Supplementary Table 1. Dietary patterns and inflammatory indices associated with pregnancy outcomes in humans

Study design and population	Dietary index	Markers	Pregnancy outcomes	Reference
Prospective cohort of pregnant women (n= 105)	E-DII	IFNγ, TNFα, IL-1β, IL-6, IL-12p70, IL-4, IL-17A	Proinflammatory maternal diets were associated with higher rates of PTB in female offspring and higher rates of caesarean delivery in obese women.	**1**
Longitudinal pregnancy cohort (n=559) 14-18 weeks of gestation	E-DII	CRP	Anti-inflammatory diets reduce the risk of excessive gestational weight gain. A higher CRP and a proinflammatory diet were associated with increased odds of PTB, and lower odds of LGA.	**2**
Randomized controlled trial of pregnant woman 19–23 weeks of gestation (n= 1028)	DII and MDAS	Maternal and newborn anthropometric parameters	Higher DII scores were associated with a higher pBMI and a lower newborn birth weight.	**3**
Prospective cohort. Pregnant women at 24 -28 weeks of gestation (n=2639)	DII	CRP	A significant and positive association between DII scores and GDM risk. This association was stronger in pregnant women with high pBMI. A pro-inflammatory maternal diet promotes systemic inflammation.	**4**
Hospital-based case–control with PE vs. control woman (n=932)	E-DII	TGF-β, IFN-γ and IL-4	Proinflammatory diets were associated with increased risk of PE and elevated IL-4, IL-2, and TGF-β levels.	**5**
Systematic review and meta-analysis of 9 observational studies (7 cohort, 2 case–control); pregnant women from 5 countries (n= 11,423).	DII	Clinical outcomes. Meta-analysis pooled ORs for GDM and PE	A 1-unit increase in the DII score, representing pro-inflammatory diet, was associated with 13 % higher risk of GDM. A proinflammatory diet was associated with a higher risk of GDM and PE.	**6**
Secondary analysis of the Nulliparous Outcomes Study (n= 7,994).	DII	Preconception dietary habits. Adverse pregnancy outcomes.	A pro-inflammatory preconception diet was associated with an increased risk of adverse pregnancy outcomes (*e.g*. stillbirth, PE, GDM, gestational hypertension, SGA). Folic acid was associated with a reduced risk of adverse pregnancy outcomes.	**7**
Cohort study in Japan (n= 68,479 Mother and Child pairs)	DII	Offspring neurodevelopment (*e.g.* communication, gross motor, fine motor, problem-solving, social skills).	An anti-inflammatory diet during the preconception period reduced the risk of neurodevelopmental disorders in a sexually dimorphic manner. An anti-inflammatory diet reduced delays in communication development in male offspring, while a pro-inflammatory diet increased the risks of delays in motor skills in female offspring.	**8**
Systematic review and meta-analysis of 25 observational studies (16 narrative studies and 9 meta-analysis)	DII	Anthropometric parameters at birth and in later childhood, GDM, gestational age at delivery	A high maternal DII is associated with an increased risk of small for gestational age offspring and low birth weight, as well as an increased risk of childhood obesity.	**9**
Meta-analysis of European studies including 2 preconceptionally cohorts and 7 antenatal cohorts (n=24,861 mother–child pairs)	DASH and E-DII	Anthropometric outcomes at birth	A maternal poor-quality diet and with high E-DII was associated with smaller offspring size at birth and a higher risk of being born with SGA, with a higher propensity in males.	**10**
Meta-analysis of 8 studies	DII	Obstetric complications (*e.g.* maternal blood pressure, PTB, PE)	A proinflammatory diet was associated with a higher risk of developing hypertensive disorders of pregnancy and premature birth.	**11**
Prospective, observational, longitudinal cohort study (n=	Prenatal DII	CRP	A proinflammatory diet is associated with high maternal plasma CRP levels and lower birth weight for gestational age in infants born to obese mothers.	**12**

2128 mother and child pairs)

CRP: C-Reactive Protein, DASH: Dietary Approaches to Stop Hypertension; DII: Dietary Inflammatory Index, E-DII: Energy-Adjusted Dietary Inflammatory Index, GDM: Gestational Diabetes Mellitus; IL: Interleukin; LGA: Large for gestation age, MDAS: Mediterranean Diet Adherence score; SGA: Small for gestational age, PE: Preeclampsia; pBMI: Prepregnancy Body Mass Index, PTB: Preterm birth; OR: Odds ratios.

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