Supplementary Table 1—*Comparison of study design and results*

Ref. number	Author/ year	Study type/ duration	Diabetes	*n*‡	Comparison summary	Intervention detail¶ dietary variable of interest for observational studies	Significant results**	Comments/study limitations#
Carbohydrate amount: lower carbohydrate								
(10)	Boden 2005	Clinical trial, single arm/ 14 day	Type 2	10 adults	Low-CHO diet	21 g CHO/day	A1C decreased 0.5% ($P = 0.006$); mean 24-h plasma glucose and insulin decreased ($P = 0.002$ and $P = 0.039$, respectively); FBG decreased from 7.5 to 6.3 mmol/L ($P = 0.025$). Insulin sensitivity (by euglycemic-hyperinsulinemic clamp) improved by 75%. TC decreased from 4.68 to 4.24 mmol/L ($P = 0.02$); TG decreased from 1.84 to 1.19 mmol/L ($P < 0.0001$).	Metabolic-unit–type study Significant weight loss
(11)	Daly 2006	RCT parallel, 2 arms/3 months, multicenter	Type 2	79 adults	Low-CHO diet vs. low-fat diet	Low-CHO diet: goal of up to 70 g CHO/day (achieved 110 g/day) vs. low-fat diet: standard advice to reduce portions and fat (achieved 169 g CHO/day)	Glycemic measures: NS TC:HDL-C ratio improved in low-CHO group vs. low-fat group (−0.48 vs. −0.10, $P = 0.011$)	77% completion rate Weight-loss study

Supplementary Table 1—*Continued*

Ref. number	Author/ year	Study type/ duration	Diabetes	*n*‡	Comparison summary	Intervention detail¶ dietary variable of interest for observational studies	Significant results**	Comments/study limitations#
(12)	Davis 2009	RCT parallel, 2 arms/1 year	Type 2	85 adults	Lower-CHO diet (Atkins type) vs. lower-fat diet (DPP type)	Low-CHO diet: initial goal of 20–25 g CHO/ day, increased by 5-g increments each week as participants lost weight (achieved 33.4% CHO, 43.9% fat) vs. low-fat diet: goal of 25% fat (achieved 30.8% fat, 50.1% CHO). 500 kcal/ day deficit for both arms	Glycemic measures: NS HDL-C increased more at 6 months in the low-CHO group (+0.16 mg/dL, P = 0.002) and increase was sustained at 12 months	Weight-loss study (both groups achieved a 3.4% weight reduction) Subjects under good control at baseline (A1C 7.4–7.5%)
(13)	Dyson 2007	RCT parallel, 2 arms/3 months	Type 2	12 adults with diabetes (22 total)	Low-CHO diet vs. healthy eating (Diabetes UK nutrition recommendations), calorie-restricted diet	Low-CHO diet: ≤40 g CHO/day (achieved 57 g CHO/day) vs. "healthy eating" with 500 kcal/day energy deficit (achieved 167 g CHO/day)	Glycemic measures: NS CVD risk measures: NS	Weight-loss study

Supplementary Table 1—*Continued*

Ref. number	Author/ year	Study type/ duration	Diabetes	*n*‡	Comparison summary	Intervention detail¶ dietary variable of interest for observational studies	Significant results**	Comments/study limitations#
(14)	Yancy 2005	Clinical trial, single arm/ 16 weeks	Type 2	21 adults	Low-CHO diet	Initial CHO goal of <20 g CHO/day, increasing CHO by 5 g/day each week after some weight loss (8 subjects with adequate food records achieved 34 g CHO/day at week 16)	A1C decreased by 16% from 7.5 to 6.3% ($P < 0.001$) TG decreased 42% from 2.69 to 1.57 mmol/L ($P = 0.001$)	75% retention rate 20 of the 21 participants were men Weight-loss study Diabetes medications were discontinued in 7 participants, reduced in 10 participants
(15)	Stern 2004	RCT parallel, 2 arms/1 year	Mainly type 2	34 adults with diabetes (87 total)	Low-CHO diet vs. lower-fat (NHLBI guidelines) calorie-restricted diet	Low CHO: <30 g CHO/day (achieved 120 g CHO/day) vs. conventional weight-loss diet: restrict calorie intake by 500 calories/day with <30% fat (achieved 230 g CHO/day)	A1C decreased more in the low CHO group with diabetes (−0.7%) vs. the calorie-restricted group with diabetes (−0.1%) after adjustment for baseline differences and weight-loss amount ($P = 0.019$) CVD risk measures: not provided for diabetes group only	Weight-loss study 62% retention rate for people with diabetes 83% of subjects were men

Supplementary Table 1—*Continued*

Ref. number	Author/ year	Study type/ duration	Diabetes	n‡	Comparison summary	Intervention detail¶ dietary variable of interest for observational studies	Significant results**	Comments/study limitations#
(16)	Westman 2008	RCT parallel, 2 arms/6 months	Type 2	50 adults	Low-CHO diet vs. low-GI, reduced-calorie diet	Low-CHO diet: goal <20 g CHO/day (achieved 49 g ± 33 g CHO/day) vs. low-GI, reduced-calorie diet (500 kcal/day energy deficit): goal 55% CHO (achieved 44% CHO)	A1C reduced 1.5% in low-CHO diet vs. −0.5% in low-GI diet, P = 0.03 HDL-C increased by 5.6 mg/dL in low-CHO diet vs. no change in low-GI diet, $P < 0.05$	58% retention rate Weight-loss study "Low GI" not defined
(17)	Haimoto 2009	Clinical trial, single arm/6 months	Type 2	31 adults	Lower-CHO diet	Lower-CHO goal: 30% CHO, 44% fat, 20% protein; achieved: 30 ± 10% CHO, 44 ± 10% fat, 20 ± 4% protein	A1C decreased from 10.9 to 7.4% ($P < 0.001$) LDL-C decreased from 142 to 128 mg/dL (P = 0.036); HDL-C increased from 52 to 59 mg/dL (P = 0.008)	Weight-loss study
(18)	Miyashita 2004	RCT parallel, 2 arms/4 weeks	Type 2	22 adults	Lower-CHO diet vs. higher-CHO diet	Lower-CHO diet: 39% CHO, 35% fat, 25% protein vs. higher-CHO diet: 62% CHO, 10% fat, 26% protein	Fasting insulin decreased 30% in lower CHO vs. 10% in higher CHO ($P < 0.05$) HDL-C increased 15% in lower CHO vs. 0 in higher CHO ($P < 0.01$)	Metabolic-unit study Weight-loss study: weight declined similarly in both groups: lower CHO, 73→64 kg; higher CHO, 71→64 kg Fiber similar in both diets

Supplementary Table 1—*Continued*

Ref. number	Author/ year	Study type/ duration	Diabetes	*n*‡	Comparison summary	Intervention detail¶ dietary variable of interest for observational studies	Significant results**	Comments/study limitations#
(19)	Wolever 2008	RCT parallel, 3 arms/1-year multicenter study	Type 2	130 adults	Higher GI vs. lower GI vs. lower CHO/high MUFA	End of study: higher GI: 46.5% CHO, 30.8% fat, 12.3% MUFA, 20.4% protein, GI = 63%, GL= 35 g vs. lower GI: 52% CHO, 26.5% fat, 10.7% MUFA, 20.6% protein, GI = 55%, GL = 133 g vs. lower CHO: 39.3% CHO, 40% fat, 18.3% MUFA, 19% protein, GI = 59%, GL = 110 g	Glycemic measures: NS HDL-C 4% lower and TG 12% higher on lower-GI diet than lower-CHO diet ($P < 0.05$ for both); higher GI was intermediate	Weight not controlled, but body weight not significantly different among diets Diabetes controlled by diet alone and subjects were in optimal glycemic control Key foods provided Lower-GI diet had 30% lower CRP than the higher GI (P = 0.0078)
(20)	Jönsson 2009	RCT crossover/3 months each (no washout period)	Type 2	13 adults	Traditional diabetic diet vs. Paleolithic diet	Traditional diet: higher fiber/ whole grains, lower saturated fat vs. Paleolithic diet: lean meats, fish, fruit, vegetables, eggs, nuts	A1C lower, Paleolithic vs. traditional diet: 5.5 vs. 5.9% (P = 0.02) HDL-C higher by 0.08 mmol/L, Paleolithic vs. traditional (P = 0.03) TG lower by 0.4 mmol/L, Paleolithic vs. traditional (P = 0.003)	76% completion rate Weight not controlled (BMI decreased significantly, Paleolithic vs. traditional) (P = 0.04)

Supplementary Table 1—*Continued*

Ref. number	Author/ year	Study type/ duration	Diabetes	*n*‡	Comparison summary	Intervention detail¶ dietary variable of interest for observational studies	Significant results**	Comments/study limitations#
Carbohydrate amount: moderate to high carbohydrate								
(21)	Barnard 2009	RCT parallel, 2 arms/74 weeks	Type 2	83 adults	Lower-fat vegan diet vs. conventional " diabetes" diet	Vegan: CHO 75→66.3% Fat 10→22.3% SFA 5.1% achieved Protein 15→14.8% vs. Conventional diet: CHO 60–70→46.5% Fat 33.7% achieved SFA <7→9.9% Protein 15–20→21.1%	Glycemic measures: NS CVD risk measures: NS	Ancillary analysis last available or observed before medication adjustment: A1C −0.40 and 0.01% in vegan and conventional diets, respectively ($P = 0.03$) TC −20.4 and −6.8 mg/dL in the vegan and conventional diet groups, respectively ($P = 0.01$) LDL-C −13.5 and −3.4 mg/dL in the vegan and conventional groups, respectively ($P = 0.03$) Weight reduction if overweight; weight controlled in some regression analyses

Supplementary Table 1—*Continued*

Ref. number	Author/ year	Study type/ duration	Diabetes	*n*‡	Comparison summary	Intervention detail¶ dietary variable of interest for observational studies	Significant results**	Comments/study limitations#
(22)	Gerhard 2004	RCT crossover/6 weeks each with 6–12-week washout period	Type 2	11 adults	Lower-fat diet vs. higher-MUFA diet	Lower-fat diet: CHO 65→64.7% Fat 20→20.8% MUFA 8.3% achieved vs. Higher-MUFA diet: CHO 45→45.1% Fat 40→39.6% MUFA 26→25.1% Protein constant for both diets (15%)	Glycemic measures: NS CVD risk measures: NS	Meals prepared in metabolic kitchen Body weight decreased significantly (−1.53 kg, $P < 0.001$) on lower-fat diet On both diets, subjects were provided 25% above maintenance energy requirement (mean 3,555 kcal/day) to allow self-selection for quantity
(23)	Wycherley 2010	RCT parallel, 4 arms/16 weeks	Type 2	59 adults	Standard-CHO diet vs. high-protein diet	Study has 4 groups: Standard CHO: CHO 53→53.6% Fat 26→22.6% Protein 19→18.6% vs. High protein: CHO 43→47.4% Fat 22→17.7% Protein 33→32% For the other 2 groups, resistance exercise training was added to each diet.	Glycemic response: NS CVD risk measures: NS	Weight-loss study, with both diets energy restricted (~1,400 kcal/day for women, ~1,700 for men) Key foods were supplied (50% total energy) 71% completion rate Significant reductions in all groups for weight, A1C, FBG, TC, LDL-C, and TG

Supplementary Table 1—*Continued*

Ref. number	Author/ year	Study type/ duration	Diabetes	*n*‡	Comparison summary	Intervention detail¶ dietary variable of interest for observational studies	Significant results**	Comments/study limitations#
(24)	Brinkworth 2004	RCT parallel, 2 arms/ 52-week follow-up of a 12-week intervention	Type 2	38 adults	Higher protein vs. lower protein	Higher-protein goals: 40% CHO, 30% fat, 30% protein vs. lower-protein goals: 55% CHO, 30% fat, 15% protein	Glycemic measures: NS CVD risk measures: NS	See Parker 2002 for study of first 8 weeks Weight uncontrolled 58% retention rate HDL-C increased in both groups (17%) During the 12-month follow-up, urinary urea:creatinine ratio remained stable in both groups, indicating compliance with the protein prescription
(25)	Gannon 2003	RCT crossover/ 5 weeks each with 2–5-week washout period	Type 2	12 adults	Higher protein vs. control (higher CHO)	Higher protein: 40% CHO, 30% fat, 30% protein vs. higher CHO: 55% CHO, 30% fat, 15% protein	A1C significantly decreased during higher-protein diet (8.1–7.3%) vs. higher-CHO diet (8.0–7.7%) ($P < 0.05$) Mean 24-h integrated glucose area response (fasting glucose concentration as baseline) significantly decreased after the higher-protein diet vs. the higher-CHO diet ($P < 0.02$) TG lower on higher-protein diet vs. higher-CHO diet (161 vs. 199 mg/dL ($P = 0.03$)	Metabolic-unit–type study; all foods provided Weight controlled

Supplementary Table 1—*Continued*

Ref. number	Author/ year	Study type/ duration	Diabetes	*n*‡	Comparison summary	Intervention detail¶ dietary variable of interest for observational studies	Significant results**	Comments/study limitations#
(26)	Rodríguez-Villar 2004	RCT crossover/6 weeks each, with no washout period	Type 2	22 adults	Higher CHO vs. higher MUFA (olive oil) diet	Higher CHO: CHO 50→52.3% Fat 30→27.9% MUFA 12→13.6% Protein 15→18.9% vs. Higher MUFA: CHO 40→41.4% Fat 40→40.2% MUFA 25→24.9% Protein 15→17.5%	Glycemic measures: NS Higher-MUFA diet decreased VLDL TGs 16% ($P = 0.016$) and VLDL cholesterol by 35% ($P = 0.023$) compared with the higher-CHO diet.	Weight uncontrolled but stable (isocaloric by design) Fiber significantly higher in CHO diet vs. higher-MUFA (26 g/day vs. 20.7, $P = 0.001$)
(27)	Kodama 2009	Meta-analysis/ 1966–2007	Type 2	19 studies, 306 adults	HFLC diets vs. LFHC diets	Median diet composition of CHO/fat in the HFLC and LFHC diets were 24/58% and 40/40%, respectively	2-h PPG (10 trials), fasting insulin (22 trials), and 2-h fasting insulin (9 trials) increased on LFHC vs. HFLC (10.3% , $P < 0.001$; 8%, $P = 0.02$;12.8%, $P < 0.001$, respectively) HDL-C decreased by 5.6% ($P < 0.001$) on LFHC vs. HFLC (20 trials) Fasting TG increased* by 13.4% ($P < 0.001$) on LFHC vs. HFLC (22 trials)	Weight-loss trials included in the meta-analysis Of the 19 studies included in the meta-analysis, only 3 were published during this systematic review time period and are included in this systematic review (Miyashita [18], and Rodríguez-Villar [26], and Lovejoy [30])

Supplementary Table 1—*Continued*

Ref. number	Author/ year	Study type/ duration	Diabetes	*n*‡	Comparison summary	Intervention detail¶ dietary variable of interest for observational studies	Significant results**	Comments/study limitations#
(28)	Kirk 2008	Meta-analysis/ 1980–2006	Type 2	13 studies, 263 adults	Lower-CHO diets vs. higher-CHO diets; lower-CHO diets, single-arm studies	Lower-CHO diets: 29 ± 14% kcal from CHO, range 4–45% vs. higher-CHO comparison diets: 55 ± 8% kcal from CHO, range 40–70%	Greater mean reduction with lower CHO vs. higher CHO for FPG; regression analysis: 10% increase in CHO calorie intake associated with 3.2 ± 1.2% increase in glucose, $P = 0.047$ A1C was reduced more on lower-CHO diet (9 of the 11 trials) In regression controlling for diet-phase duration, strong relationship between low-CHO phase and lower-TG levels, 10% increase in CHO calorie intake associated with 7.6 ± 0.6% increase in TG change, $P = 0.001$ TG reductions for both lower- and higher-CHO diets (11 of the 11 trials)	Weight loss a confounding factor in 6 studies Of the 13 studies in the meta-analysis, only 4 were published during this systematic review time period and met this systematic review criteria (Boden [10], Yancy [14], Gerhard [22], and Gannon [25])

Supplementary Table 1—*Continued*

Ref. number	Author/ year	Study type/ duration	Diabetes	n‡	Comparison summary	Intervention detail¶ dietary variable of interest for observational studies	Significant results**	Comments/study limitations#
(29)	Rosenfalck 2006	RCT crossover/ 3 months each	Type 1	10 adults	Lower-fat diet vs. conventional "diabetes" diet (European Association for the Study of Diabetes)	Lower-fat diet: CHO 55→51.4% Fat 25→26.2% Protein 20→21.1% vs. Conventional diet: CHO 55→48.7% Fat 30→31.2% Protein 15→15.1%	Insulin sensitivity by euglycemic-hyperinsulinemic clamp improved on the lower-fat diet compared with the conventional diet (7.06 vs. 5.52 g/kg/min, $P = 0.03$) CVD risk measures: not done	77% completion rate Washout period not provided Body composition remained constant (isocaloric by design) Raw food materials for lower-fat diet were delivered to patients who then prepared their own meals A1C increased from baseline for both diets
(30)	Lovejoy 2002	RCT crossover, double blind, 4 arms/4 weeks each (minimum of 2-week washout period)	Type 2	30 adults	Higher fat/high almond vs. lower fat/high almond vs. higher fat control vs. lower-fat control	Higher fat/high almonds: CHO 48% Fat 37% (10% from almonds) Protein 15% vs. Lower fat/high almonds: CHO 60% Fat 25% (10% from almonds) Protein 15% vs. Higher-fat control: CHO 48% Fat 37% (10% from olive or canola oil) Protein 15% vs. Lower-fat control: CHO 60% Fat 25% (10% from olive or canola oil) Protein 15%	Glycemic measures: NS HDL-C lower in the almond-enriched groups ($P = 0.002$)	All foods provided during the study Weight controlled Fiber almost doubled during the almond diets vs. the control Almonds (57–113 g/day depending on total energy level) and the control oils were all high in MUFA

Supplementary Table 1—*Continued*

Ref. number	Author/ year	Study type/ duration	Diabetes	n‡	Comparison summary	Intervention detail¶ dietary variable of interest for observational studies	Significant results**	Comments/study limitations#
Carbohydrate type: GI								
(31)	Kabir 2002	RCT crossover/4 weeks each (15-day washout period)	Type 2	13 men	Higher-GI vs. lower-GI breakfast	Higher-GI breakfast: whole-grain cereal, whole-wheat bread vs. lower-GI breakfast: whole-grain bread and muesli containing 3 g β-glucan from oats	Glycemic measures: NS TC lower after the lower-GI breakfast period than the higher-GI breakfast period ($P < 0.03$)	Weight not controlled Fiber content comparable between breakfasts
(19)	Wolever 2008	See "Carbohydrate amount: lower carbohydrate"						
(32)	Rizkalla 2004	RCT crossover/4 weeks	Type 2	12 men	Lower-GI vs. higher-GI diets	Usual diet with change in type of CHO only Lower GI: pumpernickel, pasta, lentils, haricot, mung beans, chickpeas; achieved GI = 39 units vs. Higher GI: whole-meal bread, French baguettes, potatoes, white rice; achieved GI = 71 units	A1C lower on lower-GI diet vs. higher-GI diet (7.17 vs. 7.57%) ($P < 0.05$) Incremental AUCs for plasma glucose (8-h metabolic profiles at 4 weeks) lower on lower-GI diet vs. higher-GI diet ($P < 0.05$) TC and LDL-C decreased on lower-GI diet vs. higher-GI diet ($P < 0.05$)	Weight not controlled, did not change Fiber significantly higher on lower-GI diet vs. higher-GI diet ($P < 0.0001$) Insulin sensitivity (clamp technique) significantly higher on lower-GI diet vs. higher-GI diet (glucose disposal: 7 vs. 4.8 mg glucose/kg/min) ($P < 0.001$) Apolipoprotein B decreased more on lower-GI diet vs. higher-GI diet ($P < 0.01$)

Supplementary Table 1—*Continued*

Ref. number	Author/ year	Study type/ duration	Diabetes	n‡	Comparison summary	Intervention detail¶ dietary variable of interest for observational studies	Significant results**	Comments/study limitations#
(33)	Jimenez-Cruz 2003	RCT crossover/6 weeks (6-week washout period)	Type 2	14 adults	Lower vs. higher GI	Typical lower-GI foods: oranges, beans, yogurt, pasta, corn tortillas; achieved GI and GL, 44 and 86 units, respectively vs. Typical higher-GI foods: corn flakes, white bread, potatoes, ripe bananas; achieved GI and GL, 56 and 139 units, respectively	A1C lower after the lower-GI period vs. after the higher-GI period (8.1 vs. 8.6%) ($P = 0.02$) FBG lower during the lower-GI period vs. the higher-GI period (8.9 vs. 10.0 mmol/L) ($P = 0.04$) CVD risk measures: NS	39% completion rate Weight not controlled (weight decreased significantly more with lower GI vs. higher GI [90.1 vs. 92.0 kg, $P = 0.04$]) Fiber higher on lower GI ($P = 0.003$)
(34)	Heilbronn 2002	RCT parallel/8 weeks	Type 2	45 adults	Lower-GI vs. higher-GI diets	Both diets were similar in composition: Lower GI: CHO 60→58.9% Fat 15→17.9% Protein 20→22% GI goal 43 units vs. Higher GI: CHO 60→60.8% Fat 15→17.1% Protein 20→21.7% GI goal 75 units	Glycemic measures: NS CVD risk measures: NS	Weight-loss study Key foods were provided Achieved GI units/group not provided

Supplementary Table 1—*Continued*

Ref. number	Author/ year	Study type/ duration	Diabetes	*n*‡	Comparison summary	Intervention detail¶ dietary variable of interest for observational studies	Significant results**	Comments/study limitations#
(35)	Jenkins 2008	RCT parallel/6 months	Type 2	155 adults	High–cereal fiber diet vs. low-GI diet	Goal to keep fiber constant while reducing GI 10-20 points End-of-study lower-GI diet: 69.6 units and 18.7 g fiber/1,000 kcal vs. high–cereal fiber diet: 83.5 units and 15.7 g fiber/1,000 kcal	In ITT analysis: A1C decreased by −0.50% absolute units in the lower-GI compared with −0.18% in the high–cereal fiber diet ($P < 0.001$). The difference was still significant after controlling for changes in body weight, fiber, or carbohydrate FBG decreased in lower GI vs. higher-cereal fiber ($P < 0.02$) HDL-C increased in the lower-GI diet by 1.7 mg/dL compared with a decrease of −0.2 mg/dL in the high–cereal fiber diet ($P = 0.005$)	Weight uncontrolled 74% completion rate

Supplementary Table 1—*Continued*

Ref. number	Author/ year	Study type/ duration	Diabetes	*n*‡	Comparison summary	Intervention detail¶ dietary variable of interest for observational studies	Significant results**	Comments/study limitations#
(36)	Ma 2008	RCT parallel/12 months	Type 2	40 adults	Lower-GI vs. traditional diabetes diet	Lifestyle education: Both groups: goal of 55% CHO, NCEP fat guidelines Lower-GI group: reduce GI to 55 units from baseline. Achieved GI at 12 months; 76 units vs. traditional diabetes group: CHO counting. Achieved GI at 12 months; 80 units	Glycemic measure (A1C): NS LDL-C higher in the lower-GI group than in the traditional diabetes group at 12 months, 94.50 vs. 71.49 mg/dL (P = 0.048)	Weight not controlled; not a weight-loss study; weight and waist circumference did not differ between groups Both diets reduced A1C and TC from baseline to end of study
(16)	Westman 2008	See "Carbohydrate amount: lower carbohydrate"						
(37)	Gilbertson 2001	Prospective, stratified, randomized, parallel study/12 months	Type 1	89 youths	Lower-GI diet vs. CHO-exchanges diet	Lifestyle intervention: Measured CHO-exchange diets vs. a more flexible food pyramid–type diet with lower-GI dietary advice	A1C was lower for lower GI (7.77 ± 0.79%) compared with CHO exchanges (8.76 ± 1.07%) (P = 0.002) CVD risk measures: not done	Weight not controlled Despite difference in dietary instruction, there was no difference in mean achieved GI between the 2 groups (56.5 ± 4.0 and 55.3 ± 4.8) (P = 0.26) Many patients appeared to under-report food intake

Supplementary Table 1—*Continued*

Ref. number	Author/ year	Study type/ duration	Diabetes	n‡	Comparison summary	Intervention detail¶ dietary variable of interest for observational studies	Significant results**	Comments/study limitations#
(38)	Burani 2006	Retrospective cohort (pre/ post)	Types 1 and 2	21 adults	GI	Pre– and post–low-GI medical nutrition therapy	In individuals with stable/improved A1C after initiation of low-GI medical nutrition therapy, A1C improved (pre: 7.5% to post: 6%) ($P < 0.0005$)	BMI significantly reduced Meds reduced in most subjects GI significantly reduced (mean pre = 59 vs. post = 44)
(39)	Cheong 2009	RCT parallel/16 weeks	Type 2	38 adults	Walk vs. eat more lower-GI foods and walk	Lifestyle education: Walk more vs. eat more lower-GI foods and walk more	Glycemic measure (A1C): NS CVD risk measures: not done	Subjects were in good glycemic control before the study
(40)	Brand-Miller 2003	Meta-analysis/ 1981–2001	Type 1 and 2	14 studies, 356 youths and adults	Lower GI vs. higher GI	Lower GI: average 65 vs. higher GI: average 83	A1C reduced 0.34% points more and fructosamine reduced 0.18 mmol/L more with lower-GI diet vs. higher-GI diet, adjusting for baseline and assuming independence CVD risk measures: not done	All meta-analysis references, except Gilbertson (37), were published before the start date of this systematic review

Supplementary Table 1—*Continued*

Ref. number	Author/ year	Study type/ duration	Diabetes	*n*‡	Comparison summary	Intervention detail¶ dietary variable of interest for observational studies	Significant results**	Comments/study limitations#
(41)	Anderson 2004	Meta-analysis Articles included were published between 1978 and 2000	Type 1 and 2	a. 174 b. 167 c. 143	a. MCHF vs. MCLF b. HCHF vs. MCLF c. Low GI vs. high GI	Moderate CHO: 30–59.9% kcal Higher CHO: ≥60% kcal Higher fiber: ≥20 g/1,000 kcal Lower fiber: <10 g/1,000 kcal	PPG reduced significantly (an average of 21%) with MCHF vs. MCLF TC, LDL-C, and TG reduced significantly (7, 8, and 8%, respectively) with MCHF vs. MCLF	MCHF vs. MCLF associated with an insignificant decrease in FBG, average daily plasma glucose and HDL-C HCHF vs. MCLF associated with reduced FBG, PPG, average plasma glucose, A1C, TC, LDL-C, HDL-C, and TG Low GI vs. high GI associated with reduced FBG and A1C All meta-analysis references were published before the start date of this systematic review
(42)	Thomas 2009	Meta-analysis/ inception of databases (MEDLINE, EMBASE, CINAHL, Cochrane) to June 2008	Type 1 and 2	11 studies, 402 youths and adults	Lower GI/GL	Lower GI in individuals with diabetes not optimally controlled	A1C decreased by 0.5% with lower-GI diet ($P = 0.02$ for parallel trials and $P = 0.03$ for crossover trials) CVD risk measures: not done	Cochrane Library Of the 11 studies included in the meta-analysis, only 3 were published during/ after 2001 and are included in this systematic review (Rizkalla [32], Jimenez-Cruz [33], and Gilbertson [37])

Supplementary Table 1—*Continued*

Ref. number	Author/ year	Study type/ duration	Diabetes	n‡	Comparison summary	Intervention detail¶ dietary variable of interest for observational studies	Significant results**	Comments/study limitations#
(43)	Qi 2005	Cross-sectional	Type 2	780 men	Semiquantitative FFQ in 1986, 1990, and 1994	GI, GL intake of dietary fibers and adiponectin	Glycemic and CVD risk measures: not done	Health Professionals' Follow-up Study Trend toward lower adiponectin levels with increasing quintiles of GI (13% lower in highest adiponectin quintile compared to the lowest $P = 0.005$) and also with GL (18% lower in highest quintile than the lowest P for trend = 0.004); adiponectin levels 19% higher in highest quintile than lowest quintile for cereal fiber intake (P for trend = 0.003)
Carbohydrate type: dietary fiber								
(45)	Ziai 2005	RCT parallel, double blind, 2 arms/8 weeks	Type 2	36 adults	Psyllium fiber vs. inert control (cellulose)	2 packets (5.1-g each) of psyllium/ day in water vs. microcrystalline cellulose	A1C decreased from 10.5 to 8.9% ($P < 0.001$) in psyllium group and increased from 9.1 to 10.5% ($P < 0.05$) in control group HDL-C increased in psyllium group and decreased in control group ($P < 0.05$ between groups)	Weight controlled 73% completion rate

Supplementary Table 1—*Continued*

Ref. number	Author/year	Study type/duration	Diabetes	*n*‡	Comparison summary	Intervention detail¶ dietary variable of interest for observational studies	Significant results**	Comments/study limitations#
(46)	Magnoni 2008	RCT parallel, double blind, 2 arms/12 weeks	Type 2	36 adults	Diabetes-specific oral nutrition supplement vs. control (isocaloric standard oral supplement)	In addition to regular diet, subjects consumed two 200 mL/day of a diabetes-specific supplement: 35% CHO, 49% fat (34% kcal as MUFA), 2.5 g fiber/100 mL vs. a standard supplement: 55% CHO, 34% fat (17 % kcal as MUFA), 0 fiber	At 12 weeks, 150- and 210-min PPG increases were significantly lower in intervention group vs. control ($P < 0.001$) CVD risk measures: not done	Weight uncontrolled
(47)	Lu 2004	RCT crossover/ 5-weeks each (no washout period)	Type 2	15 adults	Arabinoxylan fiber in bread vs. bread without the fiber	Fiber-enriched bread/muffin products (50% whole-wheat flour, 36% white flour, 14% fiber-enriched flour) vs. control products (50% whole-wheat flour and 50% white). Subjects replaced most starchy foods with 4–5 slices of bread and 1–2 muffins, depending on energy needs	Added-fiber diet 2-h PPG (by 75-g OGTT) was lower than control diet ($P = 0.001$), as was serum insulin ($P = 0.015$); serum fructosamine was lower after fiber diet vs. control ($P = 0.02$) CVD risk measures: NS	Weight uncontrolled but no significant difference between groups Completion rate not provided

Supplementary Table 1—*Continued*

Ref. number	Author/ year	Study type/ duration	Diabetes	*n*‡	Comparison summary	Intervention detail¶ dietary variable of interest for observational studies	Significant results**	Comments/study limitations#
(48)	Vuksan 2007	RCT crossover, single blind/12 weeks each (4–6-week washout period)	Type 2	20 adults	Salba (novel whole grain) vs. wheat bran	37 ± 4 g/day of Salba or wheat bran	Glycemic measures: NS CVD risk measures: NS	Weight controlled 74% completion rate A1C significantly reduced (6.9–6.7% from baseline to 12 weeks in Salba group ($P < 0.05$) High-sensitivity CRP lower in Salba group ($P = 0.04$) vs. wheat bran
(49)	Jenkins 2002	RCT crossover/ 3 months each (2-month washout period)	Type 2	23 adults	Wheat bran fiber vs. control (no wheat bran)	Wheat bran-enriched bread and cereal (24% of daily energy needs, average of 19 g fiber/day) vs. control white bread and cereal (24% daily energy needs, 4 g fiber/day) provided as sole source of bread and cereal for 3-month period each	Glycemic measures: NS CVD risk measures: NS	Weight uncontrolled, but no significant difference between groups 34% completion rate

Supplementary Table 1—*Continued*

Ref. number	Author/ year	Study type/ duration	Diabetes	n‡	Comparison summary	Intervention detail¶ dietary variable of interest for observational studies	Significant results**	Comments/study limitations#
(50)	Cho 2005	RCT parallel, 2 arms/2 months	Type 2	30 adults	Soluble fiber (Cassia tora, a herbal legume) vs. maltodextrin	Powder packet containing 2 g soluble fiber from Cassia tora plus 200 mg α-tocopherol, 500 mg vitamin C, 300 mg maltodextrin vs. 3-g packet of maltodextrin only (2 packets/day for 2 months)	Glycemic measures: NS CVD risk measures: NS	Weight uncontrolled, but anthropometric indices did not change 71% completion rate
(51)	Ble-Castillo 2010	RCT crossover/4 weeks (blinded within subject) (no washout period)	Type 2	28 obese adults	Native banana starch vs. soy milk	24 g native banana starch powder per day vs. control of 24 g soy milk powder, each dissolved in water	Glycemic measures: NS Soy milk significantly reduced serum TG (baseline to end, $P < 0.05$) and compared with the native banana starch ($P = 0.012$)	Weight uncontrolled (more weight was lost with native banana starch than with soy milk) Other treatments and medicines werecontrolled Fasting insulin concentration and insulin sensitivity (HOMA) improved, baseline to end for native banana starch group ($P = 0.01$ and $P < 0.05$, respectively)
(35)	Jenkins 2008	See "Carbohydrate type: GI"						

Supplementary Table 1—*Continued*

Ref. number	Author/ year	Study type/ duration	Diabetes	*n*‡	Comparison summary	Intervention detail¶ dietary variable of interest for observational studies	Significant results**	Comments/study limitations#
(52)	De Natale 2009	RCT crossover/4 weeks each (no washout period)	Type 2	18 adults	Higher CHO (higher fiber, lower fat and GI) vs. higher MUFA (lower CHO and fiber, higher fat and GI)	Isocaloric diets: Higher CHO vs. higher MUFA (achieved) CHO: 51 vs. 44% Fiber: 27 vs. 8 g/1,000 kcal Fat: 30 vs. 37% MUFA: 17 vs. 23% GI: 60 vs. 87	After the end of study, higher-CHO, higher-fiber test meal vs. the MUFA test meal: Plasma glucose IAUC decreased until the third hour ($P < 0.05$) Significant reduction in insulin IAUC (by 14 and 21%) at 3 and 6 h, respectively ($P < 0.05$) Decrease of nearly 50% in postprandial glycemic variability ($P < 0.02$) Fasting TC, LDL-C, and HDL-C significantly reduced, higher CHO vs. MUFA ($P < 0.05$ for each)	

Supplementary Table 1—*Continued*

Ref. number	Author/ year	Study type/ duration	Diabetes	n‡	Comparison summary	Intervention detail¶ dietary variable of interest for observational studies	Significant results**	Comments/study limitations#
(53)	Qi 2006	Cross-sectional	Type 2	902 women	Semiquantitative FFQ, past year	Intake of cereal and fruit fiber, dietary GL and GI, and marker of insulin sensitivity (adiponectin)	Glycemic and CVD risk measures: not done	Nurses' Health Study Weight controlled Cereal fiber and fruit fiber positively associated with increasing adiponectin (P = 0.002 and P = 0.036, respectively) after adjusting for confounding variables GL and GI negatively associated with adiponectin only after adjustment for BMI (P = 0.01 and P = 0.03, respectively)

Supplementary Table 1—*Continued*

Ref. number	Author/ year	Study type/ duration	Diabetes	*n*‡	Comparison summary	Intervention detail¶ dietary variable of interest for observational studies	Significant results**	Comments/study limitations#
(54)	Qi 2006	Cross-sectional	Type 2	902 women	FFQ	Intake of whole grain, bran, cereal fiber, dietary GL and GI, and markers of systematic inflammation (CRP, TNF)	Glycemic and CVD risk measures: not done	Nurses' Health Study Weight controlled Decreasing levels of CRP with higher intakes of whole grains and bran (*P* for trend = 0.03, *P* for trend = 0.007, respectively) Decreasing levels of TNF-R2 with higher intakes of whole grains (*P* for trend = 0.017) High dietary glycemic index was associated with significantly increasing trend of CRP and TNF-R2 levels (*P* for trend = 0.04 and 0.0008, respectively)

Supplementary Table 1—*Continued*

Ref. number	Author/ year	Study type/ duration	Diabetes	*n*‡	Comparison summary	Intervention detail¶ dietary variable of interest for observational studies	Significant results**	Comments/study limitations#
(55)	Steemburgo 2009	Cross-sectional	Type 2, with or without the metabolic syndrome	214 adults	3-day weighed diet	Dietary fiber intake	Glycemic measures: NS Protective effect with soluble fiber from whole-grain foods for TG, metabolic syndrome vs. no metabolic syndrome (P = 0.03)	Subjects with both diabetes and the metabolic syndrome had lower intakes of both total dietary fiber and soluble fiber, mainly from fruits and whole grains (16.7 g/day vs. 19.5, $P < 0.010$ and 5.3 g/day vs. 6, $P < 0.011$, respectively) than subjects with diabetes but without the metabolic syndrome
(41)	Anderson 2004	See "Carbohydrate type: GI"						
(43)	Qi 2005	See "Carbohydrate type: GI"						
(56)	He 2010	Prospective cohort/ 1980–2002	Type 2	7,822 women	Semiquantitative FFQ (7 years)	Whole grain, cereal fiber, bran, and germ	Glycemic measures: not done In a fully adjusted model (lifestyle and dietary variables considered), only the inverse association between bran intake and CVD-specific mortality was significant	Nurses' Health Study

Supplementary Table 1—*Continued*

Ref. number	Author/ year	Study type/ duration	Diabetes	*n*‡	Comparison summary	Intervention detail¶ dietary variable of interest for observational studies	Significant results**	Comments/study limitations#
Fat amount								
(21)	Barnard 2009	See "Carbohydrate amount: moderate to high carbohydrate"						
(22)	Gerhard 2004	See "Carbohydrate amount: moderate to high carbohydrate"						
(29)	Rosenfalck 2006	See "Carbohydrate amount: moderate to high carbohydrate"						
(23)	Wycherley 2010	See "Carbohydrate amount: moderate to high carbohydrate"						
(57)	Mostad 2004	Clinical trial/3 days	Type 2	19 adults with hypertriglyceridemia	Usual diet vs. low-fat diet	Usual diet (fat 39%) vs. low-fat diet (subjects advised to increase fiber-rich and low-fat foods and to decrease intake of visible fat in an isoenergetic manner): fat 22%	Glycemic measures: NS TC and HDL-C decreased 6.3–6.2 mmol/L ($P < 0.005$) and 1.13–1.10 mmol/L ($P < 0.048$)	Weight not controlled, and negative energy balance resulted with reduction of fat in diet

Supplementary Table 1—*Continued*

Ref. number	Author/ year	Study type/ duration	Diabetes	*n*‡	Comparison summary	Intervention detail¶ dietary variable of interest for observational studies	Significant results**	Comments/study limitations#
(58)	Coppell 2010	RCT parallel, 2 arms/6 months	Type 2	94 adults with persistently unsatisfactory glycemic control	Intensive dietary advice group vs. control group	Intensive dietary advice group, recommendations based on EASD: CHO 45–60→48% Fat <30→28.7% SFA <8–10→9.7% PUFA 10→5.6% Protein no recommendation→ 22.1% Fiber 40→26.3 g/day vs. Control: no advice CHO →48.5% Fat →29.9% SFA →11.3% PUFA →4.7% Protein →20.4% Fiber →23.5 g/day	A1C decreased more in intervention group (8.9 to 8.4%) vs. control group (stable at 8.6%) after adjustment for baseline values, age, and sex ($P = 0.007$) CVD risk measures: NS	Weight loss was a part of intervention Intervention group reduced diabetes meds significantly
(59)	Yip 2001	RCT parallel, 3 arms/12 weeks	Type 2	57 adults	Meal replacements vs. exchange diet plan	Slim-Fast (containing lactose, fructose, sucrose) Sugar-free Slim-Fast (fructose and sucrose replaced with oligosaccharides) Exchange diet plan (55–65% CHO, <30% fat, 10–20% protein)	FBG decreased in the Slim-Fast groups over time compared with the exchange diet plan group ($P = 0.012$) CVD risk measures: NS	Weight-loss study 76% completion rate No significant differences between Slim-Fast and sugar-free Slim-Fast, so they were pooled and compared with the exchange diet plan

Supplementary Table 1—*Continued*

Ref. number	Author/ year	Study type/ duration	Diabetes	n‡	Comparison summary	Intervention detail¶ dietary variable of interest for observational studies	Significant results**	Comments/study limitations#
(60)	Li 2005	RCT parallel, 2 arms/12 months	Type 2	77 adults	Soy-based meal replacement vs. individual diet plan	1–3 meals/day replaced with Slim-Fast vs. individualized diet (55–65% CHO, <30% fat, 10–20% protein). 500-calorie/day energy deficit.	A1C decreased, Slim-Fast vs. individualized diet, at 3 months only ($P < 0.05$) FBG decreased, Slim-Fast vs. individualized diet, at 3 and 6 months only ($P < 0.05$) CVD risk measures: NS	74% completion rate Weight-loss study
(61)	Snell-Bergeon 2009	Cross-sectional/ case-control	Type 1	571 and 696 control	Examined diet variables and correlation with CHD risk factors	Self-administered FFQ	A1C correlated with % fat (0.07), % saturated fat (0.06), % MUFA (0.06), % CHO (−0.07), $P < 0.05$ (all correlations) TC correlated with % fat (0.14), % saturated fat (0.12), % *trans* fat (0.11), % MUFA (0.14), % CHO (−0.14), $P < 0.001$ (all correlations) LDL-C correlated with % fat (0.15), % saturated fat (0.14), % *trans* fat (0.12), % MUFA (0.16), % PUFA (0.06), % CHO (−0.13), $P < 0.001$ (all correlations) HDL-C negatively correlated and TG positively correlated with GI ($P < 0.05$ and $P < 0.001$, respectively)	Weight controlled Part of the baseline examination of the CACTI study

Supplementary Table 1—*Continued*

Ref. number	Author/ year	Study type/ duration	Diabetes	*n*‡	Comparison summary	Intervention detail¶ dietary variable of interest for observational studies	Significant results**	Comments/study limitations#
Saturated fat								
(62)	Rivellese 2008	RCT crossover/3 weeks each (washout period not specified)	Type 2	11 adults	SFA vs. MUFA	Diets isoenergetic by design. SFA-rich diet goal: 17% SFA, 15% MUFA vs. MUFA-rich diet goal: 8% SFA, 23% MUFA Both diets were designed to contain 46% CHO, 37% fat, 17% protein, 21 g fiber. Cholesterol was 428 mg on the SFA diet and 130 mg on the MUFA diet.	Glycemic measures: NS Decrease in small VLDL triglyceride incremental area after the MUFA diet (-13.6 ± 4.7 mg/dL at 6 h vs. -2.2 ± 3.7 mg/dL at 6 h, $P < 0.005$)	All lunches and dinners provided to subjects Weight uncontrolled, but no significant difference in body weight
Omega-3 fatty acids								
(63)	Mostad 2006	RCT parallel, single blind/9 weeks	Type 2	26 adults	Fish oil vs. corn oil	Fish oil group: 20 ml fish oil enriched with omega-3 fatty acids vs. corn oil (equal amount)	FBG increased in the fish oil group (~1 mmol/L higher than the corn oil group, $P = 0.035$) CVD risk measures: NS	Weight not significantly changed during intervention

Supplementary Table 1—*Continued*

Ref. number	Author/ year	Study type/ duration	Diabetes	n‡	Comparison summary	Intervention detail¶ dietary variable of interest for observational studies	Significant results**	Comments/study limitations#
(64)	Woodman 2002	RCT parallel, double blind/6 weeks	Type 2	51 adults	EPA or DHA vs. olive oil	4 g of each oil/day	FBG in the EPA and DHA groups increased 1.40 and 0.98 mmol/L (P = 0.002 for each), respectively, vs. olive oil TG in EPA and DHA groups decreased 19 and 15% (P = 0.022 each), respectively, vs. olive oil HDL-2 in the EPA and DHA groups increased 16% (P = 0.026) and 12% (P = 0.05), respectively, vs. olive oil HDL-3 decreased 11% (P = 0.026) with EPA vs. olive oil	Weight controlled
(65)	Pedersen 2003	RCT parallel, double blind/8 weeks	Type 2	44 adults	EPA + DHA vs. corn oil	EPA + DHA: 2.6-g daily in 4 capsules (76% omega-3 and 3.4% omega-6 PUFA) vs.4 capsules of corn oil (0% omega-3 and 55.9% omega-6 PUFA)	Glycemic measures: NS HDL-C higher in fish oil group (+0.07 mmol/L) vs. −0.01 in corn oil, P = 0.045 TG lower in fish oil group (−0.53 mmol/L) vs. −0.08 in corn oil, P = 0.025 LDL-C unsaturation index increased in fish oil group vs. corn oil group	Weight uncontrolled

Supplementary Table 1—*Continued*

Ref. number	Author/ year	Study type/ duration	Diabetes	*n*‡	Comparison summary	Intervention detail¶ dietary variable of interest for observational studies	Significant results**	Comments/study limitations#
(66)	Pooya 2010	RCT parallel, double blind/2 months	Type 2	81 adults	Omega-3 fatty acids vs. control of sunflower oil	Omega-3 fatty acid capsules/day (1,548 mg EPA, 828 mg DHA, 338 mg other omega-3 fatty acid) vs. control capsules/day (2,100 mg sunflower oil, 12% SFA, 71% linoleic acid, 15% MUFA)	A1C decreased in omega-3 fatty acid group (−0.75%) vs. 0.26 in control, $P < 0.001$ CVD risk measures: NS	Weight uncontrolled
(67)	Hartweg 2009	Meta-analysis/ 1966–2008	Type 2	24 trials 1,533 adults	Fish oil, omega-3 fatty acid, PUFA, EPA, DHA vs. placebo/control	Average daily intake of fish oil during total period was ~2.4 g omega-3 PUFAs over 24 weeks for the 7 studies added 2007–2008	Glycemic measures: NS TG decreased with omega-3 PUFA supplementation by 7% (mean −0.17 mmol/L; 24 trials; 1,530 participants) vs. control ($P < 0.0001$) LDL-C increased with omega-3 PUFA by 3% (mean 0.08 mmol/L; 21 trials; 1,104 participants) vs. control ($P = 0.006$)	Of the 23 studies included in the meta-analysis, 6 meeting this systematic review criteria were published during the systematic review time period (Mostad [63], Woodman [64], Pedersen [65], Petersen [68], Kabir [69], and Shidfar [70])

Supplementary Table 1—*Continued*

Ref. number	Author/ year	Study type/ duration	Diabetes	*n*‡	Comparison summary	Intervention detail¶ dietary variable of interest for observational studies	Significant results**	Comments/study limitations#
(68)	Petersen 2002	RCT parallel, double blind/8 weeks	Type 2	42 adults	Fish oil vs. corn oil	4 g daily of either fish oil or corn oil	Glycemic measures: NS TG decreased 0.54 mmol/L in fish oil group vs. 0.04 mmol/L in corn oil group, $P = 0.025$ HDL-2a reduction was smaller in the fish oil group than in the corn oil group ($P = 0.007$)	Weight controlled
(69)	Kabir 2007	RCT parallel, double blind/2 months	Type 2	27 postmenopausal women	Fish oil vs. paraffin oil	Fish oil capsules: 3 g/day (1.8 g omega-3 PUFAs: 1.08 g EPA + 0.72 g DHA) vs. paraffin oil capsules: 3 g/day	Glycemic measures: NS TG and ratio of TG-to-HDL-C (atherogenic index) were lower in the fish oil group than in the paraffin oil group ($P < 0.03$ for each)	Body weight unchanged
(70)	Shidfar 2008	RCT parallel, double blind/10 weeks	Type 2	50 adults	omega-3 fatty acids vs. control	omega-3 fatty acid capsules: 520 mg EPA + 480 mg DHA daily vs. control capsules: 300 mg SFA, 100 mg MUFA, 600 mg linoleic acid	Glycemic measures: NS TG decreased by 31% and TG-to-HDL-C ratio decreased for omega-3 group vs. control ($P = 0.01$ and $P = 0.04$, respectively)	Weight controlled

Supplementary Table 1—*Continued*

Ref. number	Author/ year	Study type/ duration	Diabetes	*n*‡	Comparison summary	Intervention detail¶ dietary variable of interest for observational studies	Significant results**	Comments/study limitations#
(71)	Kesavulu 2002	Clinical trial, single arm/2 months	Type 2	34 adults	EPA + DHA	1,080 mg EPA + 720 mg DHA daily	Glycemic measures: NS HDL-C increased, 0.93 mmol/L before vs. 1.04 mmol/L after therapy ($P < 0.01$) TG decreased, 2.07 mmol/L, before vs. 1.54 mmol/L after therapy ($P < 0.05$) VLDL-C decreased after treatment ($P < 0.05$)	
(73)	Belalcazar 2010	Prospective cohort / baseline and 1 year	Type 2	2,397	FFQ	Marine omega-3 fatty acid intake based on 8 line items in the FFQ inquiring about seafood consumption	A1C: no association at baseline Baseline marine omega-3 fatty acid intake was 162 ± 138 mg/d and was inversely associated with TGs ($P < 0.001$)	Weight loss was a goal of RCT from which the data came (Look AHEAD) 1-year marine omega-3 fatty acid and fried fish intake decreased with the intensive lifestyle intervention ($P < 0.001$)
Protein								
(25)	Gannon 2003	See "Carbohydrate amount: moderate to high carbohydrate"						

Supplementary Table 1—*Continued*

Ref. number	Author/ year	Study type/ duration	Diabetes	*n*‡	Comparison summary	Intervention detail¶ dietary variable of interest for observational studies	Significant results**	Comments/study limitations#
(74)	Parker 2002	RCT parallel /12 weeks (8-weeks' weight loss intervention + 4-weeks' weight maintenance)	Type 2	54 adults	Higher protein vs. lower protein	Higher-protein diet: CHO 40→42.1/ 42.6%† Fat 30→27.8/27.6% Protein 30→28.1/ 27.7% vs. Lower-protein diet: CHO 60→54.8/55.0% Fat 25→26.3/26.7% Protein 15→16.4/ 16/0% Fatty acid % same in both diets	Glycemic measures: NS TC and LDL-C were lower after 12 weeks in the higher-protein group vs. lower-protein group ($P = 0.009$ for diet-by-time interaction)	Weight-loss study Some food supplied Fiber intake significantly higher in the lower-protein group during weight loss part of the study See Brinkworth 2004 for a 1-year follow-up of the study
(24)	Brinkworth 2004	See "Carbohydrate amount: moderate to high carbohydrate"						
(23)	Wycherley 2010	See "Carbohydrate amount: moderate to high carbohydrate"						

Supplementary Table 1—*Continued*

Ref. number	Author/ year	Study type/ duration	Diabetes	*n*‡	Comparison summary	Intervention detail¶ dietary variable of interest for observational studies	Significant results**	Comments/study limitations#
Protein/diabetic kidney disease								
(75)	Pijls 2002	RCT parallel, physician blinded/24 months	Type 2 with micro- or macroalbuminuria, or with diabetes >5 years	131 adults with a follow-up of ≥12 months	Lower-protein diet vs. usual-protein diet	Lower-protein group: protein 0.8 g/kg/day→ 1.11 g /kg/day (at 24 months) vs. Usual-protein group: protein 1.07 g/kg/day achieved at 24 months	Glycemic measures: not done CVD risk measures: not done	Weight not controlled 59% retention rate at 24 months No significant differences between groups for GFR or albuminuria
(76)	Meloni 2004	RCT parallel/ 1 year	Types 1 (24) and 2 (56) with macroalbuminuria	80 adults	Lower-protein diet vs. free-protein diet	Lower-protein diet: protein 0.8 g/kg/day →0.86 g/kg/day vs. Free-protein diet: protein 1.24 g/kg/day achieved	Glycemic measures: NS CVD risk measures: NS	Mean body weight decreased significantly in lower-protein group vs. free-protein group No significant difference in renal function (GFR, AER) between groups No signs of malnutrition

Supplementary Table 1—*Continued*

Ref. number	Author/ year	Study type/ duration	Diabetes	*n*‡	Comparison summary	Intervention detail¶ dietary variable of interest for observational studies	Significant results**	Comments/study limitations#
(77)	Hansen 2002	RCT parallel/ 4 years	Type 1 with macro- albuminuria	72 (at 1 year) adults	Lower-protein diet vs. usual-protein diet	Lower-protein group: protein 0.6 g/kg/day→ 0.89 g/kg/day (range 0.83–0.95 g) vs. Usual-protein group: protein achieved 1.02 g/kg/day (range 0.95–1.1 g)	Glycemic measures: NS CVD risk measures: NS	Weight not controlled, but no significant difference between groups No significant difference between groups for albuminuria or GFR
(78)	Dussol 2005	RCT parallel/ 2 years	Types 1 and 2	41 adults with micro- albuminuria, 6 with macroalbuminuria	Lower-protein diet vs. usual-protein diet	Lower-protein group (actual): 16 ± 3% kcal as protein vs. usual-protein group (actual): 19 ± 4% kcal as protein. However, calculated (Maroni formula) as g protein/kg/day, the lower-protein group (0.8 g/kg/day prescribed) at baseline, 12 months, and 24 months was 1.08, 1.02, 1.10 vs. the usual-protein group (1.13, 1.18, 1.03)	Glycemic measures: NS CVD risk measures: NS	75% completion rate During study, body weight and serum albumin were similar between groups No significant difference between groups for GFR, AER, or urinary urea excretion All subjects under strict blood pressure control

Supplementary Table 1—*Continued*

Ref. number	Author/ year	Study type/ duration	Diabetes	n‡	Comparison summary	Intervention detail¶ dietary variable of interest for observational studies	Significant results**	Comments/study limitations#
(79)	Pan 2008	Meta-analysis/ 1966–2007/ duration >6 months	Types 1 and 2 with macro-albuminuria	8 studies/ 519 adults	Lower-protein diets vs. control (usual protein)	Lower-protein groups: average protein intake 0.91 g/kg/day vs. usual-protein groups: average protein intake 1.27 g/kg/day, $P = 0.04$ for difference	A1C decreased significantly, lower protein vs. control (weighted mean difference, 0.31%) CVD risk measures: not done	Of the 8 studies included in the meta-analysis, 4 were published during/after 2001 and are included in this systematic review (Pijls [75], Meloni [76], Hansen [77], and Dussol [78]) Overall, a change in weighted mean difference for GFR or creatinine clearance rate was not significantly associated with a lower-protein diet Although the benefit of lower-protein diet therapy on proteinuria was significant ($P <$ 0.003), great heterogeneity was observed In a subgroup analysis, the change in the weighted mean difference for serum albumin was significant (reduction of 1.18 g/L; 95% CI: −1.33 to 1.03 g/L)

Supplementary Table 1—*Continued*

Ref. number	Author/ year	Study type/ duration	Diabetes	*n*‡	Comparison summary	Intervention detail¶ dietary variable of interest for observational studies	Significant results**	Comments/study limitations#
(80)	Robertson 2007	Meta-analysis/ beginning of databases searched through July 2006/duration >4 months	Types 1 and 2 with macroalbuminuria	12 studies/ 585 adults	Modified/ restricted-protein diets vs. control	Lower-protein diet: actual intake 0.7–1.1 g/kg/day vs. usual-protein diet: actual intake 1–2 g/kg/day	Glycemic measures: NA CVD risk measures: NA	Cochrane Library Of the 12 studies included in the meta-analysis, 3 were published during/after 2001 and met this systematic review criteria (Pijls [75], Meloni [76], and Hansen [77]). No significant difference between lower-protein and usual-protein diets for GFR

Supplementary Table 1—*Continued*

Ref. number	Author/ year	Study type/ duration	Diabetes	*n*‡	Comparison summary	Intervention detail¶ dietary variable of interest for observational studies	Significant results**	Comments/study limitations#
(81)	Gross 2002	RCT crossover, 3 arms/4 weeks each (4-week washout periods)	Type 2	28 adults (15 with normoalbuminuria and 13 with microalbuminuria	Usual diet (meat) vs. chicken diet vs. lower-protein/ vegetarian diet	Usual diet (meat): protein 1.2–1.5 g/kg/day →1.43 g/kg/day vs. Chicken diet (usual-diet meat replaced by chicken legs): protein 1.2–1.5 g/kg/day →1.35 g/kg/day vs. Lower-protein, vegetarian diet (protein from milk and vegetable sources only): protein 0.5–0.8 g/kg/day →0.66 g/kg/day	Glycemic measures: NS TC significantly lower after chicken diet and low-protein/ vegetarian diet as compared with usual diet ($P < 0.05$) in microalbuminuric subjects only	Weight not controlled; energy intake and weight significantly lower during the low-protein/vegetarian diet than other 2 diets GFR significantly lower after low-protein/ vegetarian diet compared with other 2 diets ($P < 0.05$), microalbuminuric subjects only UAER (in microalbuminuric subjects only) significantly lower after chicken diet compared with other 2 diets, $P < 0.05$

Supplementary Table 1—*Continued*

Ref. number	Author/ year	Study type/ duration	Diabetes	n‡	Comparison summary	Intervention detail¶ dietary variable of interest for observational studies	Significant results**	Comments/study limitations#
(82)	Teixeira 2004	RCT crossover/8 weeks each (4-week washout period)	Type 2 with macroalbuminuria	14 men	Isolated soy protein vs. casein	0.5 g/kg/day isolated soy protein powder vs. 0.5 g protein/kg/day casein powder	Glycemic measures: NS HDL-C significantly increased 0.04 mmol/L after isolated soy protein (P = 0.0041); decreased 0.03 mmol/L after casein (P = 0.0847); effect of diet depended on baseline HDL-C (P = 0.0391 for interaction) with larger differences between treatments in men with higher baseline HDL-C	41% completion rate No differences in BMI by study period (multiple regression) Subjects added protein powders during the intervention periods instead of substituting for other proteins as instructed UAC significantly decreased after isolated soy protein diet vs. casein (P < 0.001) with larger differences between diets in men with higher baseline UAC

Supplementary Table 1—*Continued*

Ref. number	Author/ year	Study type/ duration	Diabetes	n‡	Comparison summary	Intervention detail¶ dietary variable of interest for observational studies	Significant results**	Comments/study limitations#
(83)	Azadbakht 2008	RCT parallel/ 4 years	Type 2 with macroalbuminuria	41 adults	Soy protein vs. control	Soy protein group: 0.8 g protein/kg/ day (35% animal protein, 35% textured soy protein, 30% vegetable protein) prescribed. Protein achieved was 55–57 g/day (±17–23) vs. control group: 0.8 g protein/ kg/day (70% animal protein, 30% vegetable protein) prescribed. Protein achieved was 55–58 g/day (±17–23)	FBG mean change in soy group −18 mg/dL vs. +11 mg/dL in control (P = 0.03) TC mean change in soy group −23 mg/dL vs. +10 mg/dL in control (P = 0.01) LDL-C mean change in soy group −20 mg/dL vs. +6 mg/dL in control (P = 0.01) TG mean change in soy group −24 mg/dL vs. −5 mg/dL in control (P = 0.01)	Weight controlled in analyses CRP mean change in soy group −1.31 mg/dL vs. +0.33 mg/dL in control (P = 0.02) Significant improvement in proteinuria (−0.15 vs. 0.02 g/day, P = 0.001) soy vs. control; however, the significance disappeared after controlling for changes in the blood lipid profile

Supplementary Table 1—*Continued*

Ref. number	Author/ year	Study type/ duration	Diabetes	*n*‡	Comparison summary	Intervention detail¶ dietary variable of interest for observational studies	Significant results**	Comments/study limitations#
(84)	de Mello 2006	RCT crossover, 3 arms/4 weeks each (4-week washout periods)	Type 2	17 adults with macroalbuminuria	See Gross 2002	See Gross, 2002. Usual diet: protein 17–25→ 21.9% vs. chicken diet: protein 17–25→21.2% vs. lower-protein/ vegetarian diet: 0.5–0.8 g/kg/ day→11.6% kcal	Glycemic measures: NS TG significantly lower after chicken diet vs. usual diet or lower-protein/ vegetarian diet (P = 0.012)	43% completion rate (most excluded for reverting to microalbuminuria) Weight not controlled; BMI and energy intake significantly lower after lower-protein/vegetarian diet than other 2 diets No significant difference among groups for GFR UAER significantly lower after chicken and lower-protein/ vegetarian diets compared with usual diet, $P < 0.001$
Nuts								
(85)	Ma 2010	RCT crossover, single blind/ 8 weeks each (8-week washout period)	Type 2	21 adults	Walnuts	56 g shelled, unroasted English walnuts/ day isocalorically substituted for foods in an ad lib diet vs. ad lib diet	Glycemic measures: NS CVD risk measures: NS	Walnuts provided to subjects Endothelial function (flow-mediated dilation) improved significantly after consumption of the walnut-enriched diet compared with the no walnut diet (2.2 ± 1.7% vs. 1.2 ± 1.6%, P = 0.04)

Supplementary Table 1—*Continued*

Ref. number	Author/ year	Study type/ duration	Diabetes	*n*‡	Comparison summary	Intervention detail¶ dietary variable of interest for observational studies	Significant results**	Comments/study limitations#
(86)	Tapsell 2004	RCT parallel, 3 arms/6 months	Type 2	55 adults	Lower-fat diets vs. lower-fat diet + walnuts	Lower-fat diet: <30% fat, with portion controlled CHO counting meal plans and general dietary advice for reducing total and SFA vs. modified lower-fat diet: same as lower-fat diet but with more structured advice, meal plans based on energy requirements, and exchange lists for MUFA and PUFA vs. modified lower-fat diet + 30 g/day walnuts	Glycemic measures: NS The walnut group achieved a significantly greater increase in HDL-C-to-total cholesterol ratio (P = 0.049) and HDL-C (P = 0.046) than the 2 other treatment groups	Walnuts (high in PUFA) provided to subjects Gillen 2005 contains dietary variables and dietary goals outcome information
(87)	Gillen 2005	See Tapsell 2004				Target ranges of <10% SFA, >7% PUFA, 2.22 g ALA, 0.65 g DHA, and omega-6:omega-3 ratio <10	Primary outcomes for this study were dietary variables and goals. See Tapsell 2004 for study details and clinical outcomes	100% of individuals in the walnut group reached desired intakes for SFAs (P < 0.01), total PUFA (P < 0.001), and omega-6:omega-3 ratio (P < 0.05) at 3 and 6 months. Other groups were not successful in achieving targets

Supplementary Table 1—*Continued*

Ref. number	Author/ year	Study type/ duration	Diabetes	n‡	Comparison summary	Intervention detail¶ dietary variable of interest for observational studies	Significant results**	Comments/study limitations#
(30)	Lovejoy 2002	See "Carbohydrate amount: moderate to high carbohydrate"						
(88)	Mantzoros 2006	Cross-sectional	Type 2	987 women	Mediterranean-diet pattern determined from FFQ (current dietary data and 4 FFQs from the past 10 years)	Pattern assessed by 0–9 point scale: 1 point given if intake above median for fish, fruit, legumes, nuts, PUFA:SFA ratio, vegetables, whole grains; below median for red/ processed meat and if alcohol intake 5–15 g/day	Glycemic measures: NS HDL-C higher in highest tertile of adherence to Mediterranean diet as compared to lower 2 tertiles ($P = 0.03$) TG lower in highest tertile of adherence to Mediterranean diet as compared to lower 2 tertiles ($P = 0.04$)	Nurses' Health Study Adiponectin: a. highest tertile of adherence to Mediterranean diet over 10 years had adiponectin levels 25.9% higher than lowest tertile controlling for age and total energy intake, $P < 0.01$ for trend across tertiles b. significant independent effects by alcohol, nuts (12% higher levels in highest nut intake quintile compared to lowest) and whole grains (22% higher levels in highest intake quintile compared to lowest) c. no effect for fruit, vegetables, fish, legumes, red/ processed meats, protein, total carbohydrate, total fat, fiber, or PUFA/SFA

Supplementary Table 1—*Continued*

Ref. number	Author/ year	Study type/ duration	Diabetes	*n*‡	Comparison summary	Intervention detail¶ dietary variable of interest for observational studies	Significant results**	Comments/study limitations#
(89)	Li 2009	Prospective cohort	Type 2	6,309 women	Nut consumption from FFQ every 2–4 years between 1980 and 2002	Dietary intake measure of nut (nuts or peanut butter) consumption	Glycemic measures: not done Increasing nut consumption was significantly associated with a more favorable plasma lipid profile, including lower LDL-C, non-HDL-C, TC, and apolipoprotein-B-100 concentrations	Nurses' Health Study After adjustment for conventional CVD risk factors, consumption of at least 5-servings/ week of nuts or peanut butter (serving size, 28-g [1 oz.] for nuts and 16-g [1 tablespoon] for peanut butter) was significantly associated with a lower risk of CVD (relative risk = 0.56; 95% CI: 0.36–0.89)
Whole grains								
(48)	Vuksan 2007	See "Carbohydrate type: dietary fiber"						
(47)	Lu 2004	See "Carbohydrate type: dietary fiber"						
(54) (56)	Qi 2006, He 2010	See "Carbohydrate type: dietary fiber"						
(88)	Mantzoros 2006	See "Nuts"						

Supplementary Table 1—*Continued*

Ref. number	Author/ year	Study type/ duration	Diabetes	n‡	Comparison summary	Intervention detail¶ dietary variable of interest for observational studies	Significant results**	Comments/study limitations#
Legumes								
(91)	Pipe 2009	RCT crossover, double blind/57 days each (28-day washout period)	Type 2	29 adults	Soy protein isolate vs. milk protein isolate supplements	Subjects supplemented usual diet with either soy or milk protein isolates. Daily packets of supplements contained 200 kcal; 8–9 g CHO; 40 g protein from isolated soy protein or milk (casein and whey) protein; 1 g fat; 1–10 mg cholesterol; 1,400–1,600 mg calcium. The soy protein contained 88 mg isoflavones (65% genistein, 31% daidzein, 4% glycitein) and the milk protein contained 0 mg isoflavones	Glycemic measures: NA LDL-C decreased with soy intervention from 2.95 to 2.78 mmol/L vs. milk ($P = 0.04$) LDL-C:HDL-C ratio decreased with soy intervention vs. milk ($P = 0.02$)	Body weight did not differ between periods
(92)	Gobert 2010					See Pipe 2009 for study design details	Glycemic measures: NS CVD risk measures: not done	

Supplementary Table 1—*Continued*

Ref. number	Author/ year	Study type/ duration	Diabetes	n‡	Comparison summary	Intervention detail¶ dietary variable of interest for observational studies	Significant results**	Comments/study limitations#
(93)	Hermansen 2001	RCT crossover, double blind/ 6 weeks (3-week washout period)	Type 2	20 adults	Soy protein vs. casein	Soy protein (Abalon): 50 g isolated soy protein (>165 mg isoflavones) and 20 g cotyledon fiber vs. control: 50 g casein and 20 g cellulose	Glycemic measures: NS TC lower after Abalon than after control (5.11 vs. 5.45 mmol/L, $P < 0.01$) LDL-C lower after Abalon than after control (3.01 vs. 3.33 mmol/L, $P < 0.01$)	Weight controlled
(94)	Kim 2005	RCT parallel, double blind/13 weeks	Type 2	30 adults	Soybean-derived pinitol vs. lactose	Soybean-derived pinitol: 600-mg oral dose, twice daily vs. lactose: twice daily	Glycemic measures: NS CVD risk measures: NS	No significant difference in BMI between groups at baseline, and no change over course of study
(50)	Cho 2005	See "Carbohydrate type: dietary fiber"						
(95)	Fujita 2001	RCT parallel, double blind/3 months	Type 2	36 adults	Fermented soybean-derived Touchi extract vs. steamed soybean-derived control	Both supplements incorporated into powdered tea. Subjects mixed tea with water and drank 1 cup with each meal. Each cup of tea contained 0.3 g supplement	A1C lower, Touchi vs. control (5.6 vs. 6.2%, $P < 0.05$) FBG lower, Touchi vs. control (6.4 vs. 7.1 mmol/L, $P < 0.05$) CVD risk measures: NS	Weight uncontrolled, but no significant difference between groups
(60)	Li 2005	See "Fat amount"						
(52)	De Natale 2009	See "Carbohydrate type: dietary fiber"						

Supplementary Table 1—*Continued*

Ref. number	Author/ year	Study type/ duration	Diabetes	n‡	Comparison summary	Intervention detail¶ dietary variable of interest for observational studies	Significant results**	Comments/study limitations#
(96)	Jayagopal 2002	RCT crossover, double blind/ 12 weeks each (2-week washout period)	Type 2	32 postmenopausal women	Soy phytoestrogen vs. placebo	243-kcal packet containing 30 g isolated soy protein with 132 mg isoflavones (53% genistein, 37% daidzein, 10% glycitein) vs. placebo (microcrystalline cellulose), no kcal	A1C decreased, soy vs. placebo (−0.64 vs. +1.08%, P = 0.048) Fasting serum insulin decreased, soy vs. placebo (−8.09 vs. +9.92%, P = 0.006) TC decreased, soy vs. placebo (−4.07 vs. +2.83%, P = 0.004) LDL-C decreased, soy vs. placebo (−7.09 vs. + 5.35%, P = 0.001)	Weight uncontrolled, but no change in weight during study Calorie difference between soy and placebo was a confounding factor as there was no assessment of diet or statistical control for calorie intake HOMA-IR decreased, soy vs. placebo (−6.27 vs. +14.7%, P = 0.003)
(97)	González 2007	RCT crossover, double blind/ 12 weeks each (4-week washout period)	Type 2	26 postmenopausal women	Isoflavones vs. placebo	Tablet with 132 mg isoflavones (53% genistein, 37% diadzein, 10% glycitein) vs. placebo tablet (cellulose)	Glycemic measures: NS CVD risk measures: NS	Weight not controlled

Supplementary Table 1—*Continued*

Ref. number	Author/ year	Study type/ duration	Diabetes	*n*‡	Comparison summary	Intervention detail¶ dietary variable of interest for observational studies	Significant results**	Comments/study limitations#
(98)	Howes 2003	RCT crossover, double blind/ 4 weeks each (4-week washout period)	Type 2	16 postmenopausal women	Isoflavones from red clover vs. control	2 isoflavone tablets (25 mg formononetin, 2.5 mg biochanin, <1 mg genistein and daidzein per tablet) vs. control tablets	Glycemic measures: NS CVD risk measures: NS	Weight not controlled, but no significant differences between periods No description of content of control tablets (except no isoflavones) Blood pressure and endothelial function were main outcomes studied
Vegetables and fruits								
(99)	Sobenin 2008	RCT parallel, double blind, 4 arms/4 weeks	Type 2	34 adults	Garlic powder (Allicor) vs. control	Group 1: monotherapy with 300 mg of Allicor twice a day or control with oral diabetes medications discontinued Group 2: same except that oral diabetes medications continued	Serum fructosamine decreased significantly, Allicor vs. control, both monotherapy and combined therapy ($P < 0.05$) CVD risk measures: NS	Weight not controlled Group 1: FBG ≤8 mmol/L; Group 2: FBG >8 mmol/L Control is not described, so may not be a placebo TG decreased significantly in Allicor group, baseline to end of study, both monotherapy and combined therapy ($P < 0.05$)
(52)	De Natale 2009	See "Carbohydrate type: dietary fiber"						
(88)	Mantzoros 2006	See "Nuts"						

Supplementary Table 1—*Continued*

Ref. number	Author/ year	Study type/ duration	Diabetes	*n*‡	Comparison summary	Intervention detail¶ dietary variable of interest for observational studies	Significant results**	Comments/study limitations#
Dairy								
(100)	Mohamad 2009	RCT parallel/ 16 weeks	Type 1	54 young adults (17–20 years)	Camel milk	Control group received usual care vs. usual care + 500 mL daily of camel milk	Camel milk group vs. usual care group: A1C, FBG, and daily insulin dose significantly lower (7.16 vs. 9.59%, 99 vs. 227 mg/dL, 23 vs. 48 units, respectively), all $P < 0.001$ CVD risk measures: NS	Weight not controlled (BMI significantly higher in camel milk group vs. usual care group) (24.3 vs. 18.4 kg/m^2)
(101)	Shahar 2007	Ancillary study of an RCT	Type 2	259 adults	Dairy calcium	3 isocaloric diets were assessed for calcium intake: 1. mixed GI CHO 2. lower GI 3. modified Mediterranean	Glycemic measures (A1C, FBG): NS CVD risk measures: NS	Study found no association between dairy calcium intake and other diabetes/ CVD disease indexes
(91)	Pipe 2009	See “Legumes”						
(92)	Gobert 2010	See “Legumes”						
(93)	Hermansen 2001	See “Legumes”						
(94)	Kim 2005	See “Legumes”						
Meats, poultry, and fish								
(81)	Gross 2002	See “Protein”						

Supplementary Table 1—*Continued*

Ref. number	Author/ year	Study type/ duration	Diabetes	n‡	Comparison summary	Intervention detail¶ dietary variable of interest for observational studies	Significant results**	Comments/study limitations#
(84)	de Mello 2006	See "Protein"						
(102)	Qi 2007	Prospective cohort	Type 2	6,161 women	Red meat intake	Red meat and heme iron (intake assessed as cumulative average from FFQs 1980, 1984, 1986, 1990, 1994, and 1998; FFQ asked about intake frequency and amount over past year; red meat defined as beef, pork, or lamb as main dish, beef as a sandwich or mixed dish, hamburger, hot dog, processed meat, or bacon	Glycemic measures: not done CVD risk measures: not done	Nurses' Health Study High heme iron and red meat intakes were associated with high intakes of saturated fat, low intakes of cereal fiber and vitamin C, and low dietary GL After adjustment for age and BMI, high intakes of both heme iron and red meat were associated with a significantly increased risk of fatal CHD, coronary revascularization, and total CHD

Supplementary Table 1—*Continued*

Ref. number	Author/ year	Study type/ duration	Diabetes	*n*‡	Comparison summary	Intervention detail¶ dietary variable of interest for observational studies	Significant results**	Comments/study limitations#
(103)	Möllsten 2001	Case-control	Type 1 with micro-/ macro- albuminuria	75 case and 225 control, youth	Fish fat and protein	Fish intake: FFQ for past 12 months	Glycemic measures: not done CVD risk measures: not done	High consumers of fish protein (mean intake 9.35 g fish protein/day, i.e., approximately 53 g fish/day) had lower odds ratios for microalbuminuria than individuals consuming less fish protein (mean 2.72 g/day) When fish protein and fat were adjusted for each other, a high intake of fish protein but not of fish fat was still significantly associated with a decrease in the risk for microalbuminuria

Supplementary Table 1—*Continued*

Ref. number	Author/ year	Study type/ duration	Diabetes	*n*‡	Comparison summary	Intervention detail¶ dietary variable of interest for observational studies	Significant results**	Comments/study limitations#
Mediterranean diets								
(104)	Esposito 2009	RCT parallel/ 4 years	Type 2	195 adults	Lower CHO Mediterranean diet vs. lower-fat diet (American Heart Association guidelines)	Lower-CHO Mediterranean-style diet: rich in vegetables, whole grains, with poultry and fish replacing red meats; goal <50% CHO and ≥30% fat; achieved 44.2% CHO, 10% SFA, 17.6% MUFA, 11.5% PUFA, 18% protein vs. Lower-fat diet: rich in whole grains, restricted in added fats, sweets, and high-fat snacks; goal <30% fat, <10% SFA; achieved: 51.8% CHO, 9.4% SFA, 12.4% MUFA, 7.6% PUFA, 17.9% protein	A1C and FBG significantly lower in lower-CHO Mediterranean diet vs. lower-fat diet, all 4 years HDL-C increased significantly and TG decreased significantly, lower-CHO Mediterranean diet vs. lower-fat diet, all 4 years	Weight- loss study Increase in fat in lower-CHO Mediterranean diet was from 30–50 g olive oil Primary outcome (time to antihyperglycemic therapy): after 4 years, 44% of patients in lower-CHO Mediterranean–diet group required treatment vs. 70% in lower-fat-diet group

Supplementary Table 1—*Continued*

Ref. number	Author/ year	Study type/ duration	Diabetes	*n*‡	Comparison summary	Intervention detail¶ dietary variable of interest for observational studies	Significant results**	Comments/study limitations#
(105)	Karantonis 2006	RCT parallel/ 4 weeks	Type 2	45 adults	Modified Mediterranean fast-food–type diet (using foods highest in platelet anti-aggregating activity) vs. control (traditional Greek Mediterranean fast-food diet)	Modified fast foods included macaroni and cheese, chicken fillet, pita burger, chef's salad, potato salad: 50% CHO, 38% fat (13% SFA, 17% MUFA, 8% PUFA), 16.5% protein, 22 g fiber (end-of-study values) vs. control diet included fast foods such as roasted meat/fish with potatoes, beef and macaroni, carrot and cabbage salad: 53% CHO, 24% fat (12% SFA, 7% MUFA, 4% PUFA), 25% protein, 16 g fiber (end-of-study values)	Glycemic measures: NS CVD risk measures: NS	See comments in Antonopoulou 2006

Supplementary Table 1—*Continued*

Ref. number	Author/ year	Study type/ duration	Diabetes	*n*‡	Comparison summary	Intervention detail¶ dietary variable of interest for observational studies	Significant results**	Comments/study limitations#
(106)	Antonopoulou 2006	RCT parallel/ 4 weeks	Type 2	47 adults	Modified Greek Mediterranean diet using foods highest in platelet activating factor antagonists vs. control (typical Greek Mediterranean diet)	Modified diet included foods such as codfish soup, beef and fried potato, chicken and gumbo, and lettuce salad. Traditional diet included foods such as boiled chicken and rice, roasted fish and potato Modified: 50% CHO, 38% fat (10% SFA, 21% MUFA, 4% PUFA), 15% protein (prescribed) vs. typical: 50–55% CHO, 20–25% fat (7% SFA, 12% MUFA, 2.4% PUFA), 25% protein	Glycemic measure (FBG): NS CVD risk measures: NS	Foods were provided to all participants during the study, isocaloric to typical diets previous to study Significant reduction in platelet-activating factor and adenosine 5 diphosphate-induced aggregation of platelets on the modified diet but no change on the typical diet

Supplementary Table 1—*Continued*

Ref. number	Author/ year	Study type/ duration	Diabetes	n‡	Comparison summary	Intervention detail¶ dietary variable of interest for observational studies	Significant results**	Comments/study limitations#
(107)	Aronis 2007	RCT parallel/ 4 weeks	Type 2	35 adults	Fast-food Mediterranean–type diet (meals with most potent in vitro antioxidative activity) vs. control (traditional Greek fast-food diet)	Mediterranean fast foods included macaroni with cheese and tomato paste, hamburger, chef's salad, kidney bean salad: 53% CHO, 43% fat (15% SFA, 19% MUFA, 9% PUFA), 16% protein, 23 g fiber (end-of-study values) vs. control: 53% CHO, 24% fat (12% SFA, 7% MUFA, 4% PUFA), 25% protein, 16 g fiber (end-of-study values)	Glycemic measures: NS CVD risk measures: NS	Foods were provided for both groups of subjects, isocaloric to typical diets previous to study Diabetes oral agents were unchanged during the study Plasma oxidation lag time increased significantly in fast-food group but did not change in control group
(52)	De Natale 2009	See "Fiber"						

Supplementary Table 1—*Continued*

Ref. number	Author/ year	Study type/ duration	Diabetes	*n*‡	Comparison summary	Intervention detail¶ dietary variable of interest for observational studies	Significant results**	Comments/study limitations#
(108)	Ciccarone 2003	Case-control	Type 2	144 cases with PAD/288 controls (no macrovascular complications, adults)	Mediterranean diet scoring of a FFQ	Scoring: 1 point for vegetables (≥3 times/week), fruits (≥7 times/ week), fish (≥1 times/week), olive oil (1–2 times/day), alcohol (≤3 glasses wine/day), eggs (≤2 times/ week), meat (≤2 times/week), processed meat (0 times/week), cheese (≤2 times/week)	Glycemic measure (A1C): NS CVD risk measures: not done	BMI controlled in multivariate analyses In multivariate analysis, highest dietary score (11+ points) significantly and independently associated with 56% reduction in risk of PAD
(109)	Marfella 2006	RCT parallel/ 12 months	Type 2	115 adults, post-MI	Red wine vs. control	Red wine, 4-oz. daily vs. control (no alcohol) Both groups counseled on Mediterranean diet (mean intake 178 g CHO, 9 g SFA, 17 g MUFA, 8 g PUFA, 73 g protein, lower sodium, higher fiber)	Glycemic measures: NS; however, fasting insulin and HOMA were higher in wine group vs. control ($P < 0.05$) HDL-C higher in wine group vs. control ($P < 0.05$)	Weight not controlled; however, weight loss not statistically different between groups
(88)	Mantzoros 2006	See "Nuts"						Nurses' Health Study

Supplementary Table 1—*Continued*

Ref. number	Author/ year	Study type/ duration	Diabetes	*n*‡	Comparison summary	Intervention detail¶ dietary variable of interest for observational studies	Significant results**	Comments/study limitations#
Vegetarian diets								
(21)	Barnard 2009	See "Carbohydrate amount: moderate to high carbohydrate"						
(110)	Turner-McGrievy 2008	See Barnard 2009 for study details						Both vegan and traditional diets significantly improved intakes of energy, total fat, *trans* fat, cholesterol, and sodium but were below recommended intakes for vitamin D, E, calcium, and potassium Vegan diet improved intake of fiber, folate, magnesium, and vitamins A, C, K
(81)	Gross 2002	See "Protein"						
(84)	de Mello 2006	See "Protein"						

A1C, glycated hemoglobin; AER (or UAER), albumin excretion rate (or urinary albumin excretion rate); ALA, alpha-linolenic acid; AUC, area under the curve; CACTI, Coronary Artery Calcification in Type 1 Diabetes study; CGMS, continuous glucose monitoring system; CHD, coronary heart disease; CHO, carbohydrate; CRP, C-reactive protein; CVD, cardiovascular disease; DHA, docosahexaenoic acid; DPP, Diabetes Prevention Program; EASD, European Association for the Study of Diabetes; EPA, eicosapentaenoic acid; FFQ, food frequency questionnaire; GFR, glomerular filtration rate; GI, glycemic index; GL, glycemic load; GLP-1, glucagon-like peptide 1; HCHF, higher cholesterol/higher fiber; HDL-C, HDL cholesterol; HFLC, higher fat/lower cholesterol; HOMA, homeostasis model assessment; IAUC, incremental area under the curve; ITT, intention to treat; LDL-C, LDL cholesterol; LFHC, lower fat/higher carbohydrate; LpB:C, apoB-containing lipoprotein; MCHF, moderate carbohydrate/higher fiber; MCLF, moderate carbohydrate/lower fiber; MI, myocardial infarction; MUFA, monounsaturated fatty acid; NCEP, National Cholesterol Education Program; NHLBI, National Heart, Lung, and Blood Institute; NS, not significant; OGTT, oral glucose tolerance test; PAD, peripheral arterial disease; PG, plasma glucose; PPG, postprandial glucose; PUFA, polyunsaturated fatty acid; RCT, randomized controlled trial; TC, total cholesterol; TG, triglyceride; TNF, tumor necrosis factor; SFA, saturated fatty acid; UAER, urinary albumin excretion rate. ‡, number of subjects completing study. ¶, % CHO, fat, and/or protein refer to % kcal from CHO, fat, and/or protein; goal→achieved. **, results are only presented for RCTs if the significance is between groups; for one-armed studies, if the significance is between beginning and end; glycemic measures, in general (A1C, FBG, PPG); CVD risk measures, in general (TC, LDL-C, HDL-C, TG). #, retention rate determined to be a limitation if <80%. *, insignificant when accompanied by energy restriction. †, weight loss/weight maintenance.