COMMENTS AND RESPONSES

Effects of Different Modes of Exercise Training on Glucose Control and Risk Factors for Complications in Type 2 Diabetic Patients: a Meta-Analysis

Response to Balducci et al.

According to the authors of the meta-analysis we cited for the effects of A1C on cardiovascular disease, the U.K. Prospective Diabetes Study "is largely considered negative by the medical community" (1). If we accept this assessment, it would seem reasonable to describe the benefits of the therapy in that study as "small." Moreover, these benefits were achieved with a reduction in A1C of 0.9%, whereas in our meta-analysis, exercise reduced A1C by only 0.8%. We note also that the risk reductions Balducci et al. (2) stated from the position statement of the American Diabetes Association (3) are for a reduction in A1C of 1%, not for the 0.8% we found.

Diabetes raises the risk of getting cardiovascular disease by a factor of ~2.5–3.0, or ~150–200% (4,5). Overall, the various therapies reduce risk of cardiovascular disease by ~20%. To us, such a reduction is small. Overall, the standardized effects in our meta-analysis were also small in a statistical sense. However, we accept that practitioners could use "small" as an excuse not to prescribe exercise, and patients could use it as an excuse to stay sedentary. Perhaps it's better to emphasize the point we made, that the benefits of exercise are similar to those of dietary and drug interventions and that their combined effects might be moderate or large.

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References

1. Selvin E, Marinopoulos S, Berkenblit G, Rami T, Brancati FL, Powe NR, Golden SH: Meta-analysis: glycosylated hemoglobin and cardiovascular disease in diabetes mellitus. *Ann Intern Med* 141:421–431, 2004
2. Balducci S, Alessi E, Cardelli P, Cavallo S, Fallucca F, Pugliese G: Effects of different modes of exercise training on glucose control and risk factors for complications in type 2 diabetic patients: a meta-analysis (Letter). *Diabetes Care* 30:e25, 2007. DOI: 10.2337/dc06-2495
3. American Diabetes Association: Implications of the United Kingdom Prospective Diabetes Study (Position Statement). *Diabetes Care* 25 (Suppl. 1): S28–S32, 2002
4. Stamler J, Vaccaro O, Neaton JD, Wentworth D, the Multiple Risk Factor Intervention Trial Research Group: Diabetes, other risk factors, and 12-yr cardiovascular mortality for men screened in the Multiple Risk Factor Intervention Trial. *Diabetes Care* 16:434–444, 1993
5. Haffner SM, Lehto S, Ronnemaa T, Pyorala K, Laakso M: Mortality from coronary heart disease in subjects with type 2 diabetes and in nondiabetic subjects with and without prior myocardial infarction. *N Engl J Med* 339:229–234, 1998

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