

Preventing the consequences of obesity in pregnancy

An introduction to a systematic review and meta-analysis emphasizing different criteria for study selection

There is a worldwide increase in rates of overweight and obesity. In total, BMI levels of 107.7 million children and 603.7 million adults met criteria for obesity in 2015, accounting for about 4 million deaths globally [1]. Obesity affects not only pregnant women themselves, increasing complications such as gestational diabetes mellitus and hypertensive disorders in pregnancy, but also the health of future generations [2]. There is limited evidence of high-quality studies to demonstrate a benefit of pregnancy interventions on future health of mothers and their offspring. Randomized controlled trials on lifestyle interventions among overweight and obese pregnant women have resulted in various conclusions [3, 4].

Our aim is to investigate and compare different lifestyle interventions for overweight and obese women like physical activity, diet, mixed settings and interventions based on the principles of behavioral therapy and to assess their impact on maternal and fetal health. We will focus on the primary outcomes gestational diabetes mellitus, gestational hypertension, admission to neonatal intensive care unit and neonatal mortality as well as a pre-defined set of secondary outcomes.

Meta-analyses often do not systematically recognize pre-defined quality criteria of included RCTs leading to “p-hacking”. [5] High-quality research is needed to avoid wrong conclusions. Therefore, we will apply further methodological selection criteria such as pre-registration of trials and audit of procedures in addition to the Cochrane risk of bias tool when comparing current randomized controlled trials.

This work serves the purpose of summarizing current literature and can later be used to develop tools helping to transfer medical knowledge to patients to enable informed decision making. Patients themselves must finally do the effort of integrating the theoretical advice into their everyday life.



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Special thanks to my mentors Prof. Birgit Arabin and Prof. Nina Timmesfeld

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