According to NHANES, the average lifetime medical costs for managing diabetes per person is about $85,200 with 53% of the costs used to manage diabetic complications.

Overall complications can be prevented via sustainable blood sugar control. Several studies have investigated the association between muscle strength and risk of diabetes.

Data on 1058 participants aged ≥40 were collected from the NHANES. Muscle strength assessed using handgrip dynamometer and glycaemic control assessed using HbA1c.

Logistic regression analyses were used to assess the association between handgrip strength and poor glycaemic control among participants with diabetes.

Patients in quartile 4 of handgrip had 0.59 odds of poor glycaemic control (95% CI: 0.34–1.02). However, the reported trend above vanished when further adjusted for insulin use [OR = 0.81; 95% CI: 0.47–1.38].