

Evidence Analysis Library

Carbohydrate Restricted Dietary Approaches Systematic Review

Studies Examining the Effect of Carbohydrate (CHO) Restriction Compared to Higher CHO Diets in Adults with Type 2 Diabetes Mellitus

Effect Size Table: Results of sub-group analysis of CHO restrictive intervention according to amount of CHO restriction, weight status, and intervention duration. [mean difference 95% CI]

Green = Statistically significant

Blue = NS

Outcome or subgroup title	No. of studies	No. of participants	Effect size
1.1. Fasting Blood Glucose (FBG)	6	534	-5.83 [-12.25, 0.58]
1.2. FBG by diet: LCD vs. MCD	1	85	-17.19 [-37.35, 2.97]
1.2. FBG by diet: MCD vs. HCD	5	449	-4.91 [-11.6, 1.79]
1.3. FBG by OW/OB target: Yes	4	400	-4.10 [-11.56, 3.36]
1.3. FBG by OW/OB target: No	2	134	-12.47 [-24.16, -0.78]
1.4. FBG by intervention duration: ≥12 months	3	345	-6.44 [-18.95, 6.08]
1.4. FBG by intervention duration: <12 months	3	189	-6.62 [-10.16, -3.08]
2.0. Hemoglobin A1c (HbA1c)	8	657	-0.34 [-0.58, -0.10]
2.1. HbA1c by diet: LCD vs. MCD	1	85	-0.62 [-1.13, -0.11]
2.2. HbA1c by diet: MCD vs. HCD	7	572	-0.30 [-0.56, -0.05]
2.3. HbA1c by OW/OB target: Yes	5	462	-0.3 [-0.6, -0.01]
2.4. HbA1c by OW/OB target: No	3	195	-0.48 [-0.84, -0.11]
2.5. HbA1c by intervention duration: ≥12 months	4	406	-0.29 [-0.62, 0.04]
2.6. HbA1c by intervention duration: <12 months	4	251	-0.40 [-0.78, -0.03]
3.0. Body weight (BW)	6	529	-0.81 [-1.28, -0.34]
3.1. BW by diet: LCD vs. MCD	1	85	-2.05 [-9.89, 5.79]
3.2. BW by diet: MCD vs. HCD	5	444	-0.81 [-1.28, -0.34]
3.3. BW by OW/OB target: Yes	4	383	-0.95 [-1.65, -0.26]
3.4. BW by OW/OB target: No	2	146	-1.10 [-7.97, 5.76]
4.0. Body Mass Index (BMI)	7	578	-0.35 [-0.51, -0.19]
4.1. BMI by OW/OB target: Yes	4	383	-0.35 [-0.51, -0.20]
4.2. BMI by OW/OB target: No	3	195	-0.17 [-1.82, 1.49]
4.3. BMI by diet: LCD vs. MCD	1	85	-0.71 [-3.08, 1.66]
4.4. BMI by diet: MCD vs. HCD	6	493	-0.35 [-0.51, -0.19]
5.0. Waist Circumference (WC)	5	487	-0.75 [-1.25, -0.25]
5.1. WC by OW/OB target: Yes	3	341	-0.73 [-1.23, -0.23]
5.2. WC by OW/OB target: No	2	146	-2.41 [-7.35, 2.56]
5.3. WC by diet: LCD vs. MCD	1	85	-3.80 [-9.50, 1.90]

Outcome or subgroup title	No. of studies	No. of participants	Effect size
5.4. WC by diet: MCD vs. HCD	4	402	-0.73 [-1.23, -0.22]
6.0. Lean Body Mass / Fat Free Mass (LB/FFM)	2	106	0.12 [-0.26, 0.5]
7.0. Fat Mass	3	191	-0.16 (-0.45, 0.12]
Blood Pressure			
<i>8.0. Systolic Blood Pressure (SBP)</i>	5	487	-0.36 [-7.09, 6.37]
8.1. SBP by diet: LCD vs. MCD	1	85	-9.88 [-16.82, -2.94]
8.2. SBP by MCD vs. HCD	4	402	1.79 [-5.70, 9.27]
8.3. SBP by OW/OB target: Yes	3	341	1.73 [-6.73, 10.19]
8.4. SBP by OW/OB target: No	2	146	-4.39 [-16.00, 7.22]
<i>8.5. Diastolic Blood Pressure (DBP)</i>	6	532	0.99 [-4.20, 6.17]
8.6. DBP by diet: LCD vs. MCD	1	85	-1.42 [-7.03, 4.19]
8.7. DBP by diet: MCD vs. HCD	5	447	1.62 [-4.31, 7.55]
8.8. DBP by OW/OB target: Yes	4	386	1.49 [-5.38, 8.36]
8.9. DBP by OW/OB target: No	2	146	-0.07 [-4.44, -4.30]
9.0. Total cholesterol (TC)	6	536	-9.25 [-15.98, -2.53]
9.1. TC by diet: LCD vs. MCD	1	85	-0.31 [-19.54, 18.92]
9.2. TC by diet: MCD vs. HCD	5	451	-10.17 [-17.37, -2.97]
9.3. TC by OW/OB target: Yes	3	341	-9.96 [-17.91, -2.00]
9.4. TC by OW/OB target: No	3	195	-6.03 [-19.86, 7.79]
10.0 LDL-Cholesterol (LDL-C)	5	319	-8.18 [-11.19, -5.18]
10.1. LDL-C by diet: LCD vs. MCD	1	85	1.10 [-14.97, 17.17]
10.2. LDL-C by diet: MCD vs. HCD	4	234	-8.52 [-11.58, -5.46]
10.3. LDL-C by OW/OB target: Yes	3	173	-8.61 [-11.7, -5.52]
10.4. LDL-C by OW/OB target: No	2	146	-0.62 [-13.62, 12.37]
11.0. HDL-Cholesterol (HDL-C)	6	520	0.65 [-2.90, 4.20]
11.1. HDL-C by diet: LCD vs. MCD	1	85	2.00 [-4.23, 8.23]
11.2. HDL-C by diet: MCD vs. HCD	5	435	0.45 [-3.40, 4.30]
11.3. HDL-C by OW/OB target: Yes	4	374	0.36 [-3.75, 4.47]
11.4. HDL-C by OW/OB target: No	2	146	1.71 [-3.34, 6.77]
12.0. Triglycerides (TG)	6	549	-17.62 [-29.91, -5.34]
12.1. TG by diet: LCD vs. MCD	1	85	-13.59 [-74.76, 47.58]
12.2. TG by diet: MCD vs. HCD	5	464	-17.76 [-30.68, -4.84]
12.3. TG by OW/OB target: Yes	4	403	-17.74 [-31.31, -4.18]
12.4. TG by OW/OB target: No	2	146	-15.59 [-59.61, 28.44]
13.0. Quality of Life			

Outcome or subgroup title	No. of studies	No. of participants	Effect size
13.1. Quality of Life (physical)	2	98	0.80 [-0.16, 1.75]
13.2. Quality of Life (mental)	2	98	-0.82 [-2.09, 0.45]
14.0. C-Reactive Protein (CRP)	4	400	-0.00 [-0.20, 0.19]
15.0. Adverse events	2	123	NA

Green = Statistically significant

Blue = NS

Abbreviations: HCD=high carbohydrate diet; LCD=low carbohydrate diet; MCD=moderate carbohydrate diet; NS=not significant; OB=obese; OW=overweight