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Editorial

# Pregnancy and Prebiotics

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Prebiotics play a vital role in pregnant women. Prebiotics are defined in many ways with constant revisions; widely used definition for prebiotics is adapted from Bird., et al. - undigested dietary carbohydrate which is fermented by the gut microflora and stimulate the growth gut microflora to protect the gut health [1]. Pregnancy is a period where a lot of changes occur in a female body from conception to birth; a healthy pregnancy includes a healthy diet. One of the most common challenge a pregnant woman comes across is the "morning sickness". Although the morning sickness is related to sanitation practices, life styles, and living conditions Helicobacter pylori is known to cause the pathogenic condition during pregnancy [2]. A remedy for such condition could be to maintain a "healthy gut". Gut health is dictated by the intake of diets; a diet rich in prebiotics promote a healthy microflora in the gut. A gut housed with millions of healthy microflora can help prevent the presence of pathogenic bacteria. Thus, consumption of prebiotic-rich diets during pregnancy could vastly reduce the severity of morning sickness.

Pregnancy-related disorders include, anemic condition and maternal hyperglycemia (gestational diabetes). Iron-deficiency anemia (IDA) is a common micronutrient deficiency during pregnancy [3]. Although an iron-rich food is consumed, the bioavailability of iron can decrease due to anti-nutrient components (ex: phytic acids). Such condition can be combatted by the intake of, both, iron and prebiotic rich diet. Prebiotics, although do not get digested in the small intestine- will be fermented by the gut microflora to produce short chain fatty acids (SCFAs) [4]. The acids decrease the pH of the blood and enhance the uptake of micronutrient such as iron; prebiotics increase the bioavailability of iron which in turn can reduce the risk of IDA during pregnancy. Not only anemic conditions but also neural tube effects on fetal- caused by the deficiency of folate, can be reduced by a proper intake of folate rich food followed by an intake of prebiotic. In addition, the malnutrition absorption during pregnancy can be avoided by promoting a healthy gut microflora. Furthermore, maternal hyperglycemic conditions are commonly seen in recent years. Maternal hyperglycemia or gestational diabetes is a result of blockage of insulin [3]; lack of insulin will gradually develop blood glucose levels. Prebiotics have a lower glycemic index, where the glucose levels in the blood rise slowly after the ingestion- due to the indigestibility in the small intestine. Such low glycemic index foods could prevent the gestational diabetes. Overall, consumption of prebiotics during pregnancy is pivotal for a healthy labor.

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