WHAT IS CLAIMED IS:

1. A method for improving cognition in an older adult, the method comprising administering to the older adult a composition comprising an amount of beta-hydroxy-beta methylbutyrate effective to improve cognition in the older adult.

2. The method of claim 1 wherein the older adult is administered beta-hydroxy-beta-methylbutyrate daily.

3. The method of claim 2 wherein the older adult is administered from about 0.1 g/day to about 10 g/day of beta-hydroxy-beta-methylbutyrate.

4. The method of claim 2 wherein the older adult is administered from about 0.1 g/day to about 5.0 g/day of beta-hydroxy-beta-methylbutyrate.

5. The method of claim 1 wherein the composition is in a form selected from the group consisting of a nutritional powder, a nutritional emulsion, and a clear liquid.

6. The method of claim 1 wherein the older adult is suffering from cognitive decline.

7. The method of claim 1 wherein the older adult is suffering from neural dysfunction.

8. The method of claim 1 wherein the beta-hydroxy-beta methylbutyrate is administered for a period of at least one year.

9. A method for treating a cognitive disease associated with a neurodegenerative disease in an older adult, the method comprising administering to the older adult a composition comprising an amount of beta-hydroxy-beta methylbutyrate effective to treat the cognitive disease in the older adult.

10. The method of claim 9 wherein the neurodegenerative disease is selected from the group consisting of Alzheimer's disease, Huntington's disease, and Parkinson's disease, dementia, amyotrophic lateral sclerosis, stroke, and schizophrenia.

11. The method of claim 9 wherein the older adult is administered beta-hydroxy-beta-methylbutyrate daily.

12. The method of claim 11 wherein the older adult is administered from about 0.1 g/day to about 10 g/day of beta-hydroxy-beta-methylbutyrate.

13. The method of claim 11 wherein the older adult is administered from about 0.1 g/day to about 5.0 g/day of beta-hydroxy-beta-methylbutyrate.

14. The method of claim 9 wherein the composition is in a form selected from the group consisting of a nutritional powder, a nutritional emulsion, and a clear liquid.

15. A method for improving cognitive function in a toddler, child, or adolescent, the method comprising administering to the toddler, child or adolescent a composition comprising an amount of beta-hydroxy-beta-methylbutyrate effective to improve the cognitive function of the toddler, child, or adolescent.

WHAT IS CLAIMED IS:

1. Beta-hydroxy-beta methylbutyrate for use in improving cognition in an older adult.

2. Beta-hydroxy-beta methylbutyrate for use in the treatment of a cognitive disease associated with a neurodegenerative disease in an older adult.

3. Beta-hydroxy-beta methylbutyrate for use in improving cognitive function in a toddler, child, or adolescent.

4. Beta-hydroxy-beta-methylbutyrate according to any of the preceding claims, wherein the beta-hydroxy-beta-methylbutyrate is administered daily.

5. Beta-hydroxy-beta-methylbutyrate according to claim 4, which is administered in a dosage of from 0.1 g/day to 10 g/day, or which is administered in a dosage of from 0.1 g/day to 5 g/day.

6. Beta-hydroxy-beta-methylbutyrate according to any of the preceding claims, which is administered for a period of at least one year.

7. Beta-hydroxy-beta-methylbutyrate according to any of the preceding claims, which is in a form selected from the group consisting of a nutritional powder, a nutritional emulsion, and a clear liquid.

8. Beta-hydroxy-beta-methylbutyrate according to any of the claims 1 and 4 to 7, wherein the older adult is suffering from cognitive decline, or wherein the older adult is suffering from neural dysfunction.

9. Beta-hydroxy-beta-methylbutyrate of claim 2 or any of claims 4 to 8 wherein the neurodegenerative disease is selected from the group consisting of Alzheimer's disease, Huntington's disease, and Parkinson's disease, dementia, amyotrophic lateral sclerosis, stroke, and schizophrenia.