

Supplementary table 1a. Quality assessment for cohort studies examining the association between rapid weight gain during infancy and later adiposity outcome¹

Reference	Clearly focused question	Subjects recruited from same population	Participation rate	Free of outcome at baseline of the study ^a	Drop-out rate (<20%)	Comparison made between participants and drop-outs	Clearly defined outcome	Assessment of outcome is made blinded to exposure ^b	Assessment of exposure reliable	Validity of outcome measure	Repeated exposure measure ^c	Adequate confounding adjustment ^d	Confidence interval provided	Sample size or power justification	Declare of funding	Quality rating ^e
Karaolis-Danckert 2006	Yes	No	Yes	Yes	No	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Acceptable
Akaboshi 2008	Yes	Yes	N/A	Yes	N/A	N/A	Yes	Yes	Yes	Yes	No	No	Yes	Yes	N/D	Acceptable
Hui 2008	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	High
Demerath 2009	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Acceptable
Goodell 2009	Yes	Yes	N/A	Yes	N/A	N/A	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Acceptable
Heppe 2013	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	High
Fujita 2013	Yes	Yes	N/A	Yes	N/A	N/A	Yes	Yes	Yes	Yes	Yes	No	Yes	No	Yes	Acceptable
Odegaard 2013	Yes	Yes	N/D	Yes	N/D	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No	Yes	Acceptable
Taal 2013	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	High
Webster 2013	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	No	No	No	No	Yes	Low
Weng 2013	Yes	Yes	N/D	Yes	No	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Acceptable
Goncalves 2014	Yes	Yes	N/D	N/A	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Acceptable
Salgin 2015	Yes	Yes	Yes	N/A	No	No	Yes	Yes	Yes	Yes	No	Yes	No	No	Yes	Low
Sutharsan 2015	Yes	Yes	Yes	N/A	No	yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No	Yes	Acceptable
Nanri 2016	Yes	Yes	N/A	Yes	N/A	N/A	Yes	Yes	Yes	Yes	Yes	No	yes	No	yes	Acceptable
Zhou 2016	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	High

¹N/A: not applicable, N/D: not described

^aWhether subjects were free of the outcome at the baseline of the study does not apply in some studies, as anthropometric measures reflect long term existing conditions.

^bAssessment of outcome was blinded to exposure in all studies, as researchers would not know who experienced rapid weight gain.

^cStudies that examined multiple period of rapid weight gain from birth received yes for this item.

^dStudies that considered both child and maternal factors received yes for this item.

^eStudies met majority of items and conclusions unlikely to be changed by further research is rated as High

Studies met most items and conclusions may change in the light of further studies is rated as Acceptable

Studies met did not meet most items, and conclusions likely to change in the light of further studies is rated as Low

Supplementary table 1b. Quality assessment for case-control studies examining the association between rapid weight gain during infancy and later adiposity outcome

Reference	Clearly focused question	Cases/controls are taken from comparable populations	Same exclusion criteria applied	Participation rate of each group	Comparison made between participants and non-participants	Cases are clearly defined and differentiated from the controls	Controls are non-cases	Assessors are blinded to exposure	Assessment of exposure reliable	Adequate consideration for confounding	Confidence interval provided	Sample size justification or power description	Declare of funding	Quality rating
Rathnayake 2013	Yes	Yes	N/D	N/D	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Acceptable

N/D: not described