[0008] Accordingly, in one embodiment, a supplement of the present disclosure comprises, in terms of the amount of ingredient per kilogram of body weight of a pregnant or lactating woman per day of: from about 0.2 mg to about 100 mg of RRR-alpha-tocopherol; no more than about 10 mg of non-RRR-alpha-tocopherol; from about 3 mg to about 50 mg of DHA; from about 40 μg to about 500 μg of trans-lutein; and from about 0.9 mg to about 100 mg of lecithin. In addition, the supplement comprises at least one nuclear receptor activating ligand other than RRR-alpha-tocopherol, DHA, or trans-lutein.

[0009] In some embodiments, the prenatal and lactation supplement is in a unit dose form, such as a capsule or softgel.

[0010] In some embodiments, the present disclosure is directed to a method for enhancing CNS development in a fetus or a breastfed newborn, the method comprising the step of orally administering to a pregnant or lactating woman a daily dose of a supplement comprising, in terms of the amount of ingredient per kilogram of body weight per day of: from about 0.2 mg to about 100 mg of RRR-alpha-tocopherol; no more than about 10 mg of non-RRR-alpha-tocopherol; from about 3 mg to about 50 mg of DHA; from about 40 μg to about 500 μg of trans-lutein; from about 0.9 mg to about 100 mg of lecithin; and at least one of nuclear receptor activating ligand other than RRR-alpha-tocopherol, DHA, or trans-lutein.

[0009a] In one embodiment, the present disclosure comprises the use of a supplement comprising in terms of the amount of ingredient per kilogram of body weight of the woman per day of: from about 0.3 mg to about 100 mg of RRR-alpha-tocopherol; no more than about 10 mg of non-RRR-alpha-tocopherol; from about 3 mg to about 50 mg of DHA; from about 40 μg to about 500 μg of trans-lutein; from about 0.9 mg to about 100 mg of lecithin; and at least one nuclear receptor activating ligand other than RRR-alpha-tocopherol, DHA, and trans-lutein, in the manufacture of a medicament for enhancing central nervous system development in a fetus or breastfed newborn.

[0011] Accordingly, the prenatal and lactation supplements and methods of the present disclosure may offer a therapeutic or intervention option for a pregnant woman or a lactating

woman that may contribute to the enhanced development of the CNS in the fetus or breastfed newborn.

DETAILED DESCRIPTION

[0012] "Prenatal and lactation supplement" as used herein refers to a unit dose of the supplements presently described. The supplement may be in any suitable form including, but not limited to, capsules, softgels, and the like. The prenatal and lactation supplement may further comprise vitamins, minerals, and other ingredients that are beneficial to a pregnant or lactating woman.

7. The supplement according to any one of claims 1-3, wherein the docosahexaenoic acid is in the form of a triglyceride.

8. The supplement according to any one of claims 1-3, wherein the supplement comprises no more than about 5 mg of non-RRR-alpha-tocopherol.

9. The supplement according to claim 8, wherein the supplement comprises no more than about 0.1 mg of non-RRR-alpha-tocopherol.

10. The supplement according to claim 8, wherein the supplement is substantially free of non-RRR-alpha-tocopherol.

11. ~~A method for enhancing central nervous system development in a fetus or breastfed newborn, the method comprising the step of orally administering to a pregnant or lactating woman a daily dose of~~ Use of a supplement comprising in terms of the amount of ingredient per kilogram of body weight of the woman per day of: from about 0.3 mg to about 100 mg of RRR-alpha-tocopherol; no more than about 10 mg of non-RRR-alpha-tocopherol; from about 3 mg to about 50 mg of DHA; from about 40 μg to about 500 μg of trans-lutein; from about 0.9 mg to about 100 mg of lecithin; and at least one nuclear receptor activating ligand other than RRR-alpha-tocopherol, DHA, and trans-lutein, in the manufacture of a medicament for enhancing central nervous system development in a fetus or breastfed newborn.

12. The ~~method~~ use according to claim 11, wherein the nuclear receptor activating ligand is selected from the group of: vitamin D; vitamin D metabolites; beta carotene; beta-cryptoxanthin; zeaxanthin; vitamin A; vitamin A metabolites; phospholipids; nucleotides; and combinations thereof.

13. The ~~method~~ use according to claim 12, wherein the vitamin D metabolites are selected from the group of: calciferol; cacidiol; calcitriol; and combinations thereof.

14. The ~~method~~ use according to any one of claims 11-13 wherein the composition is in the form of a capsule or softgel.

15. The ~~supplement~~ use according to any one of claims 11-13 wherein the docosahexaenoic acid and the RRR-alpha-tocopherol are present in the supplement at a weight ratio of from about 5:1 to about 15:1.

16. The ~~method~~ use according to any one of claims 11-13, wherein the docosahexaenoic acid and the lecithin are present in the supplement at a weight ratio of from about 1:1 to about 5:1.

17. The ~~method~~ use according to any one of claims 11-13, wherein the docosahexaenoic acid is in the form of a triglyceride.

18. The ~~method~~ use according to any one of claims 11-13, wherein the supplement comprises no more than about 5 mg of non-RRR-alpha-tocopherol.

19. The ~~method~~ use according to claim 18, wherein the supplement comprises no more than about 0.1 mg of non-RRR-alpha-tocopherol.

20. The ~~method~~ use according to claim 19, wherein the supplement is substantially free of non-RRR-alpha-tocopherol.