especially human infants and should not produce or cause excess gas, abdominal distension, bloating or diarrhea.

~~DISCLOSURE OF THE INVENTION~~ SUMMARY

[0015] Briefly, the present disclosure is directed, in an embodiment, to an infant feeding regimen which includes a plurality of different nutritional compositions, each comprising a lipid or fat, a protein source, and a prebiotic composition, as well as other nutrients present at certain specific levels, especially vitamin D. In certain preferred embodiments, the compositions include a source of long chain polyunsaturated fatty acids which include docosahexanoic acid (DHA). Also, in certain embodiments, the prebiotic comprises at least 20% of an oligosaccharide which comprises galacto-oligosaccharide, such as a combination of galacto-oligosaccharide and polydextrose.

[0016] In certain embodiments, the feeding regimen of the present disclosure includes:

A. A first nutritional composition which comprises:

i. up to about 7 grams (g)/100 kilocalories (kcal) of a fat or lipid, more preferably about 3 to about 7 g/100 kcal of a fat or lipid;

ii. up to about 5 g/100 kcal of a protein source, more preferably about 1 to about 5 g/100 kcal of a protein source, wherein the protein source comprises from about 72% to about 90% whey and from about 10% to about 28% casein;

iii. about 1.0 to about 10.0 g/liter (L) of a prebiotic composition; and

iv. at least about 72 International Units (IU)/100 kcal of vitamin D, more preferably from about 74 to about 90 IU of vitamin D, and

B. A second nutritional composition which comprises:

i. up to about 7 g/100 kcal of a fat or lipid, more preferably about 3 to about 7 g/100 kcal of a fat or lipid;

ii. up to about 5 g/100 kcal of a protein source, more preferably about 1 to about 5 g/100 kcal of a protein source, wherein the protein source comprises from about 50% to about 70% whey and from about 30% to about 50% casein;

iii. about 1.0 to about 10.0 g/L of a prebiotic composition; and

iv. no greater than 70 IU/100 kcal of vitamin D, more preferably from about 52 to about 67 IU of vitamin D.

[0017] In certain embodiments, the prebiotic composition of the first and second nutritional composition comprises at least 20% of an oligosaccharide which comprises galacto-oligosaccharide, more preferably about 2.0 g/L to about 8.0 g/L of a prebiotic composition having at least 20% of an oligosaccharide which comprises galacto-oligosaccharide; moreover, each of the first and second nutritional compositions can, in some embodiments, also comprise about 5 to about 100 mg/100 kcal of a source of long chain polyunsaturated fatty acids which include DHA, more preferably about 10 to about 50 mg/100 kcal of a source of long chain polyunsaturated fatty acids which include DHA.

[0018] In certain embodiments of the present disclosure, the first nutritional composition also includes at least about 3.95 milligrams (mg)/100 kcal of cholesterol, more preferably from about 4.00 to about 4.90 mg/100 kcal of cholesterol, and the second nutritional composition also includes no greater than about 3.90 mg/100 kcal of cholesterol, more preferably form about 2.60 to about 3.85 mg/100 kcal of cholesterol.

[0019] In the preferred embodiments, the first nutritional composition is fed to a newborn, whereas the second nutritional composition is fed to a later stage infant.

[0019a] According to one aspect, there is provided a feeding regimen for an infant, comprising

(a) feeding to a newborn infant a first synthetic composition which comprises:

i. a fat or lipid;

ii. a protein source, wherein the protein source comprises from 72% to 90% whey and from 10% to 28% casein;

iii. a prebiotic composition;

iv. at least 72 IU/100 kcal of vitamin D, and

(b) feeding to a later stage infant a second synthetic composition which comprises:

i. a fat or lipid;

ii. a protein source, wherein the protein source comprises from 50% to 70% whey and from 30% to 50% casein;

iii. a prebiotic composition;

iv. no greater than 70 IU/100 kcal of vitamin D;

wherein the prebiotic composition of each of the first and second synthetic compositions comprises at least 20% of an oligosaccharide which comprises galacto-oligosaccharide and polydextrose.

[0019b] According to another aspect, there is provided a method for providing nutrition to an infant, comprising

(a) feeding to a newborn infant a first synthetic composition which comprises:

i. a fat or lipid;

ii. a protein source, wherein the protein source comprises from 72% to 90% whey and from 10% to 28% casein;

iii. a prebiotic composition;

iv. at least 72 IU/100 kcal of vitamin D, and

(b) feeding to a later stage infant a second synthetic composition which comprises:

i. a fat or lipid;

ii. a protein source, wherein the protein source comprises from 50% to 70% whey and from 30% to 50% casein;

iii. a prebiotic composition;

iv. no greater than 70 IU/100 kcal of vitamin D;

wherein the prebiotic composition of each of the first and second compositions comprises at least 20% of an oligosaccharide which comprises galacto-oligosaccharide and polydextrose.

DISCLOSURE OF THE INVENTION

[0020] The present disclosure provides a feeding regimen which changes with the developmental stage of an infant, from newborn to later stage infant (as defined hereinabove). The nutritional products that described are easily digested, provide physiochemical benefits, and/or provide physiological benefits, and are tailored to the level of development of the infant being fed. In an embodiment of the present disclosure, a plurality of nutritional compositions is provided, including one for a newborn infant and one for a later stage infant. In certain embodiments, each nutritional composition comprises a lipid or fat, a protein source, Vitamin D, a prebiotic composition, especially one having at least 20% of an oligosaccharide which comprises a mixture of D-glucose and D-galactose (commonly referred to as galacto-oligosaccharide or trans-galacto-oligosaccharide, or GOS), and, optionally a source of long chain polyunsaturated fatty acids which include docosahexanoic acid