

张春美,徐波,杨毅飞.游泳训练对大鼠空间学习记忆能力及海马、纹状体内c-fos、c-jun mRNA表达的影响[J].中国康复医学杂志,2008,(8):724-728

游泳训练对大鼠空间学习记忆能力及海马、纹状体内c-fos、c-jun mRNA表达的影响 [点此下载全文](#)

[张春美](#) [徐波](#) [杨毅飞](#)

青岛大学体育教学部,266071

基金项目:

DOI:

摘要点击次数: 149

全文下载次数: 150

摘要:

目的:探讨8周游泳运动训练对大鼠空间学习记忆能力的影响及其与脑内学习记忆相关基因c-fos、c-jun mRNA的关系,同时探讨其中的机制。方法:以大鼠为实验对象,采用Morris水迷宫法,研究8周游泳训练对大鼠空间学习记忆能力的作用;采用RT-PCR的方法研究8周游泳训练对大鼠海马、纹状体内学习记忆相关基因c-fos、c-jun mRNA的影响。结果:①Morris水迷宫的测试中,综合定位航行实验和空间搜索实验数据可以表明,8周的游泳训练之后,运动组大鼠的迷宫总成绩显著好于安静组;②与安静组相比,8周游泳训练可使大鼠海马c-fos、c-jun mRNA显著增加(分别上调17%、28%),但纹状体内c-fos、c-jun mRNA的增加并不显著。结论:适宜的运动训练可以促进海马内c-fos、c-jun mRNA的表达,从而促进学习记忆,这从一个侧面揭示了运动促进学习记忆的分子学机制。

关键词: [运动训练](#) [学习记忆](#) [c-fos mRNA](#) [c-jun mRNA](#)

Effects of swimming training on spatial learning-memory of rats and on expressions of c-fos and c-jun mRNA in rat's hippocampi and striatum [Download Fulltext](#)

Department of Physical Education, Qingdao University, Qingdao, Shandong, 266071

Fund Project:

Abstract:

Objective: To explore effects of 8-week swimming training on spatial learning-memory of rats and on expressions of c-fos, c-jun mRNA in rat's hippocampi and striatum, and to study the molecular mechanism of this process. Method: Thirty-two rats were used as subjects in the experiment. The effects of 8-week swimming training on the capacity of rats' learning-memory were detected by Morris maze and the influence on c-fos and c-jun mRNA in rats' hippocampi and striatum were detected by RT-PCR. Result: ①Comparing with control group, according to the data of location-navigation and spatial probe test in Morris maze, after 8-week swimming training the capacity of rats' spatial learning-memory improved significantly. ②Comparing with control group, after 8-week swimming training up-regulates in hippocampi the expressions of c-fos mRNA up-regulated 17%, and c-jun mRNA up-regulated 28%. There was no significant effect on the expressions of c-fos mRNA and c-jun mRNA in striatum. Conclusion: Optimal exercises training can up-regulate the expressions of c-fos mRNA and c-jun mRNA in hippocampi thereby improve the capacity of learning-memory. It shows the molecular mechanism of this process partially.

Keywords: [exercises training](#) [learning-memory](#) [c-fos mRNA](#) [c-jun mRNA](#)

[查看全文](#) [查看/发表评论](#) [下载PDF阅读器](#)

您是本站第 258008 位访问者

版权所有: 中国康复医学会

主管单位: 卫生部 主办单位: 中国康复医学会

地址: 北京市和平街北口中日友好医院 邮政编码: 100029 电话: 010-64218095 传真: 010-64218095

本系统由北京勤云科技发展有限公司设计