

# Physical activity reduces mortality in patients with diabetes

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Patients with type 2 diabetes should be prescribed physical activity to control blood sugar and improve heart health. That is one of the recommendations in a position paper of the European Association of Preventive Cardiology (EAPC), a branch of the European Society of Cardiology (ESC). The paper is published today in the *European Journal of Preventive Cardiology*.

"Sedentary lifestyles and unhealthy diets are the most important drivers of the increasing number of [patients](#) with type 2 diabetes and cardiovascular problems such as heart attacks," said first author Dr. Hareld Kemps, a cardiologist at Máxima Medical Centre, Veldhoven, the Netherlands. "Diabetes doubles the risk of mortality but the fitter patients become, the more that risk declines. Unfortunately, the majority of patients do not engage in exercise programmes."

One in 11 adults worldwide have diabetes, of which 90% is type 2 diabetes. Nearly all patients with type 2 diabetes develop cardiovascular complications, which are the leading causes of death in this group.

The paper provides practical [recommendations](#) for doctors on how to motivate patients to incorporate [physical activity](#) into their daily routine, set achievable and measurable goals, and design individualised exercise training programmes to meet those goals.

"Just advising patients to exercise, which is what doctors typically do, is not enough," said Dr. Kemps. "Patients must be assessed for

comorbidities, risks related to exercise, and personal preferences. This will be cost effective in the long run so we have to wake up policy makers and healthcare insurers to pay for it. That needs clinicians to take the lead and call for programmes to be reimbursed."

Patients should see their doctor for a personalised plan, and those with health insurance should ask if exercise programmes are covered, said Dr. Kemps. "There are also steps patients can take without needing to see a doctor first, such as interrupting sitting time and doing moderate exercise like walking and cycling."

Long-term adherence can be improved by setting early achievable goals that are measurable, and adapting exercise plans to patients' preferences. Remote guidance also looks promising, with patients monitoring themselves with smartwatches then sending data to a health professional for feedback.

Practical and specific goals tend to be motivational, said Dr. Kemps. "For an elderly person this could be climbing the stairs in their home or walking to the supermarket—achievements that will really improve their quality of life. Being able to use less medication because of better glycaemic control is also an incentive."

As for clinical targets, cardiorespiratory fitness and glycaemic control are the top two. Both improve with exercise training, the changes can be measured, and they are directly related to wellbeing, morbidity and mortality. Exercise also helps to lower blood pressure and harmful blood lipids.

Dr. Kemps noted that [weight loss](#) might not be the best target for exercise training. "It's difficult to lose weight with exercise only and if that is the main target patients may become demotivated and stop exercising," he said. "Weight loss is important, but it needs to be part of

a multidisciplinary intervention that includes nutrition."

As for the type and intensity of exercise, this needs to be personalised to each patient. High intensity interval training—for example alternating moderate and vigorous walking—is most effective at boosting fitness and controlling [blood sugar](#), but may be unsafe for patients who develop arrhythmias (abnormal heart rhythm) during [exercise](#) or have ischaemia (restricted blood flow to the heart).

Dr. Kemps said: "I can't stress enough how effective even small increases in activity can benefit patients with type 2 [diabetes](#) and heart problems. Interrupting sitting with brief bouts of walking improves glucose control, while two hours of brisk walking per week reduces the risk of further heart problems."

**More information:** Kemps H, Kränkel N, Dörr M, et al. Exercise training for patients with type 2 diabetes and cardiovascular disease: What to pursue and how to do it. A Position Paper of the European Association of Preventive Cardiology (EAPC). *Eur J Prev Cardiol*. 2019. DOI: [10.1177/2047487318820420](https://doi.org/10.1177/2047487318820420).

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