

**A summary table of 53 randomised controlled trials of
low-carb-high-fat diets of less than 130g per day of total
carbohydrate and greater than 35% total fat,
compared to low-fat diets of less than 35% total fat
compiled by the Public Health Collaboration**

Time Frame & Reference	Low Carb (LC) Weight Loss	Low Fat (LF) Weight Loss	Subjects (LC v LF)
6 Months [1]	8.5kg*	3.9kg	22 v 20
12 Months [2]	4.3kg	2.5kg	20 v 17
6 Months [3]	5.8kg*	1.9kg	43 v 36
12 Weeks [4]	9.9kg*	4.1kg	16 v 14
12 Weeks [5]	6.2kg*	3.4kg	22 v 23
24 Weeks [6]	12.7kg*	7.2kg	46 v 34
30-50 Days [7]	5.5kg*	3.5kg	28 v 28
10 Weeks [8]	7.0kg	6.8kg	15 v 16
6 Weeks [9]	6.2kg	6.0kg	16 v 16
6 Weeks [10]	6.4kg*	4.2kg	12 v 11
3 Months [11]	3.55kg*	0.92kg	40 v 39
12 Weeks [12]	6.3kg	5.3kg	49 v 47
12 Months [13]	4.7kg*	2.2kg	68 v 61
8 Weeks [14]	7.8kg*	6.4kg	48 v 45
3 Months [15]	6.9kg*	2.1kg	10 v 10
24 Weeks [16]	11.1kg*	6.9kg	21 v 29
2 Years [17]	5.5kg*	3.3kg	83 v 94
8 Weeks [18]	7.5kg*	6.2kg	52 v 47
24 Weeks [19]	11.9kg	10.1kg	45 v 43
12 Weeks [20]	10.1kg*	5.2kg	20 v 20
12 Months [21]	14.5kg	11.5kg	33 v 36
13 Weeks [22]	13.2kg*	7.3kg	18 v 15
24 Months [23]	3.6kg	3.1kg	31 v 30
3 Months [24]	5.5kg*	2.6kg	15 v 18
12 Months [25]	5.6kg*	1.4kg	59 v 60
4 Months [26]	9.79kg*	6.14kg	20 v 20
8 Weeks [27]	8.4kg*	6.7kg	32 v 28
12 Months [28]	3.1kg	3.1kg	47 v 49
2 Years [29]	6.34kg	7.37kg	154 v 153
24 Months [30]	1.5kg	0.2kg	28 v 40
12 Weeks [31]	6.8kg	5.2kg	18 v 15
12 Weeks [32]	8.0kg*	6.4kg	24 v 21
1 Year [33]	13.7kg	13.7kg	55 v 51
1 Year [34]	5.1kg	3.1kg	62 v 64
48 Weeks [35]	11.37kg	9.62kg	57 v 65
3 Months [36]	5.0kg	3.7kg	63 v 66
24 Weeks [37]	12.0kg	11.5kg	46 v 47
6 Months [38]	6.0kg	5.9kg	57 v 174
1 Year [39]	2.1kg	3.0kg	40 v 40
6 Weeks [40]	6.1kg*	3.9kg	15 v 15
24 Weeks [41]	7.1kg*	4.7kg	28 v 30
3 Months [42]	7.6kg*	4.3kg	22 v 19
6 Months [43]	4.3kg	4.0kg	29 v 30
6 Months [44]	2.6kg	1.4kg	12 v 12
8 Weeks [45]	7.4kg	6.5kg	12 v 12
6 Months [46]	6.8kg	5.6kg	53 v 57
3 Months [47]	3.4kg	4.1kg	150 v 150
12 Months [48]	11.8kg*	6.9kg	55 v 55
1 Year [49]	2.9kg	3.7kg	30 v 30
6 Months [50]	8.5kg*	3.5kg	43 v 35
52 Weeks [51]	9.8kg	10.1kg	41 v 37
6 Months [52]	9.1kg	8.9kg	25 v 24
6 Months [53]	8.0kg	5.7kg	21 v 17
Totals:	26/53 Are Sig. >	0/53 Are Sig. >	2071 v 2165
	46/53 Are > LF	5/53 Are > LC	
	(2 Are Equal)		

Bold = Greater Weight Loss

*= Statistically Significant

References:

- [1] A Randomized Trial Comparing a Very Low Carbohydrate Diet and a Calorie-Restricted Low Fat Diet on Body Weight and Cardiovascular Risk Factors in Healthy Women. Brehm et al. <http://press.endocrine.org/doi/full/10.1210/jc.2002-021480>
- [2] A Randomized Trial of a Low-Carbohydrate Diet for Obesity. Foster et al. <http://www.nejm.org/doi/full/10.1056/NEJMoa022207>
- [3] A Low-Carbohydrate as Compared with a Low-Fat Diet in Severe Obesity. Samaha et al. <http://www.nejm.org/doi/full/10.1056/NEJMoa022637>
- [4] Effects of a low-carbohydrate diet on weight loss and cardiovascular risk factor in overweight adolescents. Sondike et al. <http://www.sciencedirect.com/science/article/pii/S0022347602402065>
- [5] The National Cholesterol Education Program Diet vs a Diet Lower in Carbohydrates and Higher in Protein and Monounsaturated Fat A Randomized Trial. Aude et al. <http://archinte.jamanetwork.com/article.aspx?articleid=217514>
- [6] A Low-Carbohydrate, Ketogenic Diet versus a Low-Fat Diet To Treat Obesity and Hyperlipidemia: A Randomized, Controlled Trial. Yancy et al. <http://annals.org/article.aspx?articleid=717451>
- [7] Comparison of energy-restricted very low-carbohydrate and low-fat diets on weight loss and body composition in overweight men and women. Volek et al. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC538279/>
- [8] Comparison of a Low-Fat Diet to a Low-Carbohydrate Diet on Weight Loss, Body Composition, and Risk Factors for Diabetes and Cardiovascular Disease in Free-Living, Overweight Men and Women. Meckling et al. <http://press.endocrine.org/doi/full/10.1210/jc.2003-031606>
- [9] Lack of suppression of circulating free fatty acids and hypercholesterolemia during weight loss on a high-fat, low-carbohydrate diet. Hernandez et al. <http://ajcn.nutrition.org/content/91/3/578.long>
- [10] Perceived Hunger Is Lower and Weight Loss Is Greater in Overweight Premenopausal Women Consuming a Low-Carbohydrate/High-Protein vs High-Carbohydrate/Low-Fat Diet. Nickols-Richardson et al. <http://www.sciencedirect.com/science/article/pii/S000282230501151X/>
- [11] Short-term effects of severe dietary carbohydrate-restriction advice in Type 2 diabetes—a randomized controlled trial. Daly et al. <http://onlinelibrary.wiley.com/doi/10.1111/j.1464-5491.2005.01760.x/abstract>
- [12] Separate effects of reduced carbohydrate intake and weight loss on atherogenic dyslipidemia. Krauss et al. <http://ajcn.nutrition.org/content/83/5/1025.full>
- [13] Comparison of the Atkins, Zone, Ornish, and LEARN Diets for Change in Weight and Related Risk Factors Among Overweight Premenopausal Women The A TO Z Weight Loss Study: A Randomized Trial. Gardner et al. <http://jama.jamanetwork.com/article.aspx?articleid=205916>
- [14] Low- and high-carbohydrate weight-loss diets have similar effects on mood but not cognitive performance. Halyburton et al. <http://ajcn.nutrition.org/content/86/3/580.long>
- [15] A low-carbohydrate diet is more effective in reducing body weight than healthy eating in both diabetic and non-diabetic subjects. Dyson et al. <http://onlinelibrary.wiley.com/doi/10.1111/j.1464-5491.2007.02290.x/full>
- [16] The effect of a low-carbohydrate, ketogenic diet versus a low-glycemic index diet on glycemic control in type 2 diabetes mellitus. Westman et al. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2633336/>
- [17] Weight Loss with a Low-Carbohydrate, Mediterranean, or Low-Fat Diet. Shai et al. <http://www.nejm.org/doi/full/10.1056/NEJMoa0708681>
- [18] Effects of weight loss from a very-low-carbohydrate diet on endothelial function and markers of cardiovascular disease risk in subjects with abdominal obesity. Keogh et al. <http://ajcn.nutrition.org/content/87/3/567.long>

- [19] Metabolic Effects of Weight Loss on a Very-Low-Carbohydrate Diet Compared With an Isocaloric High-Carbohydrate Diet in Abdominally Obese Subjects. Tay et al. <http://www.sciencedirect.com/science/article/pii/S0735109707032597>
- [20] Carbohydrate Restriction has a More Favorable Impact on the Metabolic Syndrome than a Low Fat Diet. Volek et al. <http://link.springer.com/article/10.1007/s11745-008-3274-2>
- [21] Long-term effects of a very-low-carbohydrate weight loss diet compared with an isocaloric low-fat diet after 12 mo. Brinkworth et al. <http://ajcn.nutrition.org/content/90/1/23.long>
- [22] Efficacy and Safety of a High Protein, Low Carbohydrate Diet for Weight Loss in Severely Obese Adolescents. Krebs et al. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2892194/>
- [23] In type 2 diabetes, randomisation to advice to follow a low-carbohydrate diet transiently improves glycaemic control compared with advice to follow a low-fat diet producing a similar weight loss. Guldbrand et al. <http://link.springer.com/article/10.1007/s00125-012-2567-4/fulltext.html>
- [24] A Randomized Pilot Trial of a Moderate Carbohydrate Diet Compared to a Very Low Carbohydrate Diet in Overweight or Obese Individuals with Type 2 Diabetes Mellitus or Prediabetes. Saslow et al. <http://www.plosone.org/article/info:doi/10.1371/journal.pone.0091027>
- [25] Effects of Low-Carbohydrate and Low-Fat Diets: A Randomized Trial. Bazzano et al. <http://annals.org/article.aspx?articleid=1900694>
- [26] The Role of Energy Expenditure in the Differential Weight Loss in Obese Women on Low-Fat and Low-Carbohydrate Diets. Brehm et al. <http://press.endocrine.org/doi/full/10.1210/jc.2004-1540>
- [27] Effects of a Low Carbohydrate Weight Loss Diet on Exercise Capacity and Tolerance in Obese Subjects. Brinkworth et al. <http://onlinelibrary.wiley.com/doi/10.1038/oby.2009.134/full>
- [28] Comparative Study of the Effects of a 1-Year Dietary Intervention of a Low-Carbohydrate Diet Versus a Low-Fat Diet on Weight and Glycemic Control in Type 2 Diabetes. Davis et al. <http://care.diabetesjournals.org/content/32/7/1147>
- [29] Weight and Metabolic Outcomes After 2 Years on a Low-Carbohydrate Versus Low-Fat Diet: A Randomized Trial. Foster et al. <http://annals.org/article.aspx?articleid=745937>
- [30] Effects of a Low-intensity Intervention That Prescribed a Low-carbohydrate vs. a Low-fat Diet in Obese, Diabetic Participants. Iqbal et al. <http://onlinelibrary.wiley.com/doi/10.1038/oby.2009.460/full>
- [31] Consuming a hypocaloric high fat low carbohydrate diet for 12 weeks lowers C-reactive protein, and raises serum adiponectin and high density lipoprotein-cholesterol in obese subjects. Ruth et al. [http://www.metabolismjournal.com/article/S0026-0495\(13\)00223-0/abstract](http://www.metabolismjournal.com/article/S0026-0495(13)00223-0/abstract)
- [32] Comparison of isocaloric very low carbohydrate/high saturated fat and high carbohydrate/low saturated fat diets on body composition and cardiovascular risk. Noakes et al. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1368980/>
- [33] Long-term Effects of a Very Low-Carbohydrate Diet and a Low-Fat Diet on Mood and Cognitive Function. Brinkworth et al. <http://archinte.jamanetwork.com/article.aspx?articleid=1108558>
- [34] The effects of low-carbohydrate versus conventional weight loss diets in severely obese adults: one-year follow-up of a randomized trial. Stern et al. <http://www.ncbi.nlm.nih.gov/pubmed/15148064>
- [35] A Randomized Trial of a Low-Carbohydrate Diet vs Orlistat Plus a Low-Fat Diet for Weight Loss. Yancy et al. 2010. <http://www.ncbi.nlm.nih.gov/pubmed/20101008>
- [36] A randomized controlled trial of low carbohydrate and low fat/high fiber diets for weight loss. Baron et al. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1646726/>
- [37] A very low-carbohydrate, low-saturated fat diet for type 2 diabetes management: a randomized trial. Tay et al. <http://www.ncbi.nlm.nih.gov/pubmed/25071075>
- [38] Randomised controlled trial of four commercial weight loss programmes in the UK: initial findings from the BBC "diet trials". Truby et al. <http://www.bmj.com/content/332/7553/1309>

- [39] Comparison of the Atkins, Ornish, Weight Watchers, and Zone Diets for Weight Loss and Heart Disease Risk Reduction: A Randomized Trial. Dansinger et al. <http://jama.jamanetwork.com/article.aspx?articleid=200094>
- [40] Very Low-Carbohydrate and Low-Fat Diets Affect Fasting Lipids and Postprandial Lipemia Differently in Overweight Men. Sharman et al. <http://jn.nutrition.org/content/134/4/880.long>
- [41] Comparison of high-fat and high-protein diets with a high-carbohydrate diet in insulin-resistant obese women. McAuley et al. <http://link.springer.com/article/10.1007/s00125-004-1603-4/fulltext.html>
- [42] Diet-Induced Weight Loss Is Associated with Decreases in Plasma Serum Amyloid A and C-Reactive Protein Independent of Dietary Macronutrient Composition in Obese Subjects. O'Brien et al. <http://press.endocrine.org/doi/10.1210/jc.2004-1011>
- [43] Advice to follow a low-carbohydrate diet has a favourable impact on low-grade inflammation in type 2 diabetes compared with advice to follow a low-fat diet. Jonasson et al. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4025600/>
- [44] A non-calorie-restricted low-carbohydrate diet is effective as an alternative therapy for patients with type 2 diabetes. Yamada et al. <http://www.ncbi.nlm.nih.gov/pubmed/24390522>
- [45] Low-Fat Versus Low-Carbohydrate Weight Reduction Diets Effects on Weight Loss, Insulin Resistance, and Cardiovascular Risk: A Randomized Control Trial. Bradley et al. <http://diabetes.diabetesjournals.org/content/58/12/2741.long>
- [46] Weight loss with high and low carbohydrate 1200 kcal diets in free living women. Lean et al. <http://www.nature.com/ejcn/journal/v51/n4/abs/1600391a.html>
- [47] Evaluation of weight loss and adipocytokines levels after two hypocaloric diets with different macronutrient distribution in obese subjects with rs9939609 gene variant. De Luis et al. <http://onlinelibrary.wiley.com/doi/10.1002/dmrr.2323/abstract>
- [48] Enhanced weight loss with protein-enriched meal replacements in subjects with the metabolic syndrome. Flechtner-Mors et al. <http://onlinelibrary.wiley.com/doi/10.1002/dmrr.1097/abstract>
- [49] Long-term effects of a low carbohydrate, low fat or high unsaturated fat diet compared to a no-intervention control. Lim et al. [http://www.nmcd-journal.com/article/S0939-4753\(09\)00124-0/abstract](http://www.nmcd-journal.com/article/S0939-4753(09)00124-0/abstract)
- [50] A randomized study comparing the effects of a low-carbohydrate diet and a conventional diet on lipoprotein subfractions and C-reactive protein levels in patients with severe obesity. Seshadri et al. [http://www.amjmed.com/article/S0002-9343\(04\)00344-4/abstract](http://www.amjmed.com/article/S0002-9343(04)00344-4/abstract)
- [51] Comparison of low- and high-carbohydrate diets for type 2 diabetes management: a randomized trial. Tay et al. <http://ajcn.nutrition.org/content/early/2015/07/29/ajcn.115.112581.abstract>
- [52] Weight loss on low-fat vs. low-carbohydrate diets by insulin resistance status among overweight adults and adults with obesity: A randomized pilot trial. Gardner et al. <http://onlinelibrary.wiley.com/doi/10.1002/oby.21331/abstract>
- [53] Metabolic impact of a ketogenic diet compared to a hypocaloric diet in obese children and adolescents. Partsalaki et al. <http://www.ncbi.nlm.nih.gov/pubmed/23155696>