

## عنوان مقاله:

The Effect of Butter Oil on Avoidance Memory in Normal and Diabetic Rats

## محل انتشار:

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## نویسندگان:

Khadije Zare - *Department of Basic Sciences, Faculty of Veterinary Medicine, Shahid Chamran University of Ahvaz, Ahvaz, Iran*

Seyed Reza Fatemi Tabatabaei - *Department of Basic Sciences, Faculty of Veterinary Medicine, Shahid Chamran University of Ahvaz, Ahvaz, Iran*

Ali Shahriari - *Department of Basic Sciences, Faculty of Veterinary Medicine, Shahid Chamran University of Ahvaz, Ahvaz, Iran*

Ramezan Ali Jafari - *Department of Clinical Sciences, Faculty of Veterinary Medicine, Shahid Chamran University of Ahvaz, Ahvaz, Iran*

## خلاصه مقاله:

**Objective(s)** Since diabetes mellitus is accompanied by cognitive impairment in diabetic patient and animal models and since lipids play important roles in neuronal membrane composition, structure and function; we intended to evaluate the effect of dietary butter oil on passive avoidance memory of streptozotocin (STZ)-induced diabetic rats in this study. **Materials and Methods** Thirty six adult male rats were randomly allocated to four equal groups: normal (N) and diabetic control (D) groups [R1] with free access to regular rat diet; but the diet of normal butter oil (NB) and diabetic butter oil (DB) groups was supplemented with ۱۰% butter oil. Diabetes in D and DB groups was induced by intravenous (i.v.) injection of ۵۰ mg/kg.bw of STZ. Passive avoidance memory and cholesterol of brain and hippocampal tissues has been measured six weeks after diabetes confirmation. **Results** Diabetes, especially in diabetic butter oil group decreased the abilities of learning and memory. The level of cholesterol in hippocampus was higher in NB ( $P < 0.05$ ) and DB ( $P < 0.01$ ) groups. **Conclusion** We suggest consumption of butter oil may worsen cognitive impairment of diabetic animal. This may be related to the higher elevation of cholesterol in the hippocampus of diabetic animals.

## کلمات کلیدی:

Avoidance memory, Butter oil, Cholesterol, Diabetes, Hippocampus

## لینک ثابت مقاله در پایگاه سیویلیکا:

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