

## عنوان مقاله:

Psychophysiological assessment of disability in male mice

## محل انتشار:

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## خلاصه مقاله:

Amputation is considered as a sort of defect that its outcome is an individual's disability entailing psychological problems. The aim of present study was to examine the effects of disability on psychophysiological status of male limb-amputated mice. This experimental study was performed on 6 groups (5 male mice for each) as follows: 2 control groups (NC30 and NC60), 2 surgically amputated at right forelimb elbow (RF30 and RF60), and 2 other surgically amputated at right hindlimb knee (RH30 and RH60) groups. After 30 or 60 days, behavioral tests were performed on each group. Forced swimming test (FST), elevated plus maze (EPM), tail-pinch test (TPT), Morris water maze (MWM), and object recognition test (ORT) employed to evaluate depression, anxiety, stress, spatial memory, and learning, respectively. In FST, floating time increased significantly for RH30 group compared to NC60 group. All amputees showed a significant decrease in open arm entries in EPM compared to NC60 group. RH60 group showed a significant increase in closed arm time in EPM in comparison to NC30 group. All amputees also exhibited a significant increase in closed arm time in EPM compared to NC60 group. In sum, amputation resulted in increased anxiety and moderate impairment in spatial memory in MWM. The working memory processes in ORT and response to stressor in TPT have not altered post-amputation. Results indicated that amputation can create some psychophysiological disorders probably due to motor behavior defects, although further studies are needed to be performed on peripheral and central effects of lower sensorimotor deprivation while following ethical rules

## کلمات کلیدی:

Disability, Depression, Anxiety, Stress, Memory, Learning

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