PICO 4: Hvad er effekten af *'low-carbohydrate'* diæt sammenlignet med diæt baseret på de nordiske næringsstofanbefalinger (kulhydrat 45-60 %, protein 10-20%, fedt <35 %) som udgangspunkt for diætbehandlingen ved type 2 diabetes?

Methods

Criteria for considering studies for this review

Types of outcome measures

Primary outcomes

BMI >= 1 år (kritisk)
HbA1c >= 1 år (kritisk)

Secondary outcomes

De følgende outcomes er alle vigtige:

BMI < 1år
Vægt >= 1 år
HbA1c < 1 år
LDL < 1 år
LDL>= 1år
QoL (fysisk function) længste follow-up
QoL (mentalt helbred) længste follow-up
Frafaldsrate

Characteristics of studies

Characteristics of included studies

Davis 2012

Methods	**Study design:** Randomized controlled trial **Study grouping:** Parallel group **Open Label:** **Cluster RCT:**
Participants	**Baseline Characteristics** Low Carbohydrate diet ● *Age (mean +/- SD)*: 54 (6) ● *Mænd (males) (%)*: 18 ● *Antal år med T2DM (years with DM)*: ● *Vægt / Weight (kg)*: 93.6 (18) ● *BMI*: 35 (6) ● *HbA1c (%)*: 7.5 (1.5) ● *LDL (mmol/l)*: 2.5 (0.69) High Carbohydrate (Low Fat diet) ● *Age (mean +/- SD)*: 53 (7) ● *Mænd (males) (%)*: 26 ● *Antal år med T2DM (years with DM)*: ● *Vægt / Weight (kg)*: 101 (19) ● *BMI*: 37 (6) ● *HbA1c (%)*: 7.4 (1.4) ● *LDL (mmol/l)*: 2.4 (0.74) **Included criteria:** Adults age ≥ 18 years were eligible for participation if they had a diagnosis of type 2 diabetes for at least 6 months, body massindex ≥ 25 kg/m2 , and a A1C between 6% and 11%. **Excluded criteria:** significant kidney, gallbladder, or heart diseasein addition a weight change of > 10 pounds within 3 months of screening, a history of severe hypoglycamia (requiring hospitalization), or use of weight loss medication (from Davis et al 2009 Diabetes Care 32:1147-52)
Interventions	**Intervention Characteristics** **Low Carbohydrate diet**: Modified after the Atkin diet, initiated after a two week phase of carbohydrate restriction of 20-25 g daily (94-118 KCal), depending on baseline weight. As participants lost weight, they were able to increase carbohydrate intake at 5 g (23,5 KCal) increments each week. However, it's not clear how soon this was allowed. Significant weight loss recorded after 3 months, but hereafter the participants gained weight. Carbohydrate increment could have been initiated months before. **High Carbohydrate (Low Fat diet)** Modeled after the diet from Diabetes Prevention Program (Knowler WC et al. NEJM 2002;346:393-403) stating a fat gram goal, which was 25% of energy needs based on baseline weight. Both groups had comparable caloric intake at baseline LCD (1983 +/- 650) vs LFD (1863 +/- 450), and percentages of total energy intake for carbs were 43,9 (9.1) vs 41.2 (10.4), and for fat 36.1 (7.6) vs 38.8 (9.4)

	Remarks to the above intervention and control: Table 3 gives an overview of the dietary intake at time point 6 mths and 12 mths, and the actual dietary adherence for carbohydrate and fat was after 6 months: Low Carb diet: Carb: 33.5 (14.7) - Fat: 43.0 (13.1) Low Fat diet: Carb: 48.1 (14.1) - Fat: 30.8 (9.8) and after 12 months: Low Carb diet: Carb: 33.4 (13.2) - Fat: 43.9 (10.8) Low Fat diet: Carb: 50.1 (10.0) - Fat: 30.8 (10.2)
Outcomes	*Continuous*: ● BMI ● Weight (kg) ● HbA1c % ● LDL Cholesterol ● QoL (Angst og bekymring) ● QoL (Diabetes control) ● QoL (energi og mobilitet) ● QoL (social funktion) ● QoL (Sexual funktion) ● BMI ● Weight (kg) ● HbA1c (%) ● LDL Cholesterol ● QoL (angst og bekymring) ● QoL (diabetes kontrol) ● QoL (energi og mobilitet) ● QoL (social funktion) ● QoL (sexual funktion) *Dichotomous*: ● Drop out rate (%)
Identification	**Sponsorship source:** This research was supported by the Robert C. andVeronica Atkins Foundation, awarded to Dr Wylie-Rosett, the DiabetesResearch and Training Center (P60 DK020541), and the Clinical andTranslational Science Award (UL1 RR025750) **Country:** US **Setting:** **Comments:** **Authors name:** Nichola J. Davis **Institution:** Albert Einstein College of Medicine **Email:** ndavis@montefiore.org

	Address: 1300 Morris Park Mazer Room 216c, Bronx NY 10461
Notes	**Identification:** **Participants:** **Study design:** **Baseline characteristics:** *Henning Keinke Andersen* For QoL parametres (Davis 2012)Quality of life (QOL) scale scores (n=98 for completed QoL quistionnaires)Diabetes control (range 0-100, higher score representing worse QoL) LCD: 41 (23) LFD: 45 (22)Anxiety and worry (range 0-100, higher score representing worse QoL) LCD: 42 (21) LFD: 44 (20)Social burden (range 0-100, higher score representing worse QoL) LCD: 19 (16) LFD: 24 (21)Sexual function (range 0-100, higher score representing worse QoL) LCD: 25 (24) LFD: 36 (30)Energy and mobilityc 32 (18) 35 (18) *Henning Keinke Andersen* For QoL parametres (Davis 2012)Quality of life (QOL) scale scores (n=98 for completed QoL quistionnaires)Diabetes control (range 0-100, higher score representing worse QoL) LCD: 41 (23) LFD: 45 (22)Anxiety and worry (range 0-100, higher score representing worse QoL) LCD: 42 (21) LFD: 44 (20)Social burden (range 0-100, higher score representing worse QoL) LCD: 19 (16) LFD: 24 (21)Sexual function (range 0-100, higher score representing worse QoL) LCD: 25 (24) LFD: 36 (30)Energy and mobility (range 0-100, higher score representing worse QoL) LCD: 32 (18) LFD: 35 (18) **Intervention characteristics:** **Pretreatment:** **Continuous outcomes:** *Henning Keinke Andersen* NB! Davis (2009) data on other parametres than QoL inserted here:Change values in this table are given for 6 months **Dichotomous outcomes:** **Adverse outcomes:**

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	-
Allocation concealment (selection bias)	Low risk	-
Blinding of participants and personnel (performance bias)	Unclear risk	No qol in this study
Blinding of outcome assessment (detection bias)	Unclear risk	-
Incomplete outcome data (attrition bias)	Unclear risk	Comment: der er usikkerhed omkring hvilke pt der er droppet ud (svage) - det skal undersøge
Selective reporting (reporting bias)	Low risk	-
Other bias	Unclear risk	-

Elhayany 2010

Methods	**Study design:** Randomized controlled trial **Study grouping:** Parallel group / two control arms
Participants	**Baseline Characteristics** Low carbohydrate diet (LCD) n=61 ● *Age (years - SD)*: 55.5 (6.5) ● M*ale (%)*: 50.8 ● *Duration of diabetes (years - SD)*: 5.5 (3.8) ● *BMI*: 31.4 (2.8) ● *Weight (kg - SD)*: 86.7 (14.3) ● *LDL cholesterol (mmol/l)*: 3.1 (0.8) ● *HbA1c (%)*: 8.3 (1.0) Traditional Mediterranean (high carb - TM) n=63 ● *Age (years - SD)*: 57.4 (6.1) ● *Male (%)*: 55.5 ● *Duration of diabetes (years - SD)*: 6.2 (9.9) ● *BMI*: 31.1 (2.8) ● *Weight (kg - SD)*: 85.5 (10.6) ● *LDL cholesterol (mmol/l)*: 3.2 (0.8) ● *HbA1c (%)*: 8.3 (1.0)
Interventions	IV Low Carbohydrate/High Fat vs control (Traditional Mediterranean (TM)
Outcomes	Weight, BMI, HbA1c, LDL after 12 months
Identification	
Notes	

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	-
Allocation concealment (selection bias)	Unclear risk	-
Blinding of participants and personnel (performance bias)	Low risk	-
Blinding of outcome assessment (detection bias)	Low risk	-

Incomplete outcome data (attrition bias)	High risk	The dropout rate was relatively high at 31% (80/259), and no itt
Selective reporting (reporting bias)	Unclear risk	Meassurements from protocol not mentioned in study
Other bias	Low risk	-

Guldbrand 2012

Methods	**Study design:** Randomized controlled trial **Study grouping:** Parallel group **Open Label:** **Cluster RCT:**
Participants	**Baseline Characteristics** Low carbohydrate diet (LCD) ● *Age (years - SD)*: 61.2±9.5 ● *Male (%)*: 46.7 ● *Duration of diabetes (years - SD)*: 9.8 (5.5) ● *BMI*: 31.6 (5.0) ● *Weight (kg - SD)*: 91.4 (19) ● *LDL cholesterol (mmol/l)*: 2.7 (0.9) ● *HbA1c (%)*: 7.5 (3.1) Low fat diet (LFD) ● *Age (years - SD)*: 62.7±11.0 ● *Male (%)*: 41.9 ● *Duration of diabetes (years - SD)*: 8.8 (6.2) ● *BMI*: 33.8 (5.7) ● *Weight (kg - SD)*: 98.8 (21) ● *LDL cholesterol (mmol/l)*: 2.4 (0.7) ● *HbA1c (%)*: 7.2 (2.9) **Included criteria:** The inclusion criteria were a diagnosis of type 2 diabetes treated with diet with or without additional oral glucose-lowering medication, incretin-based therapy or insulin. There were no weight or age exclusion criteria.30 participants in the LCD group and 31 in the LFD group **Excluded criteria:** Patients who had difficulties understanding the Swedish language, were suffering from severe mental disease or malignant disease, or who were abusing drugs could not participate in the study.
Interventions	**Intervention Characteristics** Low carbohydrate diet (LCD) n=30 ● *Kj/day*: The patients were randomised to either an LCD or atraditional LFD, both with an energy content of 6,694 kJ/day(1,600 kcal/day) for women or 7,531 kJ/day (1,800 kcal/day)for men The LCD had an energy contentwhere 50 energy per cent (E%) was from

	fat, 20 E% was fromcarbohydrate and 30 E% was from protein. Low fat diet (LFD) n=31 ● *Kj/day*: The patients were randomised to either an LCD or atraditional LFD, both with an energy content of 6,694 kJ/day(1,600 kcal/day) for women or 7,531 kJ/day (1,800 kcal/day)for menThe LFD had anutrient composition that was similar to that traditionallyrecommended for the treatment of type 2 diabetes in Sweden,with 30 E% from fat (less than 10 E% from saturated fat), 5560 E% from carbohydrate and 1015 E% from protein.
Outcomes	*Continuous*: ● BMI ● Weight (kg) ● HbA1c (%) ● LDL Cholesterol ● QoL SF36 (Physical function) ● QoL SF36 (Role physical) ● QoL SF36 (bodily pain) ● QoL SF36 (general health) ● QoL SF36 (vitality) ● QoL SF36 (social function) ● QoL SF36 (role emotional) ● QoL SF36 (mental) *Dichotomous*: ● Drop-out rate (%)
Identification	**Sponsorship source:** The study was supported by University Hospital of LinköpingResearch Funds, Linköping University, the County Council ofÖstergötland, and the Diabetes Research Centre of LinköpingUniversity **Country:** Sweden **Setting:** The study was conducted in two primary healthcare centres in the cities of Motala and Borensberg **Comments:** Data on QoL is obtained (imputed) from the Guldbrand 2014 reference, with the ID 22026 **Authors name:** Hans Guldbrand **Institution:** Department of Medical and Health Sciences, Faculty of Health Science, Linköping University, **Email:** hans.guldbrand@lio.se **Address:** Linköping University,SE 581 85 Linköping, Sweden
Notes	**Identification:** **Participants:** **Study design:** **Baseline characteristics:** **Intervention characteristics:**

	Pretreatment: **Continuous outcomes:** *Grith Poulsen* OBS > 12 mdr står først i skemaet!!Længste follow-up: (24 mdr): Weight mean (sd)LFD: 95.9±21 LCD: 89.4±22BMILFD: 32.8±5.5 LCD: 30.8±5.8HBA1cLFD: 7.4±3.1 LCD: 7.5±3.1LDLLFD: 2.1±0.7 LCD: 2.4±0.7 *Henning Keinke Andersen* Longest follow up = 24 months< 12 months is measurements after 6 months **Dichotomous outcomes:** *Grith Poulsen* ITT analysis done on original population (LCD: 30) (LFD: 31) **Adverse outcomes:**

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	-
Allocation concealment (selection bias)	Unclear risk	Insufficient information to permit judgement.
Blinding of participants and personnel (performance bias)	High risk	-
Blinding of outcome assessment (detection bias)	Unclear risk	Insufficient information to permit judgement from the predetermined protocol from 2012. The participants were interviewed following a semistructured interview guide with eight questions regarding different aspects of taking part of the intervention following the low-fat or low-carbohydrate diet. The answers were written down by the interviewer during the interview and the text was analyzed using conventional content analysis following Hsieh and Shannon SF-36 questionnair
Incomplete outcome data (attrition bias)	Low risk	-
Selective reporting (reporting bias)	Low risk	-
Other bias	Low risk	-

Iqbal 2010

Methods	**Study design:** Randomized controlled trial **Study grouping:** Parallel group **Open Label:** **Cluster RCT:**
Participants	**Baseline Characteristics** Low Carbohydrate diet n=70 ● *Age (mean +/- SD)*: 60.0 (8.9)

	• *Mænd (males) (%)*: 84.3 • V*ægt / Weight (kg)*: 118.3 (21.3) • *BMI*: 38.1 (5.5) Low Fat diet n=64 • *Age (mean +/- SD)*: 60.0 (9.5) • *Mænd (males) (%)*: 94.6 • *Vægt / Weight (kg)*: 115.5 (16.7) • *BMI*: 36.9 (5.3)
Interventions	IV: Low Carb (LC) vs Control Low Fat (LF) for 24 months
Outcomes	Weight, HbA1c, LDL
Identification	
Notes	Both IV group and control seem to have low carb compared to stated PICO's (less than 45%). This study gives info on compliance, as the IV group (low carb) tends to exceed the baseline carbohydrate intake after 24 months.

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	-
Allocation concealment (selection bias)	Unclear risk	-
Blinding of participants and personnel (performance bias)	Low risk	-
Blinding of outcome assessment (detection bias)	Low risk	-
Incomplete outcome data (attrition bias)	High risk	Large dropout 32/72 30/70
Selective reporting (reporting bias)	Low risk	-
Other bias	Low risk	none known

Krebs 2012

Methods	**Study design:** Randomized controlled trial **Study grouping:** Parallel group **Open Label:** **Cluster RCT:** YES

Participants	**Baseline Characteristics** Low Carbohydrate diet ● *Age (mean +/- SD)*: 57.7(9.9) ● *Mænd (males) (%)*: 46 ● *Antal år med T2DM (years with DM)*: 8.3 (6.6) ● *Vægt / Weight (kg)*: 103.4 (19.7) ● *BMI*: 36.6 (6.7) ● *HbA1c (%)*: 8.1 (1.2) ● *SF 36 Physical*: 44.8 +/- 9.6 ● *SF 36 Mental*: 52.0 +/- 10.0 Low Fat diet ● *Age (mean +/- SD)*: 58.0 (9.2) ● *Mænd (males) (%)*: 34 ● *Antal år med T2DM (years with DM)*: 8.2 (6.3) ● *Vægt / Weight (kg)*: 101.9 (20.1) ● *BMI*: 36.7 (6.4) ● *HbA1c (%)*: 8.0 (1.2) ● *SF 36 Physical*: 44.7 +/- 9.1 ● *SF 36 Mental*: 52.4 +/- 9.3 **Included criteria:** Participants were included if they had establishedtype 2 diabetes (WHO criteria) [13], were between 30and 76 years of age, and had a BMI of at least 27 kg/m2. **Excluded criteria:** Participants were excluded if they were currently onweight-reducing medications, had weight loss of >5% in thepast 3 months, or had a psychiatric or eating disorder. Participants were also excluded if their glycated haemoglobin(HbA1c) was >9.5% (80 mmol/mol) or they had had renaldisease (estimated glomerular filtration rate <60 ml/min orurine albumin:creatinine ratio [UACR] >30 mg/mmol), abnormalliver enzymes, heart failure, known active malignancyor myocardial infarction in the preceding 6 months.
Interventions	**Intervention Characteristics** Low Carbohydrate diet Low Fat diet
Outcomes	*Continuous*: ● Weight (kg) ● LDL Cholesterol ● BMI ● HbA1c % ● QoL (SF 36 Physical) ● QoL (SF 36 Mental) *Dichotomous*:

	● Drop out rate (%)
Identification	**Sponsorship source:** The Health Research Council of New Zealand(06/337). **Country:** New Zealand **Setting:** Multicentre. Three centres in New Zealand (Wellington, Auckland and Christchurch) recruited participants during 2007 and 2008, using mail-out invitations through primary and secondary care to those with type 2 diabetes in the age range. Community and media advertisements were also used. **Comments:** **Authors name:** Jeremy D. Krebs **Institution:** Endocrine, Diabetes and Research Centre, **Email:** jeremy.krebs@ccdhb.org.nz **Address:** Endocrine, Diabetes and Research Centre,Capital and Coast Health,Private Bag 7902,Wellington, New Zealand
Notes	**Identification:** **Participants:** **Study design:** **Baseline characteristics:** *Henning Keinke Andersen* One group was prescribed a low-fat, high-protein diet (40% of total energy as carbohydrate, 30% as protein, 30% as fat) (LCD group) N = 207and the other, the active control group, a low-fat, high-carbohydrate diet (55% of total energy as carbohydrate, 15% as protein, 30% as fat) (LFD group) N = 212NB! SF 36 QoL scale used (notify interpretation of values - the higher the worse??) **Intervention characteristics:** **Pretreatment:** **Continuous outcomes:** *Grith Poulsen* Longest f.u. 24 mdr: LFD: N=150LCD: N=144WeightLFD: 95.9±17.1LCD: 99.5±17.2 LDLLFD: 2.47±0.93LCD: 2.57±0.92 Hba1cLFD: 8.1±1.4LCD: 8.2±1.5 *Henning Keinke Andersen* Longest follow up = 24 monthsMeasurements at 6 and 12 months **Dichotomous outcomes:** *Grith Poulsen* OBS: Intention-to-treat analyses were undertaken, regardlessof adherence **Adverse outcomes:**

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	-
Allocation concealment (selection bias)	Low risk	-
Blinding of participants and personnel (performance bias)	Unclear risk	Dieticians delivering the intervention were notified of the dietary allocation after baseline assessment and before the first group session. No info on participants - OBS meassuring QOL

Blinding of outcome assessment (detection bias)	Low risk	Research assessors remained blind to intervention allocation at all assessment points and until after database lock.
Incomplete outcome data (attrition bias)	Unclear risk	a rather large drop-out rate in both IV groups even after the first 6 months, and as high as(30% after 24 months
Selective reporting (reporting bias)	Low risk	-
Other bias	Low risk	none known

Larsen 2011

Methods	**Study design:** Randomized controlled trial **Study grouping:** Parallel group **Open Label:** **Cluster RCT:**
Participants	**Baseline Characteristics** Low carbohydrate diet (LCD) ● *Age (mean +/- SD)* : 59.6 +/- 1.1 ● *Mænd (males %)*: 30 (57) ● *Antal år med T2DM (years with DM)*: 8.7 +/- 0.9 ● *Vægt (Weight - kg +/- SD)*: 94.6 +/- 2.1 ● *BMI*: ● *HbA1c (%)*: 7.89 +/- 0.13 ● *LDL cholesterol (mmol/l)*: 2.49 +/- 0.11 High carbohydrate (low fat diet) ● *Age (mean +/- SD)* : 58.8 +/- 1.5 ● *Mænd (males %)*: 18 (39) ● *Antal år med T2DM (years with DM)*: 8.6 +/- 1.0 ● *Vægt (Weight - kg +/- SD)*: 95.5 +/- 2.0 ● *BMI*: ● *HbA1c (%)*: 7.78 +/- 0-14 ● *LDL cholesterol (mmol/l)*: 2.42 +/- 0.13 **Included criteria:** Participants wereaged 30–75 years, with a BMI of 27–40 kg/m2 and HbA1clevels of 6.5–10%, **Excluded criteria:** Significant heart disease (unstable angina, cardiac failure, or recent myocardial infarction or coronary intervention), sttroke within the previous 3 months, renal disease (proteinurea or serum creatinine > 0.13 mmol/l), liver disease, or malignancy.

Interventions	**Intervention Characteristics** High Protein diet (HP: low carb) vs High Carbohydrate diet (HC) HP: C: 40% F: 30% P: 30% - HC: C: 55% F: 30% P: 15% Please notify: Diets were matched for total fat-percentages in both groups (30%)
Outcomes	*Continuous*: ● BMI ● Weight (kg) ● HbA1c (%) ● LDL Cholesterol ● QoL (angst og bekymring) ● QoL (diabetes kontrol) ● QoL (energi og mobilitet) ● QoL (social funktion) ● QoL (sexual funktion) ● BMI ● Weight (kg) ● HbA1c (%) ● LDL Cholesterol ● QoL (angst og bekymring) ● QoL (diabetes kontrol) ● QoL (energi og mobilitet) ● QoL (social funktion) ● QoL (sexual funktion) *Dichotomous*: ● Drop out rate (%)
Identification	**Sponsorship source:** This Study was funded by a nutritional research grant from Meat and Livestock Australia (MLA). J.E.Shaw is supported by NHMRC Fellowship 586623 **Country:** Australia **Setting:** Diabetes clinic and local community advertisments **Comments:** **Authors name:** Robyn N Larsen **Institution:** School of Applied Sciences, RMIT University, **Email:** robyn.larsen@bakeridi.edu.au **Address:** Baker IDI and Diabetes Institute, Level 4, 99 Commercial Rd, Melbourne, Victoria 3004, Australia

Notes	**Identification:** **Participants:** **Study design:** **Baseline characteristics:** **Intervention characteristics:** **Pretreatment:** **Continuous outcomes:** *Grith Poulsen* Der skal regnes en SD ud.... CI var for den samlede change...! *Henning Keinke Andersen* Study outcomes measured at 3 months and 12 months **Dichotomous outcomes:** **Adverse outcomes:**

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	-
Allocation concealment (selection bias)	Unclear risk	-
Blinding of participants and personnel (performance bias)	Unclear risk	Study personnel who enrolled participants were blinded to the sequence allocation. Dietary assignment was performed by a third party on the day of the initial dietary counselling visit. However, blinding of participants not mentioned.
Blinding of outcome assessment (detection bias)	Unclear risk	Study endpoints were assessed blinded to the diet group, but statistical analysis were performed unblinded
Incomplete outcome data (attrition bias)	Low risk	-
Selective reporting (reporting bias)	Low risk	-
Other bias	Low risk	none known

Saslow 2014

Methods	**Study design:** Randomized controlled trial **Study grouping:** Parallel group **Open Label:** **Cluster RCT:**

Participants	**Baseline Characteristics** Low carb, high fat, non calorie restricted (LCK) n=16 ● *Age (mean +/- SD)*: 64.8 (7.7) ● *Mænd (males) (%)*: 43.7 ● *Antal år med T2DM (years with DM)*: 7.8 (7.5) ● *Vægt / Weight (kg)*: 100.1 (26.4) ● *BMI*: 36.2 (8.2) ● *HbA1c (%)*: 6.6 (0.3) Medium carb, low fat calorie restricted (MCCR) n=18 ● *Age (mean +/- SD)*: 55.1 (13.5) ● *Mænd (males) (%)*: 11.1 ● *Antal år med T2DM (years with DM)*: 6.4 (4.9) ● *Vægt / Weight (kg)*: 99.7 (24.2) ● *BMI*: 37.4 (6.4) ● *HbA1c (%)*: 6.9 (0.7) **Included criteria:** Participants aged 18 or over with a diagnosis of type 2 diabetes mellitus (HbA1c >= 6.5) or prediabetes with an HbA1c above 6.0. Participants also needed to have a body mass index (BMI) of 25 or above, be willing to eat either diet, and have sufficient control over their food to follow the intervention instructions **Excluded criteria:** Exclusion criteria included: unable to provide informed consent;non-English speaking (groups were conducted in English); asubstance abuse, mental health or medical condition that would, inthe opinion of the investigators, make it difficult for the individualto take part in the intervention; current use of oral glucocorticoidsor weight loss medications; pregnant or planning to get pregnantin the next 12 months; breastfeeding or less than 6 monthspostpartum; history of or planned weight loss surgery; vegan; orunwilling to do home glucose monitoring. We also excludedparticipants who were currently using insulin or taking more thanthree oral hypoglycemic medications to limit the complexity ofpotential medication adjustments needed to address the effects ofdiet changes on glucose levels.
Interventions	**Intervention Characteristics** Low carb, high fat, non calorie restricted (LCK) vs Medium carb, low fat calorie restricted (MCCR) - a 3 months study: Baseline energy (%) LCK: C: 38.1 (11.8), F: 37.6 (11.3), P: 19.9 (5.8) MCCR: C: 39.5 (12.0), F: 38.9 (11.2), P: 18.8 (7.8) Energy (%) in the intervention period – 3 months: LCK C: 14.4(11.9), F: 58.0(8.6), P: 24.2(6.1) MCCR C: 40.7(9.3), F: 35.1(8.7), P: 20.5(6.8) NB! Please notify that The 'control group' MCCR does not fulfil the standard diet Carb percentage (45-60%) and only IV for 3 months.

Outcomes	*Continuous*: ● Weight (kg) ● QoL (social funktion) ● QoL (Angst og bekymring) ● LDL Cholesterol ● BMI ● HbA1c % ● QoL (energi og mobilitet) ● QoL (Sexual funktion) ● QoL (Diabetes control) ● BMI ● Weight (kg) ● QoL (angst og bekymring) ● QoL (sexual funktion) ● HbA1c (%) ● LDL Cholesterol ● QoL (diabetes kontrol) ● QoL (energi og mobilitet) ● QoL (social funktion) *Dichotomous*: ● Drop out rate (%)
Identification	**Sponsorship source:** The research was supported by a grant from the William K. Bowes, Jr. Foundation. Laura Saslow was supported by NIH grant T32AT003997 from theNational Center for Complementary and Alternative Medicine (NCCAM). Judith Moskowitz was supported by NIH grant K24 MH093225 from the National Instituteof Mental Health. Frederick Hecht was supported by NIH grant K24 AT007827 from NCCAM **Country:** US **Setting:** Participants were recruited from the community and from local health organizations through advertising and announcements. **Comments:** **Authors name:** Laura R. Saslow **Institution:** University of California San Francisco **Email:** **Address:** University of California San Francisco, San Francisco, California, United States of America
Notes	**Identification:** **Participants:** **Study design:** **Baseline characteristics:**

	Grith Poulsen BMI > 30 : LCD: 11 (69%) LFD: 15 (83%) *Henning Keinke Andersen* N = 17 for LFD group and N = 15 for LCD group **Intervention characteristics:** **Pretreatment:** **Continuous outcomes:** *Henning Keinke Andersen* NB! Mesurements performed after 3 months for both groupsNotify the QoL scalesNB! The LDL values are way to big as reported - thus not inserted *Grith Poulsen* End of study: 3 monthsLDL MMOL/L was wrongly assessed (87.2 mmol/l but was mg/dl) This was imputed correctly via this page http://www.onlineconversion.com/cholesterol.htm. **Dichotomous outcomes:** **Adverse outcomes:**

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	-
Allocation concealment (selection bias)	Low risk	-
Blinding of participants and personnel (performance bias)	High risk	Meassures only objective outcome
Blinding of outcome assessment (detection bias)	Low risk	-
Incomplete outcome data (attrition bias)	Low risk	-
Selective reporting (reporting bias)	Low risk	-
Other bias	Unclear risk	The participants in particular the LCK group have had their diabetic medication changed if there was concerns on hypoglycamia. This could have influenced the HbA1c levels - to be discussed..

Tay 2014

Methods	**Study design:** Randomized controlled trial **Study grouping:** Parallel group **Open Label:** **Cluster RCT:**
Participants	**Baseline Characteristics** Very low carbohydrate diet (high unsaturated/low saturated fat) n = 58 ● *Age (mean +/- SD)*: 58 (7)

	● *Mænd (males) (%)*: 63.8 ● *Antal år med T2DM (years with DM)*: ● *Vægt / Weight (kg)*: 101.7 (14.4) ● *BMI*: 34.2 (4.5) ● *HbA1c (%)*: 7.3 (1.1) High Carbohydrate (Low Fat diet) n = 57 ● *Age (mean +/- SD)*: 58 (7) ● *Mænd (males) (%)*: 50.9 ● *Antal år med T2DM (years with DM)*: ● *Vægt / Weight (kg)*: 101.6 (15.8) ● *BMI*: 35.1 (4.1) ● *HbA1c (%)*: 7.4 (1.1) **Included criteria:** Overweight/obese adults (n = 115, BMI 26–45 kg/m2 , age 35–68 years) with T2DM (previously diagnosed with HbA1c >= 7.0% [53 mmol/mol] and/or taking antiglycemic medication) **Excluded criteria:** Exclusion criteria were type 1diabetes; proteinuria (urinary albuminto-creatinine ratio >=30 mg/mmol); impaired renal function (eGFR ,60 mL/min); abnormal liver function (alanine aminotransferase [ALT], aspartate aminotransferase [AST], or g-glutamyl transferase[GGT] >= 2.5 times the normal upper limit) assessed at screening; any significant endocrinopathy (other than stabletreated thyroid disease); history of malignancy (other than nonmelanoma); liver, respiratory, gastrointestinal, or cardiovascular disease; pregnancy or lactation; clinical depression; history of/or current eating disorder; or smoking.
Interventions	**Intervention Characteristics** Very low carbohydrate diet (high unsaturated/low saturated fat) (LC) vs high carbohydrate, low fat diet (HC) Energy (%): Low Carb: C: 14%, F: 58%, P: 28% High Carb: C: 53%, F: <30%, P: 17% Low carb: 35% monounsaturated, 13% polyunsaturated - saturated < 10% High carb: 15% monounsaturated, 9% polyunsaturated - saturated < 10%
Outcomes	*Continuous*: ● Weight (kg) ● LDL Cholesterol ● BMI ● HbA1c % ● BMI ● Weight (kg) ● QoL (angst og bekymring) ● QoL (sexual funktion) ● HbA1c (%)

	● LDL Cholesterol ● QoL (diabetes kontrol) ● QoL (energi og mobilitet) ● QoL (social funktion) *Dichotomous*: ● Drop out rate (%)
Identification	**Sponsorship source:** This study was supported by National Health and Medical Research Council projectgrant 103415. J.T. was supported by a postgraduateresearch scholarship from the Agencyfor Science, Technology and Research (A*STAR). **Country:** Australia **Setting:** single-center **Comments:** **Authors name:** Jeannie Tay **Institution:** Preventative Health National Research Flagship, Commonwealth Scientific and Industrial Research Organisation (CSIRO), Animal, Food and Health Sciences, Adelaide, Australia **Email:** grant.brinkworth@csiro.au **Address:** Grant D. Brinkworth Preventative Health National Research Flagship,Commonwealth Scientific and Industrial ResearchOrganisation (CSIRO), Animal, Food andHealth Sciences, Adelaide, Australia
Notes	**Identification:** **Participants:** **Study design:** **Baseline characteristics:** *Henning Keinke Andersen* N = 58 for the LCD groupN =57 for the HCD (LFD) group **Intervention characteristics:** **Pretreatment:** **Continuous outcomes:** *Grith Poulsen* End of study at 6 monthsLC induced greater HbA1c reductions (-2.6 +-1.0% [-28.4610.9 mmol/mol] vs. -1.9 +1.2% [-20.8 6 13.1 mmol/mol]; P = 0.002) (Forstår ikke helt disse tal??) *Henning Keinke Andersen* HbA1c measured at fasting. **Dichotomous outcomes:** **Adverse outcomes:**

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	-
Allocation concealment (selection bias)	Low risk	-
Blinding of participants and personnel (performance bias)	High risk	none were blinded
Blinding of outcome assessment (detection bias)	Low risk	-
Incomplete outcome data (attrition bias)	Low risk	-
Selective reporting (reporting bias)	Unclear risk	-
Other bias	Unclear risk	Under supervision of exercise professionals, participants undertook, free of charge, 60-min structured exercise classes on 3 nonconsecutive days per week, incorporating moderate-intensity aerobic/resistance exercises, consistent with diabetes management guidelines (Mener dette gælder begge grupper)

Wolever 2008

Methods	**Study design:** Randomized controlled trial **Study grouping:** Parallel group / two controls
Participants	Men or non-pregnant women (35-75 y old) with T2DM with fasting plasma glucose >= 7 mmol/L or plasma glucose >= 11.1 mmol/L 2 h after a 75-g oral glucose tolerance test (OGTT)on >= 1occasion within 2 months of randomisation.
Interventions	low-glycemic index dietary carbohydrate vs low carbohydrate diet
Outcomes	BMI, WEight, HbA1c, LDL cholesterol
Identification	Canada; supported by CHIR-MCT-44205; key foods donated by Kellogg Canada Inc, Robin Hood (division of Smucker foods of Canada Co), HJ Heinz Co, Italpasta Ltd, Uncle Ben's Rice (division of Mars Inc), Kraft foods Inc, Dainty Foods Inc (division of MRRM INC), the Almond board of California, and the National Peanut Board
Notes	

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	-
Allocation concealment (selection bias)	Low risk	-
Blinding of participants and personnel (performance bias)	Low risk	objective outcomes
Blinding of outcome assessment (detection bias)	Low risk	objective outcomes
Incomplete outcome data (attrition bias)	High risk	there seem to be a mismatch in the numbers of participants entered in the study, withdrawals and numbers analysed from Figure 1. Unclear how the authors have dealt with this in the text
Selective reporting (reporting bias)	High risk	Some of QOL timepoints described in protocol not described in study
Other bias	Low risk	

Yamada 2014

Methods	**Study design:** Randomized controlled trial **Study grouping:** Parallel group **Open Label:** **Cluster RCT:**
Participants	**Baseline Characteristics** Low Carbohydrate diet (n=12) ● *Age (mean +/- SD)*: 63.3 (13.5) ● *Mænd (males) (%)*: 58 ● *Antal år med T2DM (years with DM)*: 8.9 (3.6) ● *Vægt / Weight (kg)*: 67.0 (15.9) ● *BMI*: 24.5 (4.3) ● *HbA1c (%)*: 7.6 (0.4) ● *LDL cholesterol (mmol/l)*: 2.57 (0.73) High Carbohydrate (caloric restricted) (n=12) ● *Age (mean +/- SD)*: 63.2 (10.2) ● *Mænd (males) (%)*: 41.6 ● *Antal år med T2DM (years with DM)*: 9.5 (4.8) ● *Vægt / Weight (kg)*: 68.1 (7.7) ● *BMI*: 27.0 (3.0) ● *HbA1c (%)*: 7.7 (0.6)

	● *LDL cholesterol (mmol/l)*: 2.89 (0.53) **Included criteria:** We recruited patientswith type 2 diabetes who were being treated in our outpatientclinic who had received guidance regarding calorie restrictionat least once and whose HbA1c level at enrolmentwas 6.9-8.4%, suggesting that their blood glucose level was not adequately controlled. **Excluded criteria:** Proteinurea > 1.0 g/day, serum creatinine >132 umol/l (men) or 106 umol/l (women), AST or ALT levels > 3times the upper limit of normal, history of myocardial infarction or stroke within the last six months, or increase in the HbA1c > 1% within six months before study entry
Interventions	**Intervention Characteristics** Low carbohydrate diet (n=12) vs 'Calorie-restricted diet' (High Carb) (n=12) Caloric intake: 1634 (531) vs 1610 (387) Energy (%): LCD: C: 29.8 (12.5), F: 45.4 (8.9), P: 25.3 (7.3) High Carb: C: 51.0 (4.6), F: 32,3 (5.2), P: 16.6 (2.8)
Outcomes	*Continuous*: ● Weight (kg) ● QoL (social funktion) ● QoL (Angst og bekymring) ● LDL Cholesterol ● BMI ● HbA1c % ● QoL (energi og mobilitet) ● QoL (Sexual funktion) ● QoL (Diabetes control) ● BMI ● Weight (kg) ● QoL (angst og bekymring) ● QoL (sexual funktion) ● HbA1c (%) ● LDL Cholesterol ● QoL (diabetes kontrol) ● QoL (energi og mobilitet) ● QoL (social funktion) *Dichotomous*: ● Drop out rate (%)

Identification	**Sponsorship source:** Not described **Country:** Japan **Setting:** singlecenter outpatient **Comments:** **Authors name:** Yoshifumi Yamada **Institution:** Diabetes Center, Kitasato Institute Hospital, Japan **Email:** yamada-s@insti.kitasato-u.ac.jp **Address:** Satoru Yamada Diabetes Center, Kitasato Institute Hospital, Japan
Notes	**Identification:** **Participants:** **Study design:** **Baseline characteristics:** *Henning Keinke Andersen* Very small study , just 12 participants in each group Low Carbohydrate vs Calorie restricted (carb 50-60%, prot < 20% and fat < 25%)LDL cholesterol er vist som mg/dl **Intervention characteristics:** **Pretreatment:** **Continuous outcomes:** *Grith Poulsen* End of study: 6 months *Henning Keinke Andersen* QoL scores: DTSQ scoresLongest follow-up: 6 months **Dichotomous outcomes:** **Adverse outcomes:**

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	-
Allocation concealment (selection bias)	Unclear risk	-
Blinding of participants and personnel (performance bias)	High risk	-
Blinding of outcome assessment (detection bias)	Unclear risk	-
Incomplete outcome data (attrition bias)	Low risk	-
Selective reporting (reporting bias)	Low risk	-
Other bias	Low risk	-

Footnotes

Characteristics of excluded studies

Fabricatore 2011

Reason for exclusion	Wrong intervention

Goldstein 2011

Reason for exclusion	Wrong intervention

Jenkins 2011

Reason for exclusion	Wrong study design

Krebs 2011

Reason for exclusion	only abstract

Lasa 2014

Reason for exclusion	Wrong intervention

Footnotes

Characteristics of studies awaiting classification

Footnotes

Characteristics of ongoing studies

Footnotes

Summary of findings tables

Additional tables

References to studies

Included studies

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Studies awaiting classification

Ongoing studies

Other references

Additional references

Other published versions of this review

Data and analyses

1 Lav kulhydrat kost vs høj kulhydrat kost (kontrol)

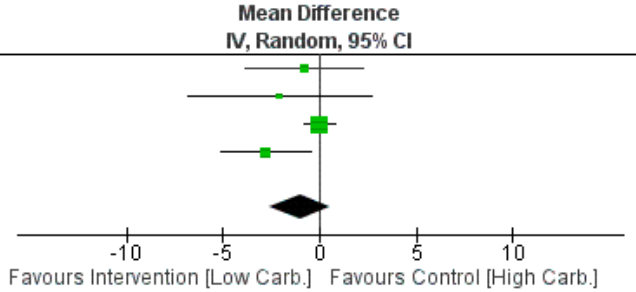
Outcome or Subgroup	Studies	Participants	Statistical Method	Effect Estimate
1.1 BMI < 1år	4	185	Mean Difference (IV, Random, 95% CI)	-1.02 [-2.58, 0.54]
1.2 BMI >= 1år	2	159	Mean Difference (IV, Random, 95% CI)	-0.43 [-1.38, 0.53]
1.3 Vægt (kg) < 1år	7	741	Mean Difference (IV, Random, 95% CI)	-0.00 [-1.03, 1.02]
1.4 Vægt (kg) >= 1år	6	771	Mean Difference (IV, Random, 95% CI)	0.20 [-0.97, 1.36]
1.5 HbA1c % <1år	8	809	Mean Difference (IV, Random, 95% CI)	-0.34 [-0.63, -0.06]
1.6 HbA1c % >= 1år	7	839	Mean Difference (IV, Random, 95% CI)	0.04 [-0.04, 0.13]
1.7 LDL Cholesterol < 1år	8	809	Mean Difference (IV, Random, 95% CI)	0.04 [-0.06, 0.13]
1.8 LDL Cholesterol >= 1år	7	839	Mean Difference (IV, Random, 95% CI)	-0.01 [-0.10, 0.07]
1.9 QOL Fysisk funktion, længste follow-up	2	348	Mean Difference (IV, Random, 95% CI)	-1.93 [-4.02, 0.16]
1.10 QOL Mentalt helbred, længste follow-up.	2	348	Mean Difference (IV, Random, 95% CI)	0.74 [-1.24, 2.71]
1.11 Frafald % (end of study)	7	1182	Risk Ratio (IV, Random, 95% CI)	1.13 [0.94, 1.37]

Figures

Figure 1 (Analysis 1.1)

Study or Subgroup	Intervention [Low Carb.] Mean	SD	Total	Control [High Carb.] Mean	SD	Total	Weight	Mean Difference IV, Random, 95% CI
Guldbrand 2012	29.4	4.1	18	30.2	5	17	17.8%	-0.80 [-3.84, 2.24]
Saslow 2014	34.3	7.4	15	36.4	6.4	18	9.0%	-2.10 [-6.87, 2.67]
Tay 2014	-4	2	46	-4	1.8	47	48.6%	0.00 [-0.77, 0.77]
Yamada 2014	23.6	3.5	12	26.4	2.2	12	24.6%	-2.80 [-5.14, -0.46]
Total (95% CI)			**91**			**94**	**100.0%**	**-1.02 [-2.58, 0.54]**

Heterogeneity: Tau² = 1.15; Chi² = 5.60, df = 3 (P = 0.13); I² = 46%
Test for overall effect: Z = 1.28 (P = 0.20)



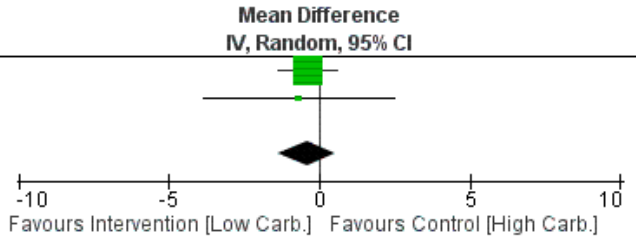
Risk of bias legend
(A) Random sequence generation (selection bias)
(B) Allocation concealment (selection bias)
(C) Blinding of participants and personnel (performance bias)
(D) Blinding of outcome assessment (detection bias)
(E) Incomplete outcome data (attrition bias)
(F) Selective reporting (reporting bias)
(G) Other bias

1 Lav kulhydrat kost vs høj kulhydrat kost (kontrol), outcome: 1.1 BMI < 1år.

Figure 2 (Analysis 1.2)

Study or Subgroup	Intervention [Low Carb.] Mean	SD	Total	Control [High Carb.] Mean	SD	Total	Weight	Mean Difference IV, Random, 95% CI
Elhayany 2010	28.1	2.8	61	28.5	2.9	63	90.8%	-0.40 [-1.40, 0.60]
Guldbrand 2012	29.8	4.5	18	30.5	5	17	9.2%	-0.70 [-3.86, 2.46]
Total (95% CI)			**79**			**80**	**100.0%**	**-0.43 [-1.38, 0.53]**

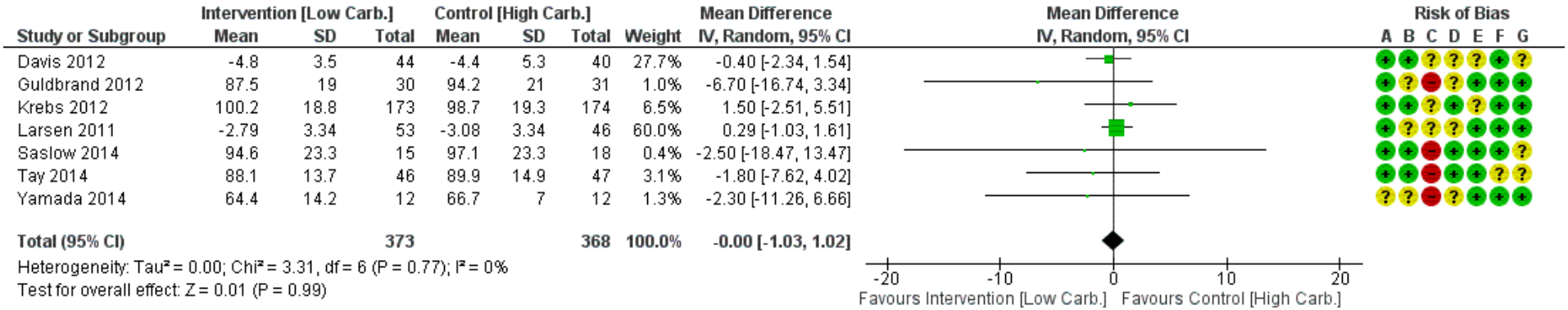
Heterogeneity: Tau² = 0.00; Chi² = 0.03, df = 1 (P = 0.86); I² = 0%
Test for overall effect: Z = 0.88 (P = 0.38)



Risk of bias legend
(A) Random sequence generation (selection bias)
(B) Allocation concealment (selection bias)
(C) Blinding of participants and personnel (performance bias)
(D) Blinding of outcome assessment (detection bias)
(E) Incomplete outcome data (attrition bias)
(F) Selective reporting (reporting bias)
(G) Other bias

1 Lav kulhydrat kost vs høj kulhydrat kost (kontrol), outcome: 1.2 BMI >= 1år.

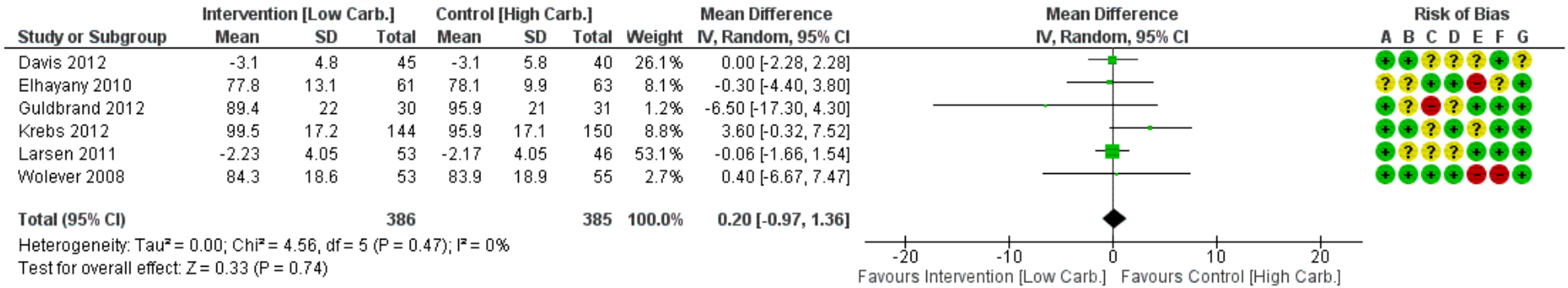
Figure 3 (Analysis 1.3)



Risk of bias legend
(**A**) Random sequence generation (selection bias)
(**B**) Allocation concealment (selection bias)
(**C**) Blinding of participants and personnel (performance bias)
(**D**) Blinding of outcome assessment (detection bias)
(**E**) Incomplete outcome data (attrition bias)
(**F**) Selective reporting (reporting bias)
(**G**) Other bias

1 Lav kulhydrat kost vs høj kulhydrat kost (kontrol), outcome: 1.4 Vægt (kg) < 1år.

Figure 4 (Analysis 1.4)



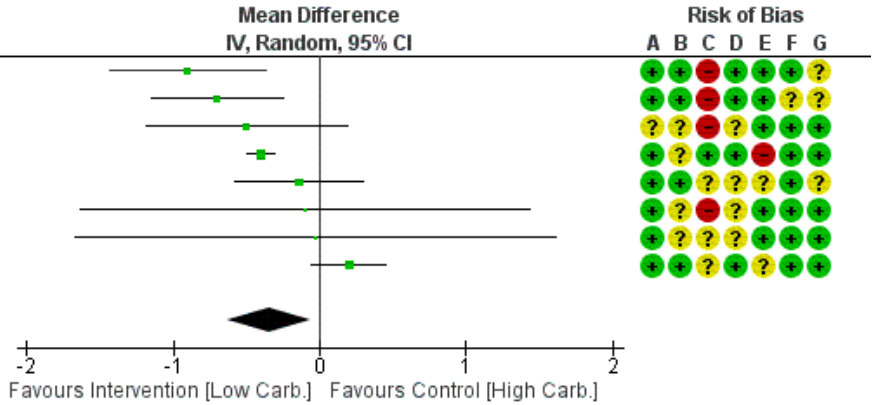
Risk of bias legend
(A) Random sequence generation (selection bias)
(B) Allocation concealment (selection bias)
(C) Blinding of participants and personnel (performance bias)
(D) Blinding of outcome assessment (detection bias)
(E) Incomplete outcome data (attrition bias)
(F) Selective reporting (reporting bias)
(G) Other bias

1 Lav kulhydrat kost vs høj kulhydrat kost (kontrol), outcome: 1.4 Vægt (kg) >= 1år.

Figure 5 (Analysis 1.5)

Study or Subgroup	Intervention [Low Carb.] Mean	SD	Total	Control [High Carb.] Mean	SD	Total	Weight	Mean Difference IV, Random, 95% CI
Saslow 2014	6	0.3	15	6.9	1.1	18	12.9%	-0.90 [-1.43, -0.37]
Tay 2014	-2.6	1	46	-1.9	1.2	47	14.7%	-0.70 [-1.15, -0.25]
Yamada 2014	7	0.7	12	7.5	1	12	9.9%	-0.50 [-1.19, 0.19]
Iqbal 2010	-0.5	0.2	28	-0.1	0.2	40	22.3%	-0.40 [-0.50, -0.30]
Davis 2012	-0.29	0.92	44	-0.15	1.1	40	15.0%	-0.14 [-0.58, 0.30]
Guldbrand 2012	7.1	3.1	30	7.2	3	31	3.1%	-0.10 [-1.63, 1.43]
Larsen 2011	-0.52	4.15	53	-0.49	4.15	46	2.7%	-0.03 [-1.67, 1.61]
Krebs 2012	7.9	1.3	173	7.7	1.1	174	19.4%	0.20 [-0.05, 0.45]
Total (95% CI)			**401**			**408**	**100.0%**	**-0.34 [-0.63, -0.06]**

Heterogeneity: Tau² = 0.09; Chi² = 26.90, df = 7 (P = 0.0003); I² = 74%
Test for overall effect: Z = 2.34 (P = 0.02)



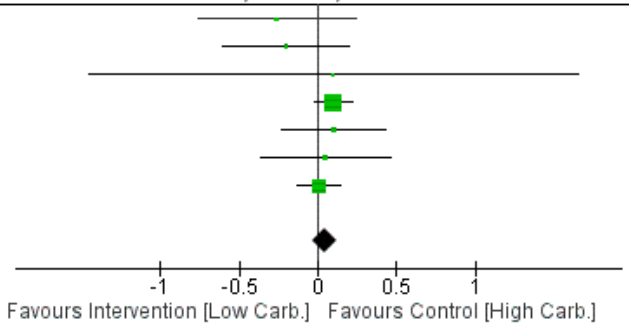
Risk of bias legend
(**A**) Random sequence generation (selection bias)
(**B**) Allocation concealment (selection bias)
(**C**) Blinding of participants and personnel (performance bias)
(**D**) Blinding of outcome assessment (detection bias)
(**E**) Incomplete outcome data (attrition bias)
(**F**) Selective reporting (reporting bias)
(**G**) Other bias

1 Lav kulhydrat kost vs høj kulhydrat kost (kontrol), outcome: 1.5 HbA1c % <1år.

Figure 6 (Analysis 1.6)

Study or Subgroup	Intervention [Low Carb.] Mean	SD	Total	Control [High Carb.] Mean	SD	Total	Weight	Mean Difference IV, Random, 95% CI
Davis 2012	-0.02	0.89	45	0.24	1.4	40	2.6%	-0.26 [-0.77, 0.25]
Elhayany 2010	6.3	1.4	61	6.5	0.8	63	4.2%	-0.20 [-0.60, 0.20]
Guldbrand 2012	7.5	3.1	30	7.4	3.1	31	0.3%	0.10 [-1.46, 1.66]
Iqbal 2010	-0.1	0.2	28	-0.2	0.3	40	47.8%	0.10 [-0.02, 0.22]
Krebs 2012	8.2	1.5	144	8.1	1.4	150	6.1%	0.10 [-0.23, 0.43]
Larsen 2011	-0.23	1.06	53	-0.28	1.06	46	3.9%	0.05 [-0.37, 0.47]
Wolever 2008	6.35	0.36400549	53	6.34	0.37080992	55	35.2%	0.01 [-0.13, 0.15]
Total (95% CI)			**414**			**425**	**100.0%**	**0.04 [-0.04, 0.13]**

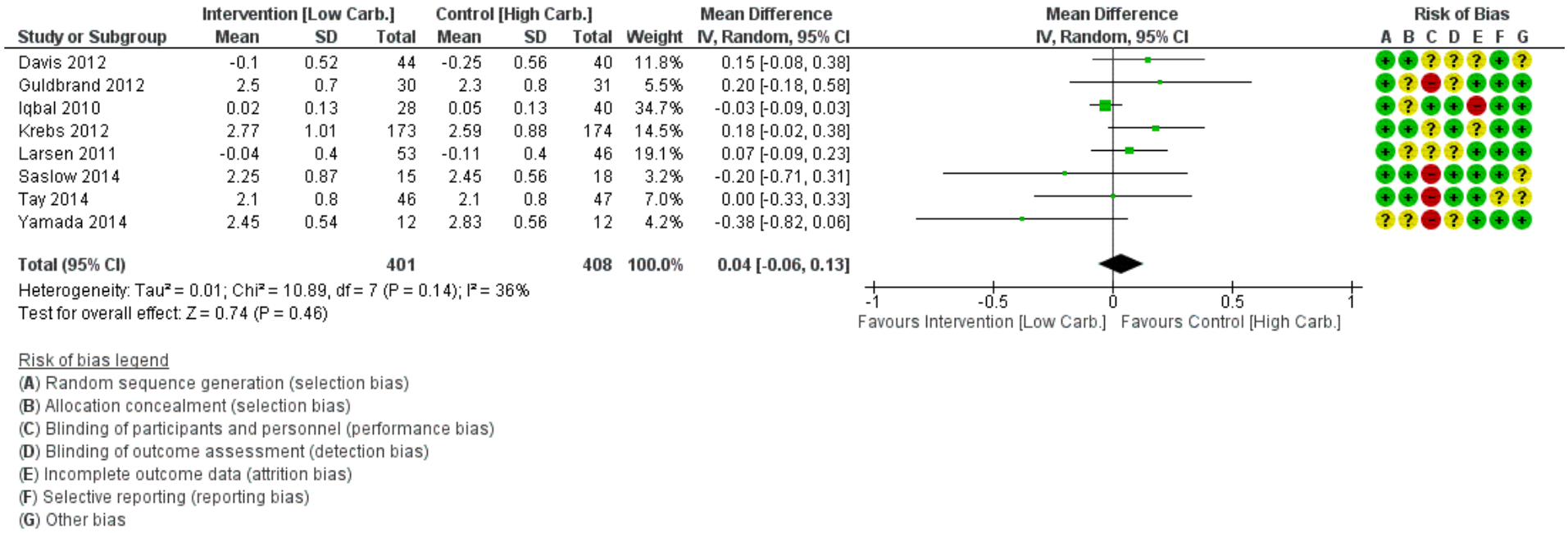
Heterogeneity: Tau² = 0.00; Chi² = 3.99, df = 6 (P = 0.68); I² = 0%
Test for overall effect: Z = 1.06 (P = 0.29)



Risk of bias legend
(A) Random sequence generation (selection bias)
(B) Allocation concealment (selection bias)
(C) Blinding of participants and personnel (performance bias)
(D) Blinding of outcome assessment (detection bias)
(E) Incomplete outcome data (attrition bias)
(F) Selective reporting (reporting bias)
(G) Other bias

1 Lav kulhydrat kost vs høj kulhydrat kost (kontrol), outcome: 1.6 HbA1c % >= 1år.

Figure 7 (Analysis 1.7)



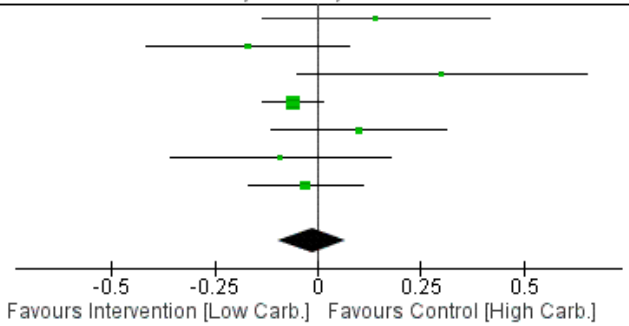
Risk of bias legend
(A) Random sequence generation (selection bias)
(B) Allocation concealment (selection bias)
(C) Blinding of participants and personnel (performance bias)
(D) Blinding of outcome assessment (detection bias)
(E) Incomplete outcome data (attrition bias)
(F) Selective reporting (reporting bias)
(G) Other bias

1 Lav kulhydrat kost vs høj kulhydrat kost (kontrol), outcome: 1.7 LDL Cholesterol < 1år.

Figure 8 (Analysis 1.8)

Study or Subgroup	Intervention [Low Carb.] Mean	SD	Total	Control [High Carb.] Mean	SD	Total	Weight	Mean Difference IV, Random, 95% CI
Davis 2012	-0.04	0.63	45	-0.18	0.66	40	7.6%	0.14 [-0.14, 0.42]
Elhayany 2010	2.46	0.72	61	2.63	0.67	63	9.3%	-0.17 [-0.41, 0.07]
Guldbrand 2012	2.4	0.7	30	2.1	0.7	31	4.9%	0.30 [-0.05, 0.65]
Iqbal 2010	-0.21	0.16	28	-0.15	0.14	40	37.4%	-0.06 [-0.13, 0.01]
Krebs 2012	2.57	0.92	144	2.47	0.93	150	11.7%	0.10 [-0.11, 0.31]
Larsen 2011	-0.05	0.68	53	0.04	0.68	46	7.9%	-0.09 [-0.36, 0.18]
Wolever 2008	2.89	0.36400549	53	2.92	0.37080992	55	21.1%	-0.03 [-0.17, 0.11]
Total (95% CI)			**414**			**425**	**100.0%**	**-0.01 [-0.10, 0.07]**

Heterogeneity: Tau² = 0.00; Chi² = 8.38, df = 6 (P = 0.21); I² = 28%
Test for overall effect: Z = 0.34 (P = 0.73)



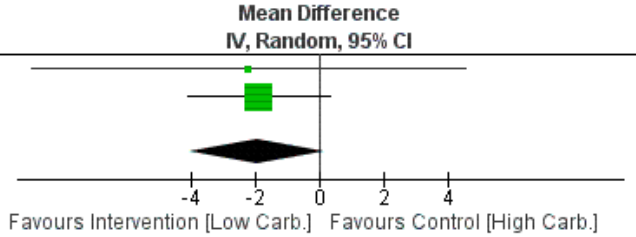
Risk of bias legend
(A) Random sequence generation (selection bias)
(B) Allocation concealment (selection bias)
(C) Blinding of participants and personnel (performance bias)
(D) Blinding of outcome assessment (detection bias)
(E) Incomplete outcome data (attrition bias)
(F) Selective reporting (reporting bias)
(G) Other bias

1 Lav kulhydrat kost vs høj kulhydrat kost (kontrol), outcome: 1.8 LDL Cholesterol >= 1år.

Figure 9 (Analysis 1.9)

Study or Subgroup	Intervention [Low Carb.] Mean	SD	Total	Control [High Carb.] Mean	SD	Total	Weight	Mean Difference IV, Random, 95% CI
Guldbrand 2012	41.4	14	25	43.6	10.5	29	9.7%	-2.20 [-8.89, 4.49]
Krebs 2012	43.9	9.9	144	45.8	9.3	150	90.3%	-1.90 [-4.10, 0.30]
Total (95% CI)			**169**			**179**	**100.0%**	**-1.93 [-4.02, 0.16]**

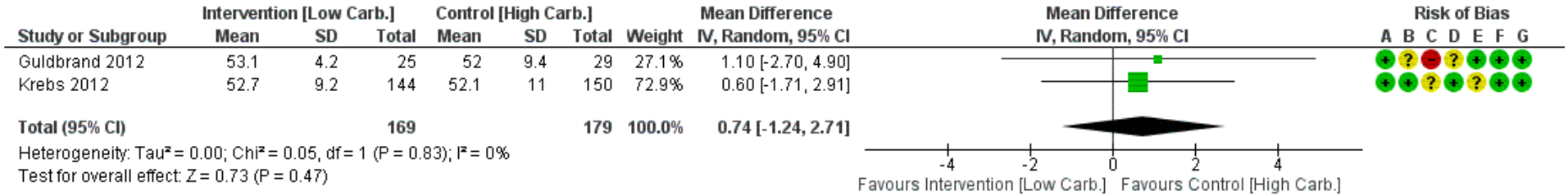
Heterogeneity: Tau² = 0.00; Chi² = 0.01, df = 1 (P = 0.93); I² = 0%
Test for overall effect: Z = 1.81 (P = 0.07)



Risk of bias legend
(A) Random sequence generation (selection bias)
(B) Allocation concealment (selection bias)
(C) Blinding of participants and personnel (performance bias)
(D) Blinding of outcome assessment (detection bias)
(E) Incomplete outcome data (attrition bias)
(F) Selective reporting (reporting bias)
(G) Other bias

1 Lav kulhydrat kost vs høj kulhydrat kost (kontrol), outcome: 1.9 QOL Fysisk funktion, længste follow-up.

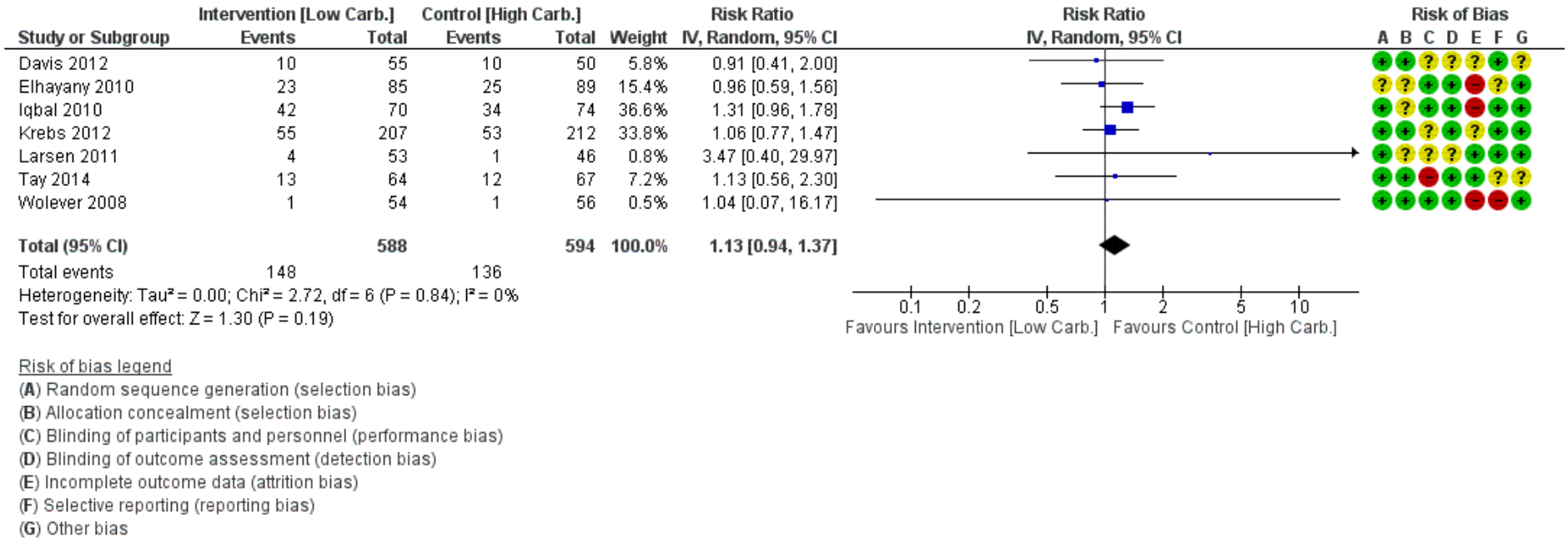
Figure 10 (Analysis 1.10)



Risk of bias legend
(**A**) Random sequence generation (selection bias)
(**B**) Allocation concealment (selection bias)
(**C**) Blinding of participants and personnel (performance bias)
(**D**) Blinding of outcome assessment (detection bias)
(**E**) Incomplete outcome data (attrition bias)
(**F**) Selective reporting (reporting bias)
(**G**) Other bias

1 Lav kulhydrat kost vs høj kulhydrat kost (kontrol), outcome: 1.10 QOL Mentalt helbred, længste follow-up..

Figure 11 (Analysis 1.11)



Risk of bias legend
(A) Random sequence generation (selection bias)
(B) Allocation concealment (selection bias)
(C) Blinding of participants and personnel (performance bias)
(D) Blinding of outcome assessment (detection bias)
(E) Incomplete outcome data (attrition bias)
(F) Selective reporting (reporting bias)
(G) Other bias

1 Lav kulhydrat kost vs høj kulhydrat kost (kontrol), outcome: 1.11 Frafald % (end of study).