

Meta-analysis of Health Behavior Change Interventions in Type 1 Diabetes

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Objectives: To meta-analyze research testing interventions to improve health behaviors including exercise among adults with type 1 diabetes. **Methods:** Multiple literature-searching strategies identified published and unpublished studies reporting glycosylated hemoglobin outcomes. Fixed- and random-effects meta-analyses included moderator effects. **Results:** Data were synthesized across 1435 subjects. The overall effect size was 0.26. This translates into a

reduction of 0.33 in mean HbA1c levels between treatment (8.47%) and control (8.80%) groups. Effect sizes were larger with more females, lower body mass index, higher baseline HbA1c, and interventions targeting multiple behaviors. **Conclusions:** Behavior change interventions improve metabolic control in type 1 diabetes.

Key words: diabetes; health behaviors; meta-analysis; exercise; hemoglobin A, glycosylated

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