|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| First author | Setting and Date | Inclusion exclusion criteria | Details of intervention | Maternal age – mean (SD) | Baseline BMI – mean (SD) | Primipara - (%) | C-section - (%) | Preterm (<37 weeks) - (%) | Risk of bias |
| Bonomo51 | Milan, Italy  1997 –2002 | Singleton pregnancy, elevated GCT (>7.8mmol/L), Caucasian.  Sample: 450 (150 int, 150 SM, 150 con)  Final analyses: 150 int, 150 SM, 150 con | Int: Dietary advice based on pre-pregnancy weight (24-30kcal/kg/day). Outpatient clinic every 2 weeks.  SM: No special care, diet or pharmacological treatment.  Duration: Unclear | 31.1 (4.7), 30.7 (5.1), *p=*NR | 23.1 (4.4), 23.0 (4.5), *p=*NR | 45.3, 42.0, *p=*NS | 29.0, 28.0,  *p=*NR | - | Random: Low  AC: Unclear  Blinding: Unclear  Data: Unclear  SR: Unclear  Other: Low |
| Deveer52 | Turkey  Published 2013 | Singleton pregnancy, positive 50g GCT and negative 100g OGTT between 24-28 weeks gestation.  Excluded: diabetes, history of stillbirth, active chronic systemic disease.  Sample: 100 (50 int, 50 con)  Final analyses: 50 int, 50 con | Individualized dietary advice (1800-2500kcal/day). Follow up weekly in the first month and then every 2 weeks until delivery.  Duration: 12-16 weeks | 29.5 (5.8), 31.2 (5.6), *p=*0.126 | 28.0 (3.6), 29.1 (4.8), *p=*0.203 | Gravida\*\*  3 (1-7), 2 (1-6), *p=*0.540 | 32, 40,  *p=*0.405 | 2, 8, *p=*0.363 | Random: High  AC: Unclear  Blinding: Unclear  Data: Low  SR: Unclear  Other: Unclear |
| Di Carlo53 | Naples, Italy Jun 2010 – Jun 2011 | Singleton pregnancy, < 12 weeks gestation.  Excluded: HTN, thyroid disorder, BMI <20 or >40.  Sample: 154 (77 int, 77 con)  Final analyses: 61 int, 59 con | A personalised meal plan (average intake 1916kcal/day) and monthly reviews with a dietitian.  Duration: 32 weeks | 31.3 (4.7), 28.2 (5.3), *p=*0.002 | 26.5 (6.3), 25.0 (4.2), *p=*0.3# | 28.8, 37.7, *p=*0.3 | - | - | Random: Low  AC: Low  Blinding: Unclear  Data: Low  SR: Unclear  Other: Low |
| Ilmonen29 | Finland Apr 2002- Nov 2005 | Singleton pregnancy, <17 weeks gestation, no metabolic diseases.  Sample: 256 (85 diet/probiotic, 86 diet/placebo, 85 con/placebo)  Final analyses: 64 diet/probiotic, 64 diet/placebo, 57 con/placebo | Diet: Recommended energy 55- 60% CHO, 10-15% protein, 30% fat.  Probiotic: 1 capsule per day of *L.rhamnosus* GG and *B.lactus*  Duration: 30 weeks | Diet/probiotic: 29.7 (4.1), diet/placebo: 30.1 (5.2), control/placebo: 30.2 (5.0) *p=*0.813 | - | Diet/probiotic: 65, diet/placebo: 51, control/placebo: 56, *p=*0.197 | - | - | Random: Low  AC: Low  Blind: Low  Data: Unclear  SR: Unclear  Other: Unclear |
| Korpi- Hyovalti54 | Finland Published 2012 | Singleton pregnancy, 8-12 weeks gestation, risk of GDM.  Excluded: GDM.  Sample: 60 (30 int, 30 con)  Final analyses: 27 int, 27 con | 10 individual dietary counselling sessions throughout pregnancy. Recommended energy 50-55% CHO, 15-20% protein, 30% fat  Duration: 28-32 weeks | - | 27.3 (6.0), 25.5 (3.4), *p=*NS | - | - | - | Random: Low  AC: Unclear  Blinding: Unclear  Data: Low  SR: Unclear  Other: Low |
| Liao*55* | Wuzhou, China Mar 2010 – Mar 2012 | Singleton pregnancy, >16 weeks gestation, risk of GDM.  Excluded: GDM.  Sample: 200 (100 int, 100con)  Final analyses: 100 int, 100 con | 3 face to face nutrition consultations | - | - | - | 14 (14), 32 (32), *p=*0.02 | - | Random: High  AC: High  Blinding: High  Data: Unclear  SR: Unclear  Other: High |
| Markovic39 | Camper down, Australia Jan 2011 - Oct 2012 | Singleton pregnancy, 12-20 weeks gestation, high risk of GDM  Excluded: Pre-existing diabetes, special dietary requirements.  Sample: 147 (76 low-GI, 71 HF)  Final analyses: 65 low-GI, 60 HF | 5 individual dietary consultations with a dietitian. Recommended energy 40-45% CHO, 15-25% protein, 25-30% fat.  Low-GI (LGI): Target GI ≤50  High Fibre (HF): Target GI 60  Duration: 20-26 weeks | Low-GI: 36.0 (4.4), HF: 34.7 (4.1), *p=*0.091 | Low-GI: 25.1 (5.2), HF: 25.2 (5.4), *p=*0.945# | Parity\*\*\*  Low-GI: 0.6 (0.6), HF: 0.8 (0.8), *p=*0.117 | 32.3, 25.0, *p=*0.346 | - | Random: Low  AC: Low  Blinding: Low  Data: Low  SR: Unclear  Other: Low |
| Moses35 | Australia Feb 2010 – Sep 2012 | Singleton pregnancy, ≥18 years old, < 20 weeks gestation.  Excluded: Diabetes, special dietary requirements, medical conditions that may compromise metabolic status, medications known to affect body weight.  Sample: 691 (337 healthy eating, 354 low-GI) | Healthy eating (HE) : Advice based on the Australian Guide to Healthy Eating  Low-GI: Advice based on low-GI diet.  4 counselling sessions for both groups (3 face-to-face and a phone call)  Duration: 18 weeks | HE: 29.9 (0.3), Low-GI: 29.9 (0.3), *p=*0.96\*\*\*\* | HE: 24.7 (0.3), Low-GI: 24.3 (0.3), *p=*0.35\*\*\*\*# | Parity\*\*\*\*  HE: 0.8 (0.1), Low-GI: 0.8 (0.1), *p=*0.82 | - | - | Random: Unclear  AC: Unclear  Blinding: Unclear  Data: Low  SR: Unclear  Other: Low |
| Rhodes40 | Boston, USA  Jan 2007 – Jun 2009 | Singleton pregnancy, > 25 years, 13-28 weeks gestation, overweight or obese.  Excluded: Smoking, alcohol consumption, major illness, medications or supplements that affect body weight, high levels of physical activity, lactation in last 3 months.  Sample: 46 (25 low-GI, 21 low-fat)  Final analyses: 22 low-GI, 16 low-fat | Low-GI (LGI): Recommended energy 45% CHO, 20% protein, 35% fat.  Low-fat (LF): Recommended energy 55% CHO, 20% protein, 25% fat (low saturated fat).  2 x 1 hour counselling sessions and maintenance visits every 2-4 weeks.  Duration: 12-27 weeks | LGI: 33.7 (3.9),  LF: 33.2 (3.7), *p=*0.67 | LGI: 32.1 (4.6),  LF: 31.2 (3.2), *p=*0.43# | - | LGI: 25, LF: 43, *p=*0.30 | LGI: 4, LF: 19, *p=*0.17 | Random: Unclear  AC: Low  Blinding: Unclear  Data: Unclear  SR: Unclear  Other: Low |
| Thornton45 | New York, USA  Jun 1998- May 2005 | Singleton pregnancy, 12-28 weeks gestation, obese.  Excluded: diabetes, HTN, chronic renal disease.  Sample: 257 (133 int, 124 con)  Final analyses: 116 int, 116 con | Energy restricted diets to 24kcal/kg/day. Recommended energy 40% CHO, 30% protein, 30% fat.  Duration: 12-28 weeks | 26.8, 27.3\*\* *p=*NR | 37.4 (7.0), 38.2 (7.5), *p=*0.134 | 16.3, 17.2, *p=*NR | 78.4, 71.6, *p=*0.225 | 2.6, 4.3, *p=*0.046 | Random: Low  AC: Low  Blinding: Unclear  Data: Low  SR: Unclear  Other: Low |
| Walsh57 | Dublin, Ireland Jan 2007- Jan 2011 | Singleton pregnancy, > 18 years, <18 weeks  gestation, previously delivered an infant >4kg, secundigravid.  Excluded: Previous GDM, drug use.  Sample: 800 (394 int, 406 con)  Final analyses: 372 int, 387 con | A group education session regarding general healthy eating and low-GI foods.  Duration: 24 weeks | 32.0 (4.2), 32.0 (4.2), *p=*NR | 26.8 (5.1), 26.8 (4.8), *p=*NR | 0, 0, *p=*NR | - | 0.8, 2.1, p>0.05 | Random: Low  AC: Low  Blinding: Unclear  Data: Low  SR: Unclear  Other: Low |
| Wolff58 | Copenhagen, Denmark  Published 2008 | Singleton pregnancy, > 18 years, <15 weeks  gestation, obese.  Excluded: >45 years old, medical complications that affect foetal growth.  Sample: 66 (28 int, 38 con)  Final analyses: 23 int, 27 con | 10 x 1 hour consultations with a dietitian based on Danish dietary recommendations. Recommended energy 55% CHO, 15-20% protein, 30% fat.  Duration: 25 weeks | 28 (4), 30 (5), *p=*0.069 | 34.9 (4) , 34.6 (3), *p=*0.762 | - | 9, 11, *p=*NR | - | Random: Low  AC: Unclear  Blinding: Unclear  Data: Low  SR: Unclear  Other: Low |
| Ye56 | Guangzhou, China May 2012 – May 2013 | Sample: 120 (60 in, 60 con)  Final analyses: 60 int, 60 con | 5 x counselling sessions regarding  health coaching and  individualised dietary advice  based on the Chinese Society of  Nutrition Pregnancy Guidelines.  Duration: 28 weeks | 28.4 (3.2), 29.1 (3.4), *p*>0.05 | 20.6 (2.0), 20.2 (1.7), *p*>0.05 | 100, 100 | 41.7, 60, *p=*0.045 | - | Random: Low  AC: Low  Blinding: High  Data: Unclear  SR: Unclear  Other: Low |
| Zhang37 | Ningbo, China Jan 2011 – Dec 2011 | Singleton pregnancy, < 12 weeks  gestation, mild physical activity.  Sample: 472 (236 int, 236 con)  Final analyses: 236 int, 236 con | Individualised dietary assessment  based on nutrition management software.  Duration: 28 weeks | 26.7 (5.2) | 20.5 (1.8), 20.8 (1.4), *p*>0.05# | - | 48.6, 72.0,  *p<*0.05 | 2.5, 5.5, *p*>0.05 | Random: High  AC: High  Blinding: High  Data: Unclear  SR: Unclear  Other: High |
| Results presented: Intervention, control. Abbreviations: NR= Not reported, NS= Not significant, SM= Standard Management; Random = Randomization; AC = Allocation concealment; Blinding = Blinding of participants, personal and outcome; Data = Incomplete data; SR = Selective reporting; Other = Other bias; GCT = Glucose challenge test; OGTT = Oral glucose tolerance test; GDM = Gestational diabetes mellitus; GI = Glycemic index; HF = High fibre; HE = Healthy eating; LF = Low fat. Symbols:  ‘-‘ = data not available; # = Pre-pregnancy BMI; \*\*= Median (minimum-maximum); \*\*\*= Mean (SD); \*\*\*\*=Mean (SEM). | | | | | | | | | | |