

# Antiepileptic Effect of Hippophae Rhamnoides Juice in Young Rat Model of Post-traumatic Epilepsy

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## **INTRODUCTION:**

Epilepsy is the most serious neurological disorder affecting all age groups of people. The proper treatment for epilepsy is least understood and has no cure even today. Finding ways to seize it can allow development of effective drugs.

There have been many studies that have indicated that different parts of Hippophae rhamnoides have been used as traditional therapies for diseases. The fruit and seed of this shrub contain many bioactive compounds. Hence, we have hypothesized that this berry could be use as an alternative medications or supplements in the treatment of epilepsy.

## **METHODOLOGY:**

Male wistar rats of 4-5 months age were used for this study. FeCl<sub>3</sub> (5μL/100mM/5min) was injected stereotaxically in the cortical region of the brain to induce post-traumatic epilepsy. The juice of Hippophae rhamnoides was orally administered (PO) at the dose of 1ml/kg in rats for one month. EEG and MUA were recorded to monitor the brain activity. Whereas, Morris water maze test and Open field test were performed to test the memory and anxiety level respectively.

## **RESULT:**

Changes in EEG and MUA recording were compared statistically among different groups. We observed decreased MUA by 43.37% in treated group while increased MUA by 94.84% in epileptic group as compared to control. In Morris water maze test, we observed increased in latency to reach platform by 66.55% in treated group and decreased in latency to reach platform by 26.96% in epileptic control. In open field test, we observed the ambulatory movement increased significantly by 169.32% in treated group and decreased by 83.48% in epileptic group. Whereas, the fecal index decreased by 38.46% in treated and 116.67% increased in epileptic group.

## **CONCLUSION:**

Our results suggest the possible pharmacotherapeutic potential of Hippophae rhamnoides juice in the treatment of epilepsy. Further, also supports its role in memory consolidation and anxiety reduction.