



## Effects of Acetyl L-carnitine on mRNA changes of neurotrophin receptor after spinal cord injury

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### **Abstract**

The neurotrophins belong to growth factor family and their function is based on their receptors. They bind to two types of receptors: p75 and tyrosine kinase. The motoneuron survival or death depends upon the neurotrophic factors. Recent studies have demonstrated that spinal cord injury induces apoptosis of neuron.

In this investigation Spinal Cord Injury were done in adult female rats by the use of aneurysm clips.

Molecular studies for mRNA changes of Trk-B and P75NTR receptor were done on two groups of animals which were sacrificed 1, 2, 24, 48, 72 hours after SCI. Injection Acetyl L-carnitine or Saline were done in based of groups every day until they were sacrificed.

The RT-PCR revealed that Acetyl L-Carnitine has effect on the mRNA P75 after 24 hours. So it can protect motoneurons death by reducing mRNA P75 receptor.

*Keyword:* Acetyl L-Carnitine- SCI -P75 receptor.