

International Conference on

# PHARMACOLOGY

&amp;

World Congress on

# NEUROLOGY AND PSYCHIATRY

June 18-19, 2018 | Tokyo, Japan

## Can 12 weeks creatine supplementation improve cognitive function following hypoxic ischemic insult?

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**Background:** Creatine is a nitrogenous organic acid that occurs naturally in vertebrates and helps to supply energy to all cells in the body, primarily to muscles and brain.

**Purpose of the Research:** To demonstrate the effect of 2 % Creatine monohydrate (Cr) supplementation for 12 weeks, on neuromuscular coordination, exploratory and anxiety behavior and learning and memory formation in male albino mouse.

**Methods:** At postnatal day 10 male albino mice pups were subjected to right common carotid artery ligation followed by 8% hypoxia for 25 minutes. Following weaning at 20th day of life, animals were separated and grouped on the basis for dietary supplementation for 12 weeks followed by a battery of neurological tests including Morris water maze,

open field and rota rod and serum cytokines, interleukin -6 and interleukin -18.

**Results:** Our results indicated that mice fed on 2% Cr supplementation showed better performance when compared with mice on normal rodent diet, throughout neurological test series suggesting that neuromuscular coordination and learning capabilities were improved in Cr treated group. Creatine has little bit effect on serum interleukin -6 and interleukin -18.

**Conclusions:** It is concluded that long term Cr supplementation for 12 weeks is beneficial for male albino mice and can be used as therapeutic agent for the treatment of neurological and muscular impairments.

### Biography

Shahid Iqbal has expertise in occlusion of carotid artery and induction of hypoxia in albino mouse model. The research was conducted at The Gert Lubic proteomic lab, Medical University, Vienna, Austria.

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