

Table S1. Diagnostic Criteria for gestational diabetes mellitus (GDM) used by the studies included in the review.

| Criteria name | Year | Screening oral glucose challenge test (OGCT) | | Diagnostic oral glucose tolerance test (OGTT) | | | | | Studies in the review | |
|--|------|---|------------------------------|---|------------------|------------|-------------------|--|--|-----------------|
| | | Dose | 1 h mmol/L | Fasting mmol/L | Dose | 1 h mmol/L | 2 h mmol/L | 3 h mmol/L | | Abnormal values |
| O' Sullivan and Mahan [51] | 1964 | 50 g fasting | 140 | 5.0 | 100 g | 9.2 | 8.1 | 6.9 | 2 or more | [18] |
| White's Classification [52] | 1978 | Pregnant women are categorised according to duration and age of onset of diabetes | | | | | | | | [17] |
| US National Diabetes Data Group [53] | 1979 | 50 g fasting | 7.8 | 5.8 | 100 g | 10.5 | 9.1 | 8.0 | 2 or more | [6,29] |
| Carpenter and Coustan [54] | 1982 | 50 g fasting | 7.2 | 5.3 | 100 g | 10.0 | 8.6 | 7.8 | 2 or more | [19,21,25,30] |
| Modified O'Sullivan Criteria by Court et al. [55] | 1985 | 50 g fasting | 7.8 | 5.8 | 100 g | 10.0 | 8.9 | 7.8 | 2 or more | [20] |
| European Association for the Study of Diabetes (EASD) [56] | 1991 | – | – | 7.0 | 75 g | 11.0 | 9.0 | – | Either the 0-h or 1-h concentration should meet or exceed stated values in addition to a 2-h value | [34] |
| Australasian Diabetes In Pregnancy Society (ADIPS) [57] | 1998 | 50 g or 75 g non-fasting | 50 g: 7.8 or 75 g: 8.0 | 5.5 | 75 g | – | 8.0 or 9.0* | – | 1 or more | [11,12,22,24] |
| 4th International workshop conference [58] | 1998 | 50 g fasting | 7.2 or 7.8 | 5.3 | 100 g or 75 g | 10.0 | 8.6 | 7.8 (3 hr value only for 100 g test) | 2 or more | [26] |
| American Diabetes Association (ADA) [59] | 2004 | 50 g fasting | 7.2 or 7.8 | 5.3 | 100 g or 75 g | 10.0 | 8.6 | 7.8 (3 hr value only for 100 g test) | 2 or more | [27,28] |
| International Association of Diabetes and Pregnancy Study Groups (IADPSG) [60] | 2010 | – | – | 5.1 | 75 g | 10.0 | 8.5 | – | 1 or more | [31,33,35,36] |
| World Health Organisation [61] | 2014 | – | – | 5.1–6.9 | 75 g | 10.0 | 8.5–11.0 | – | 1 or more | [32] |

Guidelines are ordered according to the year of the publication. All values are for venous plasma glucose, except for O'Sullivan and Mahan criteria, which are venous whole blood glucose. IADPSG criteria are based on the Hyperglycaemia and Pregnancy Outcome (HAPO) study. OGCT: oral glucose challenge test; OGTT: oral glucose tolerance test.

| Step | Searches |
|------|---|
| 1 | (gestation* or pregnan* or maternal or mother*).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms] |
| 2 | (diabet* or hyperglyc?mi* or glycy?mi* or glucose intolerance or impaired glucose tolerance or insulin resistance).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms] |
| 3 | (infan* or neonat* or child* or newborn* or offspring* or birth).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms] |
| 4 | ("body composition" or fat or adiposity).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms] |
| 5 | ("air-displacement plethysmography" or "isotope dilution" or "deuterium dilution" or "bioelectrical impedance" or "total body electrical conductivity" or "dual-energy x-ray absorptiometry" or "photon-counting computed tomography" or "photon absorptiometry" or "total body potassium" or "magnetic resonance imaging" or "skinfold" or "skin fold" or anthropometry).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms] |
| 6 | 1 and 2 and 3 and 4 and 5 |
| 7 | limit 6 to (english language and humans and "all infant (birth to 23 months)") |

Figure S1. Search strategy in Medline via Ovid.

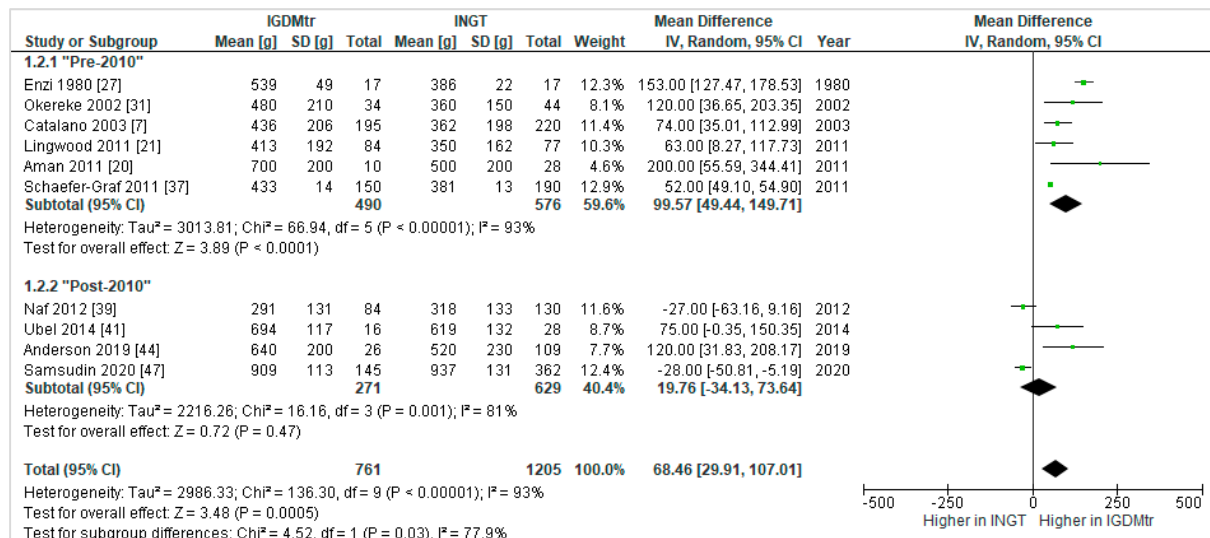


Figure S2. Forest plot comparing fat mass (g) in infants exposed to treated gestational diabetes mellitus (IGDMtr) and infants exposed to normal glucose tolerance (INGT) by subgroup analysis of time of the study; ‘pre-2010’ vs. ‘post-2010’.

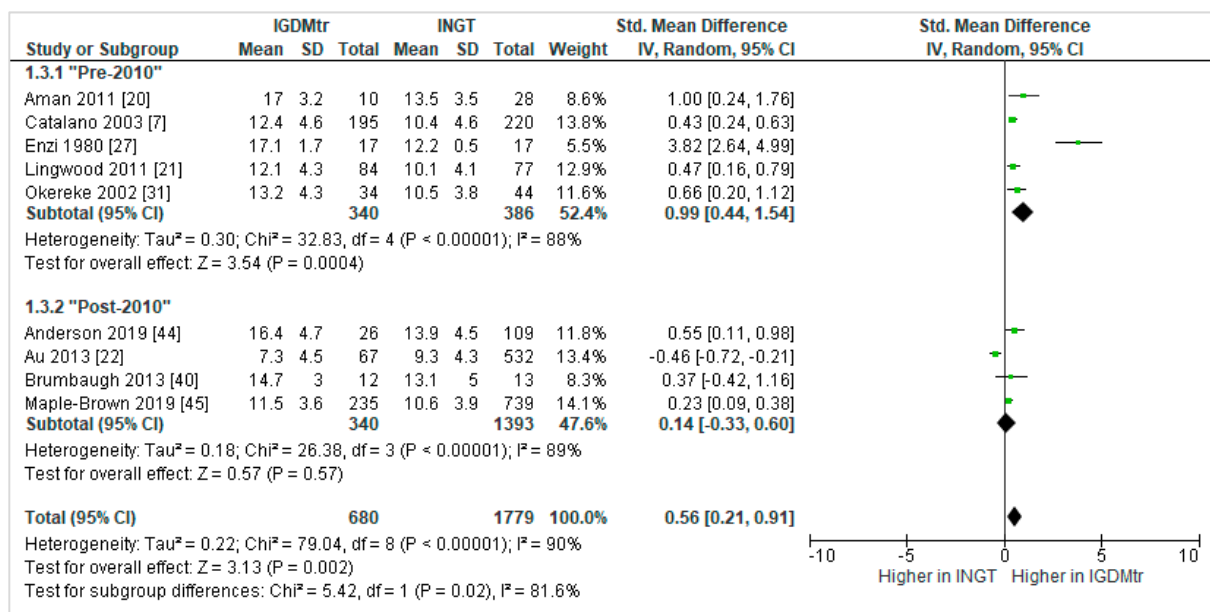


Figure S3. Forest plot comparing percent fat mass (%) in infants exposed to treated gestational diabetes mellitus (IGDMtr) and infants exposed to normal glucose tolerance (INGT) by subgroup analysis of time of the study; ‘pre-2010’ vs. ‘post-2010’.

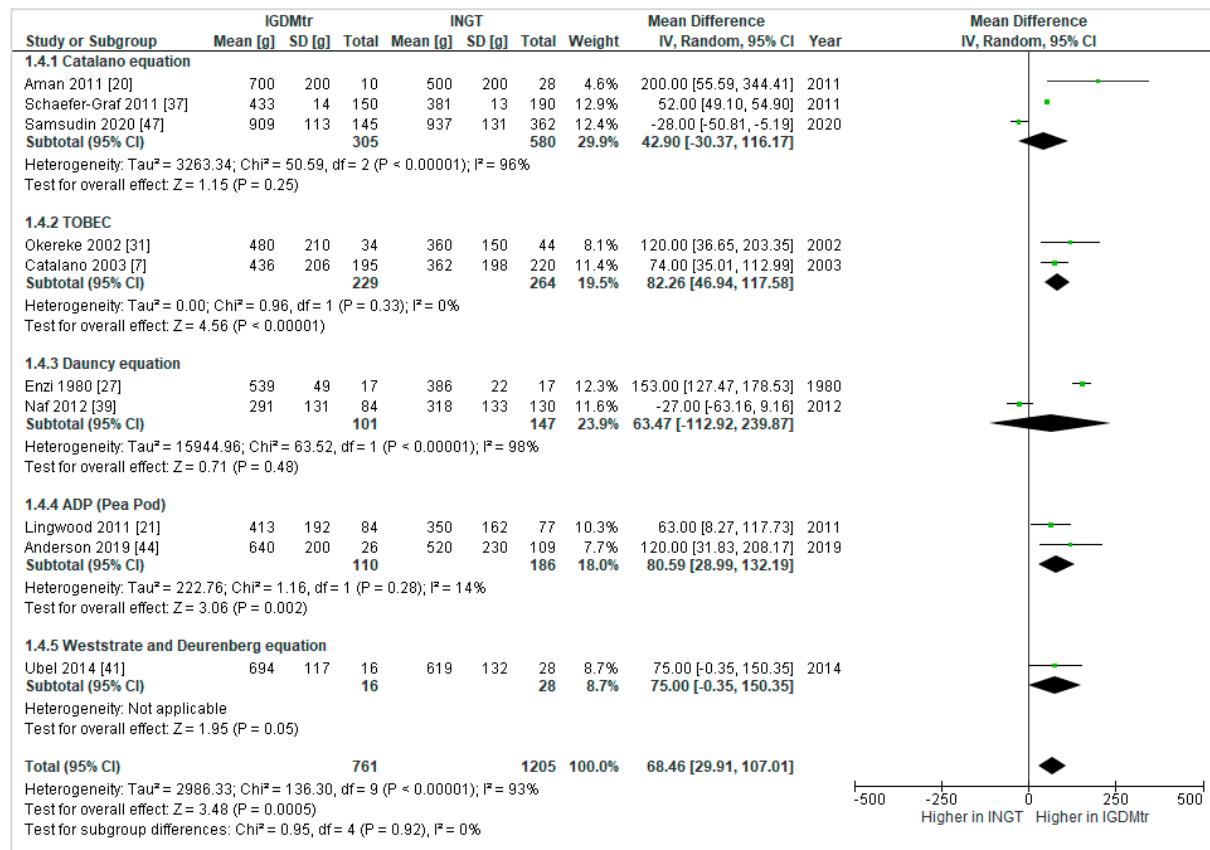


Figure S4. Forest plot comparing fat mass (g) in infants exposed to treated gestational diabetes mellitus (IGDMtr) and infants exposed to normal glucose tolerance (INGT) by subgroup analysis of infant body composition assessment technique.

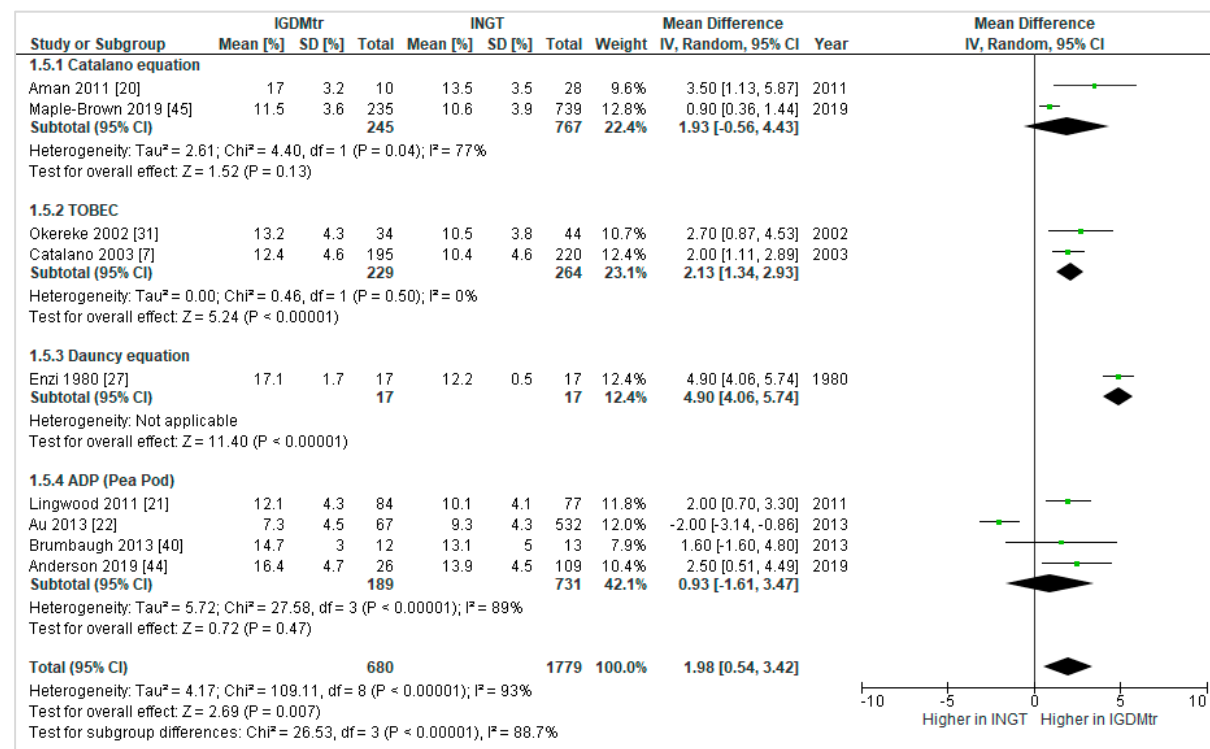
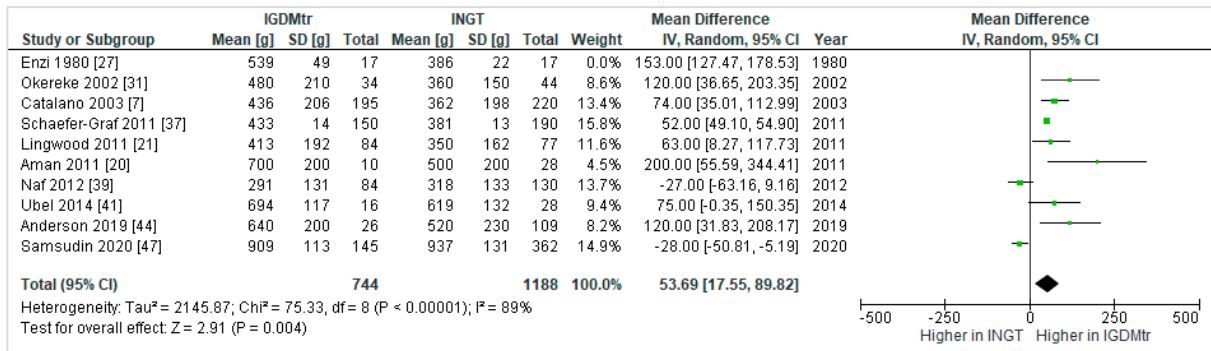
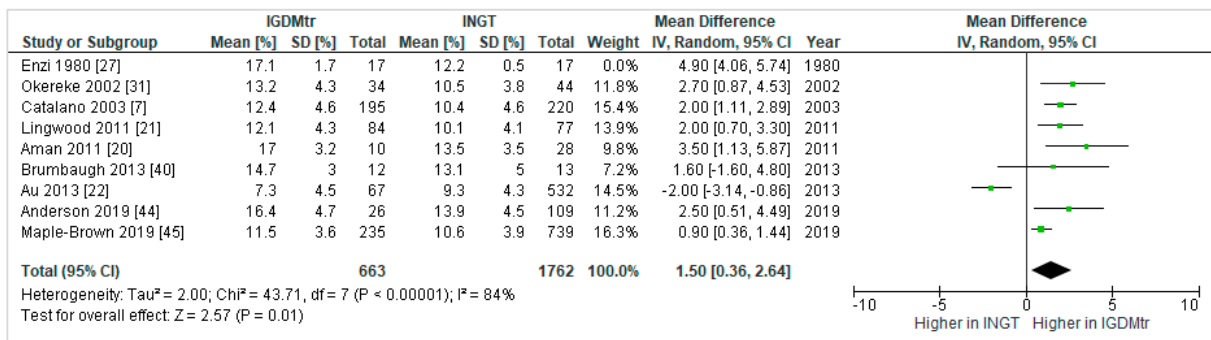


Figure S5. Forest plot comparing percent fat mass (%) in infants exposed to treated gestational diabetes mellitus (IGDM) and infants exposed to normal glucose tolerance (INGT) by subgroup analysis of infant body composition assessment technique.



(a)



(b)

Figure S6. Forest plot comparing fat mass (a) and percent fat mass (b) in infants exposed to treated gestational diabetes mellitus (IGDM) and infants exposed to normal glucose tolerance (INGT) excluding the effect by the study (Enzi 1980) that used White’s classification for diagnosis of gestational diabetes.

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