Obesity Prevention and Control: Provider Education with Patient Intervention

Summary Evidence Table

Study	Intervention and Comparison	Study Population	Effect measure	Reported Baseline and Follow-Up	Reported effect		Follow-up time

Author (year): Cohen et al. (1991)
 	
Study Period: 1987-1988
 	
Study Design: RCT
 	
Design Suitability: Greatest
 	
Quality of Execution: Fair
	Location: Pittsburgh, PA
	
	Physician training session by a behavioral psychologist on importance of weight reduction and information about effects of specific foods on body weight; taught methods to encourage patients. Total training time not reported
	
	Components: Intervention: Initial consult with physician on caloric content of foods and dietary changes suggested. At following visits (1/month)dietary advice repeated as well as setting short-term goals and providing feedback to encourage further weight loss
	
	Comparison: Usual care
		Family Health Center
		
		10 intervention & 8 Usual care residents, selection NR
		
		Group N_0 N_1 N_1
		Interv 15 15 15
		UC 15 15 15
			1) Mean change in body weight (kg) (direct measure)
			    Intervention
			    Control
			
			2) Mean change in BP (mmHg)
			    Intervention
			    Control
				0-6 mos 0-1 yr
				-1.8 0.9
				 0.6 0.7
				
				0-6 mos 0-1 yr
				1.2 1.8
				-2.3 1.6
					-2.4
					
					3.5
						0.2
						
						0.2
							12 months

Study	Intervention and Comparison	Study Population	Effect measure	Reported Baseline and Follow-Up			Reported effect		Follow-up time
Author (year): Kastarinen et al. (2002) **Study Period:** 1996-1997 **Study Design:** RCT **Design Suitability:** Greatest **Quality of Execution:** Fair	**Location:** Finland **Components:** Study staff trained public health nurses – dealt with counseling and behavior modification on weight reduction; given folder with detailed info and practical tips. Training time unknown Patient Intervention – four individual counseling sessions in year 1, three individual counseling sessions in year 2, and a 2-hour group session each year. Counseling by public health nurses on 5 goals (BMI <25, sodium <5 gm, alcoholic beverages <2/day, moderate exercise 30 min 3x/weeks, stop smoking). **Comparison:** Usual care	10 health care centers Public health nurses; sample size unknown Group N_0 N_1 N_1 Inter 360 317 304 Cont 355 275 283	1) Change in body weight (kg) (direct measure) 　　Intervention 　　Control 2) Change in DBP 　　Intervention 　　Control 3) Change in SBP 　　Intervention 　　Control 4) Change in HDL 　　Intervention 　　Control 5) Change in LDL 　　Intervention 　　Control 6) Change in Total Cholesterol 　　Intervention 　　Control 7) Change in waist circumference 　　Intervention 　　Control	<u>0-1 yr</u> -1.5 -0.2 -4.0 -2.4 -4.7 -3.4 0.02 0.01 -0.06 -0.01 -0.05 -0.03 -1.2 0.3	<u>0-2 yr</u> -1.5 -0.3 -4.3 -3.2 -6.2 -4.2 0.10 0.07 -0.11 0.04 -0.03 0.07 -1.2 0.2		-1.3 -1.6 -1.3 0.01 -0.05 -0.02 -1.5	-1.2 -1.1 -2.0 0.03 -0.15 -0.10 -1.4	12, 24 months
Author (year): Lojander et al. (1998) **Study Period:** not reported	**Location:** Helsinki, Finland N_0 =24 N_1=23 N_1=22 **Components:** Experienced nurses attended a 2-day course on weight loss and behavioral	1 clinical practice	1) BMI direct measurement 2) Weight direct measurement (kg) 3) Weight reduction (% overwt)	<u>Baseline</u> 36 110	<u>1.5 mo</u> 31 97 40	<u>12 mo</u> 31 99 33			12 months

Study	Intervention and Comparison	Study Population	Effect measure	Reported Baseline and Follow-Up	Reported effect	Follow-up time
Study Design: Time series **Design Suitability:** Moderate **Quality of Execution:** Fair	management, led meetings. Week 1 – overview and group session; Weeks 2-7 VLCD and 3 group meetings; Weeks 8-9 back to low calorie food; Weeks 10-14 1 group meeting on adaptation to new life; Next 7 months had monthly group meetings					

Author (year): Moore et al. (2003)
 	
Study Period: 2000-2002
 	
Study Design: Group RCT
 	
Design Suitability: Greatest
 	
Quality of Execution: Fair
	Location: Northern and Yorkshire regions of England
	
	Components: Providers received three 90-min nutritional training sessions; A "ready reckoner" was produced to allow practitioners to estimate daily energy expenditure and then calculate a 500 kcal deficit. Diet sheet and supporting written materials provided.
	Total training time 4.5 hours
	Patients seen regularly until 10% of original body weight lost.
	
	Comparison: Usual care
		Recruited practices (4 health areas). All 161 invited; 44 randomized. All practitioners and practice nurses eligible (n = 245).
		
		Staff invited to participate consecutively attending obese adults (BMI ≥ 30).
		
		Group N_0 N_1
		Inter 415 256
		Contr 428 275
			1) Weight (kg) (direct measure)
			    Intervention
			    Control
			
			2) BMI
			    Intervention
			    Control
				Baseline 3m 12m 18m
				
				100.8 100.4 100.3 100.8
				100.2 99.8 99.3 99.5
				
				37 36.8 36.9 37.1
				36.9 36.9 36.8 36.9
					Absolute change
					0.0 0.4 0.7
					
					Absolute change
					-0.2 0.0 0.1
						18 months

Study	Intervention and Comparison	Study Population	Effect measure	Reported Baseline and Follow-Up	Reported effect	Follow-up time

Author (year): Ockene et al. (1999)
 	
Study Period: not reported
 	
Study Design: Group RCT
 	
Design Suitability: Greatest
 	
Quality of Execution: Fair
	Location: Worcester, MA
	
	Components: Nutrition alone: Two sessions 2.5 hours in small group and 30 min individual sessions (role play). Focus on counseling. Tools given to practitioners. Nutrition +: same as above plus physicians received office support
	
	Comparison: Usual care
		45 primary care internists (46 available, 1 declined) randomized into 3 groups.
		
		1162 patients recruited; 550 completed weight at 1 year
		161 control
		192 nutrition alone (nutri)
		197 nutrition plus (nutri +)
			1) Weight (kg) (direct measure)
			  Nutri counseling
			  Nutri counseling +
			  Control
			
			2) HDL (mmol/L)
			  Nutri counseling
			  Nutri counseling +
			  Control
			
			3) LDL (mmol/L)
			  Nutri counseling
			  Nutri counseling +
			  Control
			
			4) Saturated Fat (% of energy)
			  Nutri counseling
			  Nutri counseling +
			  Control
			
			5) Total Cholesterol (mmol/L)
			  Nutri counseling
			  Nutri counseling +
			  Control
			
			6) Total Chol: HDL
			  Nutri counseling
			  Nutri counseling +
			  Control
			
			7) Total Fat (% of energy)
			  Nutri counseling
			  Nutri counseling +
			  Control
				12 month
				
				-1.0
				-2.3
				0
				
				0.01
				0.01
				-0.02
				
				0.02
				-0.11
				-0.01
				
				-0.04
				-1.10
				0
				
				0.05
				-0.10
				0.03
				
				0.1
				-0.1
				0.1
				
				-1.0
				-2.3
				-0.7
					-1.0
					-2.3
					
					0.02
					-0.13
						12 months

Study	Intervention and Comparison	Study Population	Effect measure	Reported Baseline and Follow-Up		Reported effect	Follow-up time
			8) Triglyceride (TG) (mmol/L) Nutri counseling Nutri counseling + Control	0.06 -0.01 0.12			
Author (year): Richman et al. (1996) **Study Period:** not reported **Study Design:** NRCT **Design Suitability:** Greatest **Quality of Execution:** Fair	**Location:** Australia **Provider intervention:** 2 half day training sessions Session 1: Dietary information (emphasis on fat content), exercise training, behavior modification techniques (emphasis on goal setting), and medical update on obesity management (emphasis on identifying patients at risk); Session 2: individual session to observe procedures and counseling sessions **Shared care (SC):** weekly meeting (20 min) with general practitioner (GP) up until week 9. Patients given 10 brochures on nutrition, exercise, and behavioral aspects of obesity management; also asked to keep food and exercise logs	24 GP attended 1st training, 12 attended 2nd training Group N_0 N_1 SC 37 17 MOS 101 27	1) Weight loss (direct measure) (kg) SC MOS 2) BMI (kg/m2) SC MOS 3) Excess weight loss (%) SC MOS	<u>10 wk</u> <u>26 wk</u> 4.8 5 2.6 5 1.8 1.9 0.9 1.9 17.7 15.2 9.5 19.4			26 weeks

Study	Intervention and Comparison	Study Population	Effect measure	Reported Baseline and Follow-Up	Reported effect	Follow-up time
	Hospital based Metabolism and Obesity Service (MOS): Same as SC without the integration of trained general practitioner. Program administered weekly by primary therapist. Eating plan prescribed.					
Author (year): Willaing et al. (2004) **Study Period:** 2000-2001 **Study Design:** Before-after, all using only general practioner **Design Suitability:** Least **Quality of Execution:** Fair	**Location:** Copenhagen, Denmark **Components:** General practitioner counseling (GPs trained 1 day in motivational interviewing) – Patients provided with commercially available information on healthy diet; individual counseling for 30 min with 4 additional sessions of 12 min. **Comparison** (data not being used): Dietetic counseling – individual counseling 1 hour with 4 additional sessions of 30 min.	60 general practioners Group N_0 N_1 GP 191 130 Diet 312 209	1) Change in body weight (kg; direct measure) 　GP all 　Diet all 　GP completers 　Diet completers 2) Change in BMI (kg/m2) 　GP all 　Diet all 　GP completers 　Diet completers 3) Change in waist circumference (cm) 　GP all 　Diet all 　GP completers 　Diet completers 4) Change in TG (mmol/L) 　GP all 　Diet all 　GP completers 　Diet completers 5) Change in LDL (mmol/L) 　GP all 　Diet all	12 mo -2.5 -3.2 -2.4 -4.5 -0.88 -1.14 -0.88 -1.60 -2.98 -2.87 -3.26 -4.17 -0.19 -0.67 -0.18 -0.68 -0.42 -0.39	-2.5 -0.88 -2.98	12 months

Study	Intervention and Comparison	Study Population	Effect measure	Reported Baseline and Follow-Up		Reported effect		Follow-up time
			GP completers Diet completers	-0.41 -0.35				

			6) Change in HDL (mmol/L)
			    GP all
			    Diet all
			    GP completers
			    Diet completers
				0.12
				0.02
				0.13
				0.03				

			7) Change in Total Cholesterol (mmol/L0
			    GP all
			    Diet all
			    GP completers
			    Diet completers
				-0.45
				-0.56
				-0.45
				-0.58
						-0.45		

Author (year): Woolard et al. (2003)
 	
Study Period: not reported
 	
Study Design: RCT
 	
Design Suitability: Greatest
 	
Quality of Execution: Fair
	Location: Perth, Western Australia
	
	Nurses received 170 hours training on transtheoretical model
	
	Components:
	High level – individual face-to-face counseling once a month (up to 60 minutes) for 12 months by nurse counselor (total time up to 720 minutes)
	
	Low level – one initial face-to-face counseling and contacted by phone once a month (10-15 minutes) for 12 months by nurse
		7 general practices
		Number of nurses used is unknown
		
		Group N_0 N_1 N_2
		C 69 53 57
		Lo 69 49 52
		Hi 74 48 54
			1) BMI (kg/m2)
			    Low
			    High
			    Control
			
			2) Weight (kg) (direct measure)
			    Low
			    High
			    Control
			
			4) Total energy (kJ)
			    Low
			    High
			    Control
			
			5) Total fat (% of energy)
			    Low
			    High
			    Control
			
			Can't use lipid information because some subjects received lipid-lowering drugs
				Change at 12 mo 18 mo
				
				0.38 0.21
				0.18 0.50
				0.70 0.60
				
				1.0 0.5
				0.5 1.2
				2.0 1.7
				
				-1520 -801
				-815 -1214
				-720 -1200
				
				-3.7 -3.8
				-3.8 -2.0
				-1.9 -1.8
						-0.32 -0.39
						-0.52 -0.10
						
						-1.0 -1.2
						-1.5 -0.5
								12 months and 18 months

Study	Intervention and Comparison	Study Population	Effect measure	Reported Baseline and Follow-Up	Reported effect	Follow-up time
	counselor (total time up to 144 minutes) **Comparison:** Usual care, under care of general practitioner and offered heart health literature					

Absolute effect size is calculated unless otherwise noted.

Abbreviations

BMI, Body Mass Index
DBP, diastolic blood pressure
GP, general practitioner
HDL, high density lipoprotein
kg, kilogram
kJ, kilojoule
LDL, low density lipoprotein
N_0, sample size at baseline
N_1, sample size at time 1
N_2, sample size at time 2
NRCT, non-randomized control trial
RCT, randomized control trial
RD, registered dietitian
SBP systolic blood pressure
TG, triglyceride
VLCD, very low calorie diet