

TABLE. A review of 26 studies on low-carbohydrate diets

Study	Total number of participants		Age range (y)	Gender (% male)	Initial BMI	Duration of diet (d)	Carbohydrate (% kcals)		Total calories (kcal)		Energy balance (% of requirement)		Body weight change (%)		
	Treatment group	Control group					Treatment group	Control group	Treatment group	Control group	Treatment group	Control group	Treatment group	Control group	
Baba ³⁷	7	6	Adults	100	36.3	30	25	58	1,738	1,609	68 ^a	68 ^a	-7.3	-5.6	
Benoit ¹⁶	6	1	22-45	100	38.1	10	4	60	1,000	1,000	54 ^b	54 ^b	-5.7	-8.3	
Bettens ³¹	57	N/A	27.5-55	21	32.9	60	16	N/A	1,000	N/A	50 ^a	N/A	-20	N/A	
Brehm ¹⁰	22	20	31-58	0	33.6	180	32	51	1,355	1,400	83 ^b	86 ^b	-9.3 ^c	-4.2	
Farnsworth ²⁵	28	29	20-65	25	34.3	112	44	57	1,702	1,750	77 ^a	79 ^a	-7.9	-7.9	
Fleming ¹³	38	16	23-67	47	Overweight	365	10	75	1,450	1,350	61 ^a	47 ^a	-13.7 ^c	-18.4	
Foster ¹⁴	33	30	34.6-53.4	32	33.9	365	≤20 g/d	60	<i>ad libitum</i>	1,500	N/A	68 ^a	68 ^a	-4.4	-2.5
Gannon ²¹	8	8	51-82	100	31	35	20	55	2,825	2,825	80 ^b	80 ^b	-1.8	-1.8	
Golay ¹²	22	21	27-63	11	41	42	15	45	1,000	1,000	52 ^b	54 ^b	-8.3	-7.4	
Golay ²²	31	37	Adults	22	24.8	84	25	45	1,120	1,200	57 ^a	58 ^a	-11.5	-9.3	
Hockaday ³⁶	54	39	22-65	56	N/A	365	40	54	1,500	1,500	87 ^a	81 ^a	-4.9	-5.5	
Kogon ¹¹	12	11	23-55	0	36.5	28	12	49	950	950	N/A	N/A	-5.6 kg ^d	-4.9 kg ^d	
Luscombe ²³	15	11	62-64	44	33.2	84	42	55	1,680	1,715	81 ^a	82 ^a	-5.1	-4.7	
Mathieson ²⁷	7	5	23-36	0	Obese	28	33	71	530	530	30 ^a	30 ^a	-9.8	-8.8	
Nobels ³²	113	N/A	24-50	N/A	36	180	20	N/A	750	N/A	33 ^a	N/A	-17.7	N/A	
Samaha ³⁹	64	68	44-63	82.5	42.9	180	43	51	1,860	1,712	64 ^a	58 ^a	-4.4	-1.4	
Sharman ³⁸	12	8	36.7	100	Normoweight	42	8	59	2,335	1,950	98 ^e	76 ^e	-2.7 ^c	+0.5	
Sondike ⁴⁰	16	14	12.5-16.8	N/A	35.6	84	8	56	1,830	1,100	104 ^b	182 ^b	-10.7 ^c	-4.1	
Stern ²⁴	44	43	Adults	82	42.9	365	43	52	1,717	1,871	58 ^a	64 ^a	-3.8	-2.4	
Ullrick ²⁶	7	N/A	21-27	86	Normoweight	7	35	N/A	To maintain body weight	N/A	100	N/A	-0.2	N/A	
Vazquez ¹⁵	8	8	38-49	0	49	30	7	52	594	590	N/A	N/A	-7	-6.5	
Volek ³⁰	10	N/A	19-33	100	24.8	56	7	N/A	2,110	N/A	88 ^b	N/A	-5.3	N/A	
Volek ²⁰	12	8	36.7	100	Normoweight	42	8	59	2,335	1,950	98 ^e	76 ^e	-2.7 ^c	+0.5	
Walberg ²⁸	7	5	23-36	0	Obese	28	33	71	530	530	30 ^a	30 ^a	-9.8	-8.8	
Westman ²⁹	41	N/A	18-65	24	31.7	168	5	N/A	1,447	N/A	85 ^b	N/A	-10.3	N/A	
Yancy ¹⁷	59	60	18-65	24	34.3	168	8	52	1,461	1,502	66 ^a	69 ^a	-12.9 ^c	-6.7	

Key: N/A, not available.

^a Based on 20-25 kcals/kg actual body weight (mean).

^d Initial body weight was unavailable.

^b Based on Harris Benedict equation of resting energy expenditure.

^e Based on 30 kcals/kg of actual body weight (mean).

^c Treatment and control different significantly ($P < .05$).

Data from Brehm BJ et al,¹⁰ Kogon MM et al,¹¹ Golay A et al,¹² Fleming RM,¹³ Foster GD et al,¹⁴ Vazquez JA and Adibi SA,¹⁵ Benoit FL et al,¹⁶ Yancy WS Jr et al,¹⁷ Volek JS et al,²⁰ Gannon MC and Nuttall FQ,²¹ Golay A et al,²² Luscombe ND et al,²³ Stern L et al,²⁴ Farnsworth E et al,²⁵ Ullrick IH et al,²⁶ Mathieson RA et al,²⁷ Walberg JL et al,²⁸ Westman EC et al,²⁹ Volek JS et al,³⁰ Bettens C et al,³¹ Nobels F et al,³² Hockaday TD et al,³⁶ Baba NH et al,³⁷ Sharman MJ et al,³⁸ Samaha FF et al,³⁹ and Sondike SB et al.⁴⁰