or normal walking speed of 2–3 miles or 3–5 km/hour was associated with a 15% lower risk of type 2 diabetes, irrespective of the time spent walking.

Similarly, fairly brisk walking at a speed of 3–4 miles/hour or 5–6 km/hour was associated with a 24% lower risk of type 2 diabetes compared with strolling.

Brisk walking or striding at a speed above 4 miles or 6 km/hour was associated with a [reduced risk](#) of around 39%, equal to 2.24 fewer cases

of type 2 diabetes in every 100 people.

Every 1 km/hour increase in walking speed was associated with a 9% lower risk of type 2 diabetes, with the minimal threshold of 4km/hour equal to 87 steps/minute for men and 100 steps/minute for women, the findings suggest.

The researchers acknowledge that three studies were rated as having a moderate risk of bias, while the other seven were rated as having a serious risk, principally due to inadequate adjustment for potentially influential factors and the way in which walking speed had been assessed.

Another factor to consider is reverse causality, whereby participants with faster walking speed might be more likely to be physically active and have better cardiorespiratory fitness, greater muscle mass, and better overall health status.

The findings should be interpreted in light of these limitations, caution the researchers. But there are plausible explanations for the findings, they explain.

Walking speed is an important indicator of overall health and a key indicator of functional capacity; faster [walking speed](#) is associated with better cardiorespiratory fitness and [muscle strength](#), both of which are linked to diabetes risk; and [brisk walking](#) is good for [weight loss](#), which helps to improve insulin sensitivity.

The researchers conclude, "The present meta-analysis of cohort studies suggests that fairly brisk and brisk/striding walking, independent of the total volume of physical activity or time spent walking per day, may be associated with a lower risk of type 2 diabetes in adults. While current strategies to increase total walking time are beneficial, it may also be

reasonable to encourage people to walk at faster speeds to further increase the health benefits of walking."

More information: Walking speed and the risk of type 2 diabetes: a systematic review and meta-analysis, *British Journal of Sports Medicine* (2023). [DOI: 10.1136/bjsports-2023-107336](https://doi.org/10.1136/bjsports-2023-107336)

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