Ernährung und Lebensstil vor und während der Schwangerschaft – Handlungsempfehlungen des bundesweiten Netzwerks Gesund ins Leben

Supplement Tabelle 1
Kohortenstudien, die im Kontext zu IOM Empfehlungen stehen.

Referenz (Autor/Journal/Titel)	Studientyp	Endpunkt/ Outcome	Fallzahl	Deskriptive und quantitative Effektbeschreibung	Conclusio
Beyerlein A, Schiessl B, Lack N et al. *Am J Clin Nutr 2009; 90:1552-8* Optimal gestational weight gain ranges for the avoidance of adverse birth weight outcomes: a novel approach	Observational study	Statistical Analyses of joint predicted risks (JPRs) of SGA or LGA in relation to GWG; Comparison with IOM criteria	N = 177.079 mature singleton deliveries (gestation ≥ 37 l weeks) Maternal and neonatal data from Bavaria (2004-2006)	Estimated JPRs of ≤ 20 % = "optimal" GWG: **Underweight women** (BMI < 18,5): 8 - 25 kg **Normalweight women** (BMI ≥ 18,5-< 25): 2 - 18 kg **Overweight women** (BMI ≥ 25- < 30): -7 – 12 **Obese women** (BMI ≥ 30: -15 – 2 kg	The "optimal" GWG ranges were considerably wider and, particularly for obese mothers, lower than corresponding IOM categories
Beyerlein A, Lack N, von Kries R. *Obstet Gynecol 2010; 116(5): 1111-8* Within-population average ranges compared with Institute of Medicine recommendations	Observational study	Calculation of the prevalence of following outcome in GWG-Ranges according to IOM an in interquartile ranges IQR (25th to 75th percentile) and interdecile ranges IDR (10th to 90th percentile): • preeclampsia • gestational diabetes • nonelective cesarean delivery • SGA • LGA	N = 678,560 singleton deliveries in Bavarian obstetric units (2000 to 2007)	**Underweight women** Preterm delivery GWG-IOM 5,22 (4,84-5,60) GWG-IQR 7,14* (6,78-7,52) GWG-IDR 7,57* (7,24-7,90) SGA GWG-IOM 12.09 (11.54–12.65) GWG-IQR 14.26* (13.70–14.82)	Perinatal outcomes are likely to be improved if underweight and normal-weight pregnant women adapt their gestational

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for gestational weight gain		• preterm delivery (before • 37+0 completed weeks of gestation, irrespective • of underlying cause) stillbirths • early neonatal • deaths (within the first 7 days of life). GWG Ranges Underweight women IOM 12,5 – 18,0 kg IQR 11-16 kg IDR 8-20 kg Normalweight women IOM 11,5-16,0 kg IQR 11-17 kg IDR 7-20 kg Overweight women IOM 7,0 – 11,5 kg IQR 10- 17 kg IDR 7-20 kg Obese women IOM 5,0-9,0 kg IQR 7-15 kg IDR 3-19 kg		GWG-IDR 14.61* (14.18–15.04) **Overweight women:** Preeclampsia GWG-IOM 1.66 (1.53–1.78) GWG-IQR 2.30* (2.20–2.41) GWG-IDR 2.38* (2.29–2.47) GDM GWG-IOM 2,30 (2,15-2,45) GWG-IQR 1,69* (1,60-1,78) GWG-IDR 1,82* (1,74-1,90) Nonelective cesarean delivery GWG-IOM 11.55 (11.22–11.87) GWG-IQR 13.31 (13.07–13.55)* GWG-IDR 13.49 (13.29–13.69)* **Obese women** Preeclampsia GWG-IOM 4.94 (4.64–5.24) GWG-IQR 6.23 (5.99–6.47)* GWG-IDR 6.30 (6.10–6.50)*	weight gain to the Institute of Medicine criteria. Overweight and obese mothers seem to increase the risks for adverse perinatal outcomes related to the offspring such as SGA, gestational age, preterm delivery and perinatal mortality if they restrict their gestational weight gain to the ranges recommended by IOM

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				Preterm delivery GWG-IOM 8.58 (8.19–8.96) GWG-IQR 7.10 (6.84–7.36)* GWG IDR 7.42 (7.21–7.64)* SGA GWG-IOM 7.26 (6.90–7.62) GWG-IQR 6.33 (6.08–6.57)* GWG-IDR 6.41 (6.20–6.61)* *P <0,001	
Rogozinska E, Marlin N, Jackson L, Rayanagoudar G, *et al.* *Health Technol Assess* 2017;21(41) Effects of antenatal diet and physical activity on maternal and fetal outcomes: individual patient data meta-analysis and health	Individual patient data (IPD) meta-analysis	analysis to assess if the effects of diet- and physical activity-based interventions on GWG, composite maternal and composite fetal/neonatal outcomes vary in subgroups of women based on BMI at booking, age, parity, ethnicity and underlying medical conditions Adverse maternal effect: gestational diabetes mellitus, pre-eclampsia or pregnancy-induced hypertension, preterm delivery (< 37 weeks), Caesarean section	GWG: 9320 participants Maternal composite: 8852 Fetal and neonatal composite: 7981	**Composite adverse maternal effects / *fetal complications*** Normalweight women Below IOM: 0,99 (summary OR; 0,67-1,46) *0.87 (0.40 to 1.90)* Exceeds IOM: 1,05 (0,61-1,80) *1.26 (0.60 to 2.65)* Overweight women Below IOM: 1,28 (0,79-2,08) *1.07 (0.51 to 2.22)* Exceeds IOM: 0,78 (0,49-1,26) *1.09 (0.68 to 1.74)*	The odds of adverse composite outcome were not significant when normal weight, overweight and obese women gained above and below the recommended targets.

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economic evaluation. [1]		Fetal outcome: intrauterine death, small for gestational age fetus, large for gestational age fetus, admission to the NICU		Obese women Below IOM:1,38 (0,95-2,01) *1.57 (1.05 to 2.32)* Exceeds IOM: 1,15 (0,85 – 1,56) *1.36 (0.89 to 2.06)* [2]	

[1] https://www.journalslibrary.nihr.ac.uk/hta/hta21410#/abstract
[2] https://www.journalslibrary.nihr.ac.uk/hta/hta21410#/s6