combination with a non-absorbent carbohydrate, such as an insoluble dietary fiber, and/or an indigestible carbohydrate, such as fructooligosaccharides, to a pregnant woman to improve the health of the woman, and, in other aspects, reduce long term adverse health effects, such as obesity, glucose intolerance, and related co-morbidities associated to metabolic syndrome (cardiovascular disease and hypertension).

[0008] Thus, in embodiments, the present disclosure is directed to a method of reducing and/or preventing excessive fat accumulation in a pregnant woman during gestation. The method comprises administering to the pregnant woman during and/or before the gestational period a nutritional composition comprising a carbohydrate system. The carbohydrate system may comprise a slow rate of digestion simple carbohydrate, a complex carbohydrate, a nonabsorbent carbohydrate, and an indigestible oligosaccharide. In one aspect, the carbohydrate system may be administered to a woman prior to pregnancy. In one aspect, the carbohydrate system is administered to a woman during pregnancy.

[0008a] In one aspect, there is provided use of a nutritional composition comprising a carbohydrate system in the manufacture of a medicament for preventing fat accumulation in a woman during gestation, the carbohydrate system comprising from 40% to 80% by weight of a carbohydrate selected from the group consisting of isomaltulose, sucromalt, and combinations thereof, from 1% to 15% by weight of a complex carbohydrate, from 5% to 25% by weight of a nonabsorbent carbohydrate, and from 1% to 20% by weight of an indigestible oligosaccharide

[0009] In embodiments, the present disclosure is directed to a nutritional composition comprising a carbohydrate system. The carbohydrate system comprises isomaltulose, maltodextrin, fructooligosaccharides, and an insoluble dietary fiber.

[0010] It has now surprisingly been discovered that by administration of a nutritional composition including a carbohydrate system that includes a slow rate of digestion simple carbohydrate, a complex carbohydrate, a nonabsorbent carbohydrate, and an indigestible oligosaccharide to a woman during gestation, excessive fat accumulation can be prevented or reduced.

BRIEF DESCRIPTION OF THE FIGURES

[0011] Figure 1 is a schematic representation of the experimental study of the Examples.

[0012] Figures 2A and 2B show maternal body weight and food intake curves during the gestational period for the experimental study of the Examples. Values are expressed as mean ± SEM.