

# Diets work

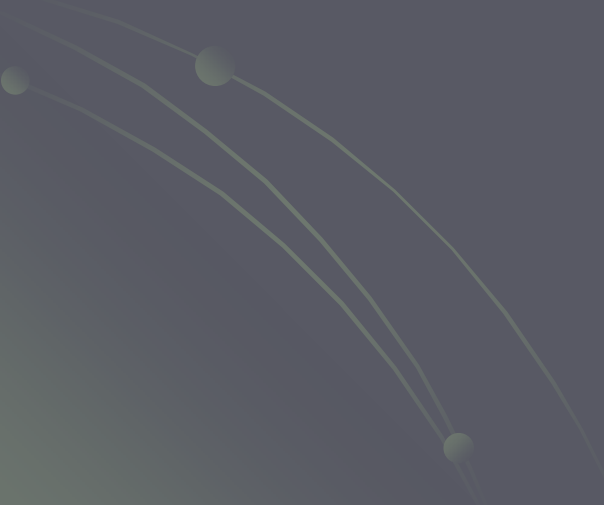
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# Diets work

- The effectiveness of a weight loss diet is determined from “successful weight loss maintenance”
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# DEFINING "SUCCESSFUL WEIGHT LOSS MAINTENANCE"

- **Individuals who have intentionally lost at least 10% of their initial body weight and kept it off at least one year**

(Wing RR, Hill JO. Successful weight loss maintenance. *Annu Rev Nutr* 2001;21:323–41)

1. Several recent studies indicate that unintentional weight loss occurs quite frequently and may have different causes and consequences than intentional weight loss
2. Although a 10% weight loss may not return an obese to a non-obese state, the health impact of a 10% weight loss is well documented
3. 1-y duration criterion was proposed in keeping with the Institute of Medicine criteria

# SUCCESSFUL WEIGHT LOSS MAINTENANCE

- The perception of the general public is that no one ever succeeds at long-term weight loss. This belief stems from Stunkard and Mc Laren - Hume's 1959 study of 100 obese individuals, which indicated that, 2 y after treatment, only 2% maintained a weight loss of 9.1 kg (20 lb) or more

Arch Int Med 1959;103:79–85.

Long – term efficacy of dietary treatment of obesity: a systematic review of studies published between 1931 and 1999 - Ayyad C, Andersen T - Obesity Reviews 2000, 1, 113-119

## KEYWORDS

- DIET  
+  
obesity, drug-therapy,  
psychological, reducing,  
follow-up studies

**RESULT : 898 Papers**

## CRITERIA FOR INCLUSION

1. Treatment of adults with diet or diet & nonsurgical treatment
2. Follow-up period  $\geq 3$  years
3. Follow-up rate  $\geq 50\%$  of original study group
4. Obesity complications of the patient group not over-represented
5. Long term success = maintenance of all weight (100%) initially lost or maintenance of at least 9 to 11 kgr of the initial weight loss

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- The inclusion criteria were fulfilled by 17 ( $\approx 2\%$ ) of the 898 publications

Table 1 Main reason for exclusion of publications

Criteria for exclusion	% of all excluded papers (n = 881)
No follow-up or follow-up < 3 years	35
Surgical treatment	26
Reference of no relevance	10
Children or adolescents	9
Obesity complications over represented	6
Follow-up of < 50% of study group	4
Survey	4
Reference not available or duplicate publication	2
Lacking information on use of diet, initial weight loss, criteria for success or success rate	2
Language other than Scandinavian, English or German	2

# Long – term efficacy of dietary treatment of obesity: a systematic review of studies published between 1931 and 1999 - Ayyad C, Andersen T - Obesity Reviews 2000, 1, 113-119

**Table 2** Success rate for reported study groups, subdivided according to initial treatment, energy level of initial diet and intensity of follow-up

	No. of patients	No. of study groups	Median success rate (range)
Overall success rate	2131	21	15% (0–49%)
Influence of initial treatment:			
Diet* alone**	1337	10	15% (6–28%)
Diet* plus group therapy	487	4	27% (14–31%)
Diet* plus behaviour modification	307	7	14% (0–49%)
Influence of energy level of initial diet:			
Very-low-calorie diet (300–600 kcal/24 h)**	304	8	14% (6–49%)
Conventional diet (800–1800 kcal/24 h)	1827	13	18% (0–31%)
Influence of intensity of follow-up:			
Passive follow-up**	597	10	10% (0–31%)
Active follow-up	1534	11	19% (13–49%)

\* Conventional diet or very-low-calorie diet. \*\* Fasting was initially used in one study group.

Long term weight loss maintenance: a meta analysis of US studies Anderson J. et al Am J Clin Nutr 2001;74:579-84

- Inclusion criteria

1. US Studies
2. Structured weight loss program
3. Follow-up data with variance estimates for  $\geq 2$  years

**29 STUDIES** MET THE CRITERIA

# Long term weight loss maintenance: a meta analysis of US studies Anderson J. et al Am J Clin Nutr 2001;74:579-84

**TABLE 2**

Weight maintenance of all subjects and of selected subgroups<sup>1</sup>

Group	Years of follow-up	No. of studies	No. of subjects	Initial weight <sup>2</sup>	Weight loss <sup>2</sup>	Weight-loss maintenance <sup>3</sup>	Percentage weight-loss maintenance <sup>3</sup>	Reduced weight <sup>3</sup>
	y			kg	kg	kg	%	%
All	4.5	13	1081	98	14.00	3.00 (2.54, 3.45)	23.40 (20.4, 26.4)	3.15 (2.69, 3.62)
Men	4.4	5	247	115	18.30	4.70 (2.86, 6.54)	30.50 (21.5, 39.4)	4.48 (2.89, 6.06)
Women	4.4	6	534	95	16.60	4.66 (3.52, 5.80)	23.60 (18.4, 28.8)	4.67 (2.55, 5.79)
VLED	4.5	4	578	106	24.10	7.05 (6.04, 8.06)	29.40 (25.2, 33.6)	6.59 (5.65, 7.54)
HBD	4.5	8	448	93	8.80	1.99 (1.47, 2.51)	17.80 (13.4, 22.2)	2.11 (1.56, 2.65)
Lower exercise	2.7	6	272	110	22.00	7.47 (6.29, 8.66)	27.20 (22.8, 31.6)	6.66 (5.61, 7.71)
Higher exercise	2.7	6	220	110	20.90	14.99 (13.48, 16.49)	53.80 (48.4, 59.2)	12.49 (11.24, 13.74)

<sup>1</sup>Percentage weight-loss maintenance is as a percentage of initial weight loss and reduced weight is as a percentage of initial body weight. VLED, very-low-energy diet; HBD, hypoenergetic balanced diet.

<sup>2</sup> $\bar{x}$ .

<sup>3</sup> $\bar{x}$ ; 95% CI in parentheses.

# Long term weight loss maintenance: a meta analysis of US studies Anderson J. et al Am J Clin Nutr 2001;74:579-84

1. Most studies had people who dropped out by the time five years rolled around so no one knows how much weight they kept off or put back on.
2. Lots of studies relied on self-reported weight.
3. Not all the studies addressed the same variables.

- THE TRUE EFFECT OF A WEIGHT LOSS INTERVENTION COULD BE ASSESSED IN A LONG TERM RANDOMIZED CONTROLLED CLINICAL TRIAL

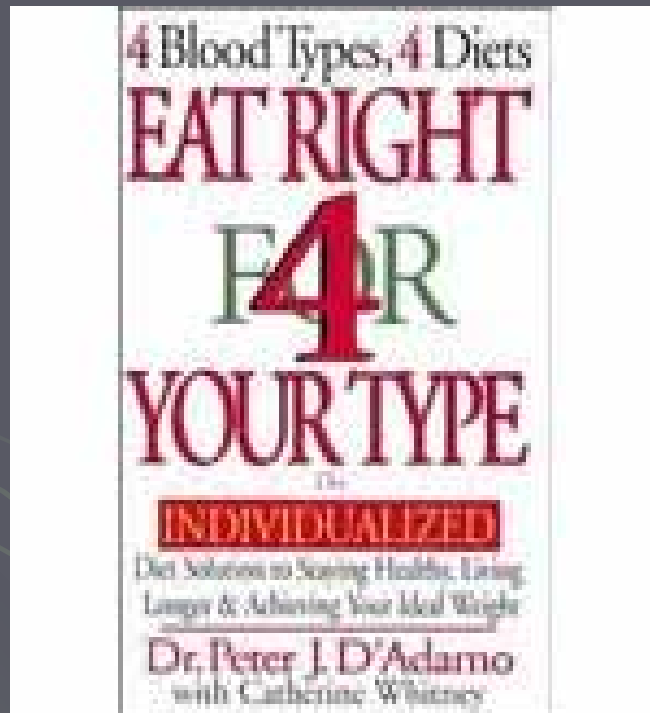
- TO DATE SUCH A STUDY HAS NOT BEEN DONE

# Conclusion

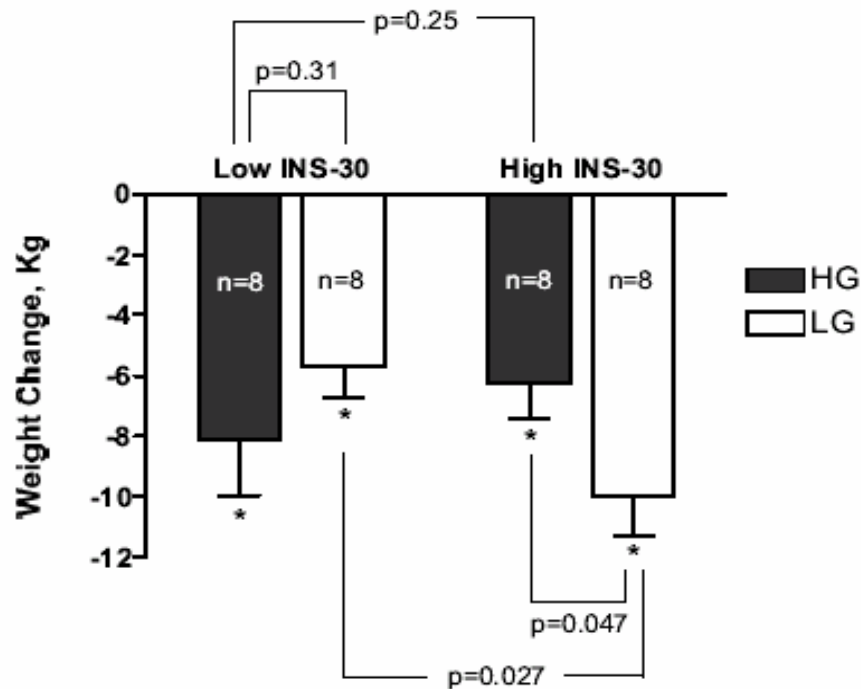
- DIETS DON'T FALL – PEOPLE DO.

THAT'S BECAUSE THERE ARE MULTIPLE AND POWERFUL SYSTEMS (WITHIN THE BODY AND THE MIND AND IN THE ENVIROMENT) THAT CONTRIBUTE TO FOOD INTAKE AND BODY WEIGHT

# A calorie-reduced, but balanced diet has nothing to do with Fad Diets



**Pittas AG** et al. Dietary composition and weight loss: can we individualize dietary prescriptions according to insulin sensitivity or secretion status? *Nutr Rev.* 2006 Oct;64:435-48.



**Figure 1.** Mean (SEM) weight change during a 6-month feeding study of a high- (HG) vs. a low- (LG) glycemic load diet in overweight adults stratified by baseline insulin secretion based on serum insulin at 30 minutes after a 75 g oral glucose tolerance test. Low INS-30, <473 pmol/L (66 mU/L); High INS-30, >473 pmol/L. *P* values are adjusted for baseline weight. \**P* < 0.005 for within-group change in weight from baseline. From Pittas et al., 2005<sup>35</sup>; used with permission.

Evidence suggests that specific dietary compositions may work better for identifiable groups of overweight/obese individuals based on their insulin dynamics.