Chapter III

PROBLEM AND HYPOTHESES

During the last three decades the concept of a well balanced diet has undergone radical redefinition with emphasis being shifted to energy balancing rather than only balancing of the dietary components. However, there are various ways to structure a diet based on individual needs and desired results. The latest nutritional breakthroughs and research on brain biochemistry suggest new diet strategies designed to keep one alert, active and high on energy during the day and promote restful sleep at night. Whatever may be the diet strategy, glucose is the end product which is utilized by the brain and the other parts of the body.

From the review of literature in the preceding chapter, it is apparent that glucose does play an important role in memory. Although the effect of glucose has been widely studied in animals but experimental verification of its mnemonic effect at the human level is rather limited.
In the present study, an attempt has been made to study the effect of glucose and dietary proteins on memory at the human level and to determine whether age related and permanent abnormalities in glucose metabolism result in memory deficits. Further, an attempt has been made to study the role of dietary proteins in memory.

Problem

To study the mnemonic effect of glucose and dietary proteins in human subjects.

The following hypotheses were formulated:

1. There would be an inverted "U" shaped relationship between amount of glucose ingested (after fasting of at least 7 - 5 hours) and memory.

2. The facilitative effect of glucose would be significantly more in elderly than the young subjects.

3. Glucose tolerance would result in better memory.

4. There would be no significant correlation between total caloric intake and protein levels/memory.
5. There would be a positive correlation between amount of protein and memory.

We may now pass on to the next chapter dealing with the Design and Methodology of the present investigation.