Abstract

Introduction: Over a period of time researchers have become more interested in finding out the potential of various foods to maintain the general health and to treat diseases. Almonds are a very good source of many nutrients which may help to sharpen the memory and to reduce cardiovascular risk factors. Objective: The present study was conducted to evaluate the nootropic effects of almonds. Effect of oral intake of almond was also monitored on food intake and plasma cholesterol levels. Methods: Rats were given almond paste orally with the help of feeding tube for 28 days. Memory function in rats was assessed by Elevated Plus Maze (EPM) and Radial Arm Maze (RAM). Brain tryptophan, 5-HT and 5-HIAA were estimated at the end of the treatment by HPLC-EC method. Results: A significant improvement in learning and memory of almond treated rats compared to controls was observed. Almond treated rats also exhibited a significant decrease in food intake and plasma cholesterol levels while the change in growth rate (in terms of percentage) remained comparable between the two groups. Analysis of brain tryptophan (TRP) monoamines exhibited enhanced TRP levels and serotonergic turnover in rat brain following oral intake of almonds. Conclusion: The findings show that almonds possess significant hypophagic and nootropic effects. Results are discussed in context of enhanced 5-HT metabolism following almond administration.

Keywords

5-HT turnover, Almond, Cholesterol, Hypophagic action, Nootropic substance.