Studies on patients with pre-DM

Study name registration number Design	Setting Place, setting and time	Population Inclusion / Exclusion criteria	Characteristics	Intervention vs. Control Description with duration	Outcomes Primary and secondary	Results Longest follow-up period with intervention effects (IG vs. CG) with SD, 95%-CI or p value
Strategies to enhance physical activity						
RezkAllah 2019 ACTRN126170 00631303 RCT	Egypt, urban 07/2017-01/2018	Pre-DM, 25-45 yrs, BMI of 25–30 kg/m2, HbA1C 5.7–6.4%, fasting glucose 100–125 mg/dL, sedentary lifestyle No history of diabetes, cancer, prediabetic neuropathy, stroke, pulmonary embolism, or severe musculoskeletal problems restricting physical activity	n=60 45 % females age (yrs): 32.9±5.5 BMI (kg/m²): 28.3±1.4	IG2 (n=20): High-volume high intensity interval training, 40 min/session vs. IG1 (n=20): Low-volume high intensity interval training, 25 min/session Both with 90 % HR maximum, 3 times/week CG (n=20): No exercise intervention Duration: 12 weeks	Primary: HbA1c Other: fasting glucose	After 3 months HbA1c (%): Benefit for IG2 and IG1: Benefit for IG: 4.87±0.34 (-26 %) vs. 5.13±0.57 (-14.5 %) vs. 6.25±0.48 (+3.38 %) (p=0.0001) fasting glucose (mg/dL): Benefit for IG2 and IG1: 90.8±4.13 (-17.8 %) vs. 93.8±4.16 (-13.2 %) vs. 103.8±7.21 (+2.9 %) (p=0.0001)
Strategies on nutrition						
Krawinkel 2018 DRKS 00005131 Cross-over-RCT	Tanzania, urban 10/2013-03/2014	Individuals with pre-DM age (yrs): 30 -65, FPG 5.6-6.9 mmol/l (100–125 mg/dL) on 2 days or on one day + HbA1c 5.7-7.5 %, BMI 27–35 kg/m², BP 90/60-160/110 mmHg, waist circumference > 80/90 cm for women / men No chronic disease, taking regular intake of medication, identified glucose-6-phosphatase-dehydrogenase deficiency, heavy alcohol consumption, pregnancy,	n=52 55% female age (yrs): 47.5±8.7 HbA1c (%):5.85±0.43 FPG: (mmol/l): 5.34±0.49 BMI (kg/m²):29.6±2.2	IG/CG (n=30): started with bitter gourd supplementation (2,5 g) over 8 wks, followed by placebo over 8 wks vs. CG/IG (n=31): first placebo over 8 wks, followed by bitter gourd over 8 wks washout period: 4 wks Duration 8 weeks	Primary: FPG Secondary: HbA1c, Insulin, SBP, DBP, lipids	after 8 wks FPG (mmol/l): Benefit for IG/CG: MD 0.31 (0.08-0.54) HbA1c: (%): No differences (MD 0.05)

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		lactation				

BMI: Body mass index; CG: Control group; CG/IG: Crossover from CG to IG; CI: Confidence interval; DBP: Diastolic blood pressure; DM: diabetes mellitus; FPG: fasting plasma glucose; HbA1c: haemoglobin A1c; IG/CG: cross over from IG to CG; IG: intervention group; n: number of participants; MD: mean difference; RCT: randomized controlled trial; SBP: Systolic blood pressure; SD: Standard-deviation; wks: weeks; yrs: years

Supplementary Table 1: Characteristics and results of studies on patients with pre-DM