

limitations, including lack of blinding of patients, small sample size, and imprecision. The harms of IF in adults with T2DM, which include hypoglycemia (despite education and medication reduction), dehydration, and the potential to reinforce the maladaptive behaviors characteristic of some eating disorders, slightly outweighed the benefit of a 1.89 kg weight loss when compared with a standard diet. IF conferred no additional reduction in HbA1c when compared with a standard diet. IF was not associated with other positive effects on lipid profile, waist circumference, fasting glucose, or BP compared with a standard diet. Patient values and preferences varied because some patients reported that any diet could adversely impact social interactions. The Work Group posited that modifying the dose or timing of medication administration on a fasting day could prove difficult for some patients. Thus, the Work Group made the following recommendation: For adults with type 2 diabetes mellitus, we suggest against intermittent fasting. The Work Group noted that there were no studies comparing the glycemic profile (e.g., as measured by continuous glucose monitoring) in patients who restrict various macronutrients but do not fast versus those who limit macronutrient intake though fasting. Further study of this issue, as well as the overall safety and efficacy of IF for patients with T2DM, is needed.

Recommendation

16. In adults with type 2 diabetes mellitus, we suggest regular physical activity to improve glycemic control, including but not limited to aerobic exercise, resistance training, or tai chi.

(Weak for | Reviewed, New-added)

Discussion

Shah et al. (2021) found that general exercise was associated with improved blood glucose, glycemic control, and weight loss in patients with T2DM.[\(113\)](#) Zhu et al. (2022) found that supervised aerobic exercise training improved metabolic outcomes by reductions in body weight, total body fat, HbA1c, and FPG.[\(114\)](#) Bock et al. (2022) found that yoga reduced HbA1c in adults with T2DM.[\(115\)](#)

According to Acosta-Manzano et al. (2019), resistance training is an effective first-line intervention for managing T2DM. Hypertrophy training (HT) and muscular endurance training (MERT) were two types of resistance training highlighted in the study.

Combined HT and MERT were associated with improved HbA1c, glucose levels, fat mass, muscle strength, and BMI. Liu et al. (2019) found that patients diagnosed with T2DM had larger reductions in HbA1c from high-intensity resistance exercise than low to moderate-intensity exercise. Yang et al. (2017) found that the combination of resistance training and aerobic exercise training for 6 months improved glycemic control.

Wang et al. (2022) found that tai chi improved glucose in older patients. Loss of balance and anticipating falling are major concerns in the older population. The study identified