

Combined Diet and Physical Activity Promotion Programs to Prevent Type 2 Diabetes Among People at Increased Risk

Results of Before-After Studies of Combined Diet & Physical Activity

Author, Year, PMID	Outcome Name	Outcome Description	Timepoint	Arm (N Analyzed)	Baseline	Final	Change	P value within-arm
Absetz 2007 17586741	2h OTT	Change in 2h OTT in mmol/L	12 mo	Diet & PA	6.6	NR	0.1	NS
			36 mo	Diet & PA	6.6	NR	0.1	NS
	SBP	Change in SBP in mmHg	12 mo	Diet & PA	142.3	140.8	NR	NR
			36 mo	Diet & PA	142.3	140.8	NR	NR
	DBP	Change in DBP in mmHg	12 mo	Diet & PA	88.0	86.3	NR	NR
			36 mo	Diet & PA	88.0	86.3	NR	NR
	FPG	Change in FPG in mmol/L	12 mo	Diet & PA	105.3	NR	0.1	<0.001
			36 mo	Diet & PA	105.3	NR	0.00	NS
	HDL-c	Change in HDL in mmol/L	12 mo	Diet & PA	1.5	NR	0.00	NS
			36 mo	Diet & PA	1.5	NR	0.00	NS
	Total cholesterol	Change in total cholesterol in mmol/L	12 mo	Diet & PA	5.5	NR	-0.1	0.034
			36 mo	Diet & PA	5.5	NR	-0.4	<0.004

Author, Year, PMID	Outcome Name	Outcome Description	Timepoint	Arm (N Analyzed)	Baseline	Final	Change	P value within-arm
	Triglycerides	Change in triglycerides in mmol/L	12 mo	Diet & PA	1.6	NR	-0.07	NS
			36 mo	Diet & PA	1.6	NR	-0.14	<0.001
	Weight, absolute	Change in weight in kg	12 mo	Diet & PA	90.0	NR	-0.8	0.002
			36 mo	Diet & PA	90.0	NR	-1.0	0.003
	BMI	Change in BMI in kg/m ²	12 mo	Diet & PA	32.6	NR	-0.3	0.003
			36 mo	Diet & PA	32.6	NR	-0.5	0.001
Gilis-Januszewska 2011 No PMID	2h OTT	Change in 2h OTT in mmol/L	12 mo	Diet & PA	5.86	6.18	-0.31	NS
	SBP	Change in SBP in mmHg	12 mo	Diet & PA	133.22	131.15	2.07	<0.05
	DBP	Change in DBP in mmHg	12 mo	Diet & PA	82.98	81.02	1.96	<0.05
	FPG	Change in FPG in mmol/L	12 mo	Diet & PA	5.28	5.39	-0.11	NS
	HDL-c	Change in HDL in mmol/L	12 mo	Diet & PA	1.37	1.37	0.00	NS
	Total cholesterol	Change in total cholesterol in mmol/L	12 mo	Diet & PA	5.56	5.33	0.23	<0.05

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	Triglycerides	Change in triglycerides in mmol/L	12 mo	Diet & PA	1.76	1.63	0.13	NS
	Weight, absolute	Change in weight in kg	12 mo	Diet & PA	85.65	83.73	1.92	<0.05
	BMI	Change in BMI in kg/m ²	12 mo	Diet & PA	31.76	31.07	0.69	<0.05
Jiang 2013 23275375	FPG	Change in FPG in md/dL	4-6 mo	Diet & PA	104.6	100.5	NR	NR
			1 y	Diet & PA	104.6	101.7	NR	NR
			2 y	Diet & PA	104.6	102.3	NR	NR
			3 y	Diet & PA	104.6	103.4	NR	<0.01
	Weight, absolute	Change in weight in lbs	4-6 mo	Diet & PA	217.5	207.9	NR	<0.001
			1 y	Diet & PA	217.5	212.0	NR	<0.001
			2 y	Diet & PA	217.5	214.5	NR	<0.001
			3 y	Diet & PA	217.5	215.1	NR	<0.001
Kyrios 2009 19351299	2h OTT	Change in 2h OTT in mmol/L	6 mo	Diet & PA	8.53	NR	-0.64	<0.01
	FPG	Change in FPG in mmol/L	6 mo	Diet & PA	5.9	NR	-0.2	<0.05

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Laatikainen 2007 17877232	2h OTT	Change in 2h OTT in mmol/L	12 mo	Diet & PA	6.70	NR	-0.58	NR
	SBP	Change in SBP in mmHg	3 mo	Diet & PA	132.1	NR	-1.67	NR
			12 mo	Diet & PA	132.1	NR	-1.01	NR
	DBP	Change in DBP in mmHg	3 mo	Diet & PA	81.0	NR	-0.99	NR
			12 mo	Diet & PA	81.0	NR	-2.14	
	FPG	Change in FPG in mmol/L	3 mo	Diet & PA	5.53	NR	0.00	NR
			12 mo	Diet & PA	5.53	NR	-0.14	NR
	HDL-c	Change in HDL in mmol/L	3 mo	Diet & PA	1.34	NR	0.01	NR
			12 mo	Diet & PA	1.34	NR	0.06	NR
	LDL-c	Change in LDL-c in mmol/L	3 mo	Diet & PA	3.44	NR	-0.16	NR
			12 mo	Diet & PA	3.44	NR	-0.25	NR
	Total cholesterol	Change in total cholesterol in mmol/L	3 mo	Diet & PA	5.67	NR	-0.21	NR

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	Triglycerides	Change in triglycerides in mmol/L	12 mo	Diet & PA	5.67	NR	-0.29	NR
			3 mo	Diet & PA	1.90	NR	-0.10	NR
			12 mo	Diet & PA	1.90	NR	-0.15	NR
	Weight, absolute	Change in weight in kg	3 mo	Diet & PA	91.7	NR	-2.38	NR
			12 mo	Diet & PA	91.7	NR	-2.52	NR
	Makrilakis 2010 20536519	2h OTT	Change in 2h OTT in mmol/L	12 mo	Diet & PA	6.6	6.6	-0.03
SBP		Change in SBP in mmHg	12 mo	Diet & PA	133	127	-6	<0.001
DBP		Change in DBP in mmHg	12 mo	Diet & PA	79	80	-1	NR
FPG		Change in FPG in mmol/L	12 mo	Diet & PA	5.8	5.7	-0.15	0.017
HDL-c		Change in HDL in mmol/L	12 mo	Diet & PA	1.3	1.3	0.00	NS
LDL-c		Change in LDL-c in mmol/L	12 mo	Diet & PA	4.0	3.6	-0.39	<0.0001

Author, Year, PMID	Outcome Name	Outcome Description	Timepoint	Arm (N Analyzed)	Baseline	Final	Change	P value within-arm
	Total cholesterol	Change in total cholesterol in mmol/L	12 mo	Diet & PA	5.9	5.5	-0.37	<0.0001
	Triglycerides	Change in triglycerides in mmol/L	12 mo	Diet & PA	1.4	1.5	+0.03	NS
	Weight, absolute	Change in weight in kg	12 mo	Diet & PA	89.0	88.0	-1.0	0.022
	BMI	Change in BMI in kg/m ²	12 mo	Diet & PA	32.0	31.6	-0.5	0.014
Penn 2013 24227871	2h OTT	NR	12 mo	Diet & PA	NR	NR	NR	NR
	SBP	NR	12 mo	Diet & PA	NR	NR	NR	NR
	DBP	NR	12 mo	Diet & PA	NR	NR	NR	NR
	FPG	NR	12 mo	Diet & PA	NR	NR	NR	NR
	HDL-c	NR	12 mo	Diet & PA	NR	NR	NR	NR
	LDL-c	NR	12 mo	Diet & PA	NR	NR	NR	NR
	Total cholesterol	NR	12 mo	Diet & PA	NR	NR	NR	NR
	Triglycerides	NR	12 mo	Diet & PA	NR	NR	NR	NR
	Weight, absolute	Change in weight in kg	6 mo	Diet & PA	Men: 105.5 Women: 85.7	NR	Men: -4.2 Women: -2.2	NR

Author, Year, PMID	Outcome Name	Outcome Description	Timepoint	Arm (N Analyzed)	Baseline	Final	Change	P value within-arm
			12 mo	Diet & PA	Men: 105.5 Women: 85.7	NR	Men: -1.5 Women: -0.6	NR
	BMI	Change in BMI in kg/m ²	6 mo	Diet & PA	Men: 34.6 Women: 33.0	NR	Men: -1.4 Women: -0.8	NR
			12 mo	Diet & PA	Men: 34.6 Women: 33.0	NR	Men: -0.5 Women: -0.2	NR
Ramachandran 2009 19277602	2h OTT	Change in 2h OTT in mmol/L	36 mo	Diet & PA	8.9	9.5	0.68	NR
	SBP	Change in SBP in mmHg	36 mo	Diet & PA	118.1	123.6	5.5	NR
	DBP	Change in DBP in mmHg	36 mo	Diet & PA	75.5	79.1	3.6	NR
	FPG	Change in FPG in mmol/L	36 mo	Diet & PA	5.7	5.9	0.19	NR
	HbA1c	Change in HbA1c in %	36 mo	Diet & PA	5.8	6.3	0.55	NR
	Total cholesterol	Change in total cholesterol in mmol/L	36 mo	Diet & PA	5.3	4.9	-0.32	NR
	Triglycerides	Change in triglycerides in mmol/L	36 mo	Diet & PA	1.9	1.8	-0.13	NR

Author, Year, PMID	Outcome Name	Outcome Description	Timepoint	Arm (N Analyzed)	Baseline	Final	Change	P value within-arm
	Weight, absolute	Change in weight in kg	36 mo	Diet & PA	68.7	68.3	-0.40	NR
	BMI	Change in BMI in kg/m ²	36 mo	Diet & PA	26.0	25.9	-0.14	NR
Sepah 2014 24723130	HbA1c	Change in HbA1c in %	12 mo	Diet & PA	5.98	5.61	-0.37	<0.001
	Weight, absolute	Change in weight in lb	12 mo	Diet & PA	221.6	210.9	-10.7	<0.001
Swanson 2012 22068253	2h OTT	Change in 2h OTT in mg/dL	6 mo	Diet & PA	136	128	-9	0.004
			12 mo	Diet & PA	136	130	-7	<0.001
	FPG	Change in FPG in mg/dL	6 mo	Diet & PA	109	107	-2	0.005
			12 mo	Diet & PA	109	106	-3	<0.001
	Weight, absolute	Change in weight in kg	6 mo	Diet & PA	85.9	85.4	-1.3	<0.001
			12 mo	Diet & PA	85.9	84.5	-1.3	0.008
Vanderwood 2012 20805260	SBP	Change in SBP in mmHg	10 mo	Diet & PA	132.7	127.1	NR	<0.001
	DBP	Change in DBP in mmHg	10 mo	Diet & PA	81.2	77.7	NR	<0.001

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	FPG	Change in FPG in mg/dL	10 mo	Diet & PA	101.6	96.9	NR	<0.001
	HDL-c	Change in HDL in mg/dL	10 mo	Diet & PA	49.1	51.0	NR	<0.001
	LDL-c	Change in LDL in mg/dL	10 mo	Diet & PA	123.2	118.7	NR	<0.001
	Weight, absolute	Change in weight in kg	10 mo	Diet & PA	97.4	89.7	NR	<0.001
Vojta 2013 23198291	Weight, %	% change in weight	1.5 y	Diet & PA	NR	NR	-4.77%	NR

Abbreviations

BMI, body mass index

DBP, diastolic blood pressure

FPG, fasting plasma glucose

HDL-c, high density lipoprotein cholesterol

lbs, pounds

LDL-c, low-density lipoprotein cholesterol

mo, month

NR, not reported

OGTT, oral glucose tolerance test

PA, physical activity

SBP, systolic blood pressure

y, year