

Breastfeeding and carotid intima-media thickness in children: a systematic review

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INTRODUCTION Increased carotid intima-media thickness (CIMT) is a surrogate marker of atherosclerosis that may be related to factors originating in early life, such as the feeding practices in the first months of life.

QUESTION Is breastfeeding (BF) associated with a lower ultrasound CIMT in children?

METHODS Systematic review of observational studies

- **Systematic searches:** MEDLINE, EMBASE, and CENTRAL
- **Association:** standardized mean difference (SMD) [95% confidence interval (CI)] in CIMT between higher versus (vs) lower duration of BF
- **Study protocol:** Epure AM et al; BMJ Open 2018;8(6):e019644
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POPULATION 1'777 participants (6 studies)

- Age at CIMT assessment: 9 to 18 years
- Mean CIMT: 0.45 mm

STUDY LOCATION



ASSOCIATION OF BF WITH CIMT (SMD [95% CI])

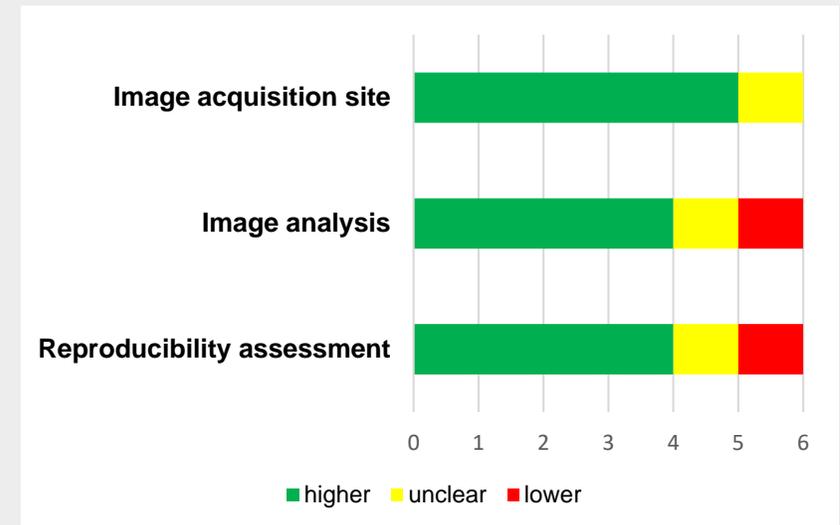
Any BF

- > 0 vs 0 months -0.10 [-0.39 to 0.19][#][1]
- ≥ 1 vs < 1 month -0.16 [-0.55 to 0.23][¶][2]
- ≥ 2 vs < 2 months -0.12 [-0.52 to 0.28]^[3]
- ongoing vs discontinued at 6 months: -0.13 [-0.33 to 0.08][§][4]

Exclusive BF

- > 0 months vs 0 months: 0.10 [-0.16 to 0.36][£][5]
- 3 months vs never or < 2 months: 0.13 [-0.08 to 0.34]^[6]

CIMT reliability



Note: based on estimates from bivariate or partial associations with the following covariates: [#]sex; [¶]sex and gestational age at delivery; [§]sex, age, gestational age, birth length, length-adjusted birth weight, change in weight-for-height Z-score between 0 and 18 months of age, randomization, paternal BMI, maternal education; [£]sex, age, gestational age, birth weight, maternal smoking during pregnancy, parental smoking during early life, maternal pre-pregnancy BMI, maternal age at childbirth, maternal ethnicity, socioeconomic status

CONCLUSION There is no clear association between BF and CIMT in children.

The confidence in results is limited by the low number of studies, with heterogeneous comparisons and different adjustment strategies.

REFERENCES

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