

Table G3.A8. Prospective Cohort Studies of the Relationship of Cardiovascular Fitness/Physical Activity to Cardiovascular Disease Mortality Risk in Type 2 Diabetes

Author, Year	Subjects	Follow-Up (years)	Fitness or Physical Activity Assessment	Major Findings
Wei et al., 2000 (1)	1,263 T2DM Mean age, 50 years	12	Treadmill test to peak	Lowest 20% vs. highest 40% RR for CVD mortality = 2.0
Church et al., 2005 (2)	2,316 T1D/T2D Mean age, 50 years No known CVD at baseline	15.9	Treadmill test to peak	HR for CVD death vs. normal weight/high fitness: Normal weight/low fitness 2.7 (1.3-5.7) Overweight/low fitness 2.7 (1.4-5.1) Class I obese/low fitness 2.8 (1.4-5.6) Incremental analysis: maxMET (HR) <7.0 (2.8), 7-7.9 (2.1), 8-8.9 (1.8), 9-9.9 (1.0), 10-10.9 (0.8), 11-11.9 (0.8), 12-12.9 (0.3), >13 (0.4)
Seyoum et al., 2006 (3)	468 T2D 40-74 years old No known CVD at baseline	5	Treadmill test to peak (included only if RER>1.0)	Peak VO ₂ greater in those who did not develop CVD (397) during follow-up (21.3±0.3 vs. 20.3±0.6) Multivariate analysis: peak VO ₂ independent predictor of CVD mortality
McAuley et al., 2007 (4)	831 T2D Men only Mean age, 61 years	4.8	Treadmill test to peak	Peak MET <5 vs. ≥5: RR all-cause mortality = 1.7 Each additional 1 MET of exercise capacity → 10% survival benefit

CVD, cardiovascular disease; HR, hazard ratio; maxMET, maximum metabolic equivalent task; RER, respiratory exchange ratio; RR, relative risk; T1D, type 1 diabetes; T2D, type 2 diabetes

Reference List

1. Wei M, Gibbons LW, Kampert JB, Nichaman MZ, Blair SN. Low cardiorespiratory fitness and physical inactivity as predictors of mortality in men with type 2 diabetes. *Ann.Intern.Med.* 2000 Apr 18;132(8):605-11.
2. Church TS, LaMonte MJ, Barlow CE, Blair SN. Cardiorespiratory fitness and body mass index as predictors of cardiovascular disease mortality among men with diabetes. *Arch.Intern.Med.* 2005 Oct 10;165(18):2114-20.
3. Seyoum B, Estacio RO, Berhanu P, Schrier RW. Exercise capacity is a predictor of cardiovascular events in patients with type 2 diabetes mellitus. *Diab.Vasc.Dis.Res.* 2006 Dec;3(3):197-201.
4. McAuley PA, Myers JN, Abella JP, Tan SY, Froelicher VF. Exercise capacity and body mass as predictors of mortality among male veterans with type 2 diabetes. *Diabetes Care* 2007 Jun;30(6):1539-43.