

# Management of Pain and Improvement in Quality of Life in Lumbar Disc Herniation using Class IV LASER- A Placebo-controlled Study

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**Introduction:** Intervertebral disc herniation is the most common cause of spine related disability in working-age individuals. Class IV high-intensity Light Amplification by Stimulated Emission of Radiation (LASER) therapy can help in reducing inflammation, pain and improve function with increasing microcirculation, activating angiogenesis.

**Aim:** To find the effect of Class IV LASER on pain and Quality of Life (QoL) in patients with herniated lumbar disc.

**Materials and Methods:** This placebo-controlled pre- and post-comparison study conducted at Jindal Physio Care, New Delhi with the sample size of 34 subjects. Participants were recruited based upon a predefined selection criteria. After signing the informed consent, all the subjects were randomly distributed among two groups. Outcome variables were Numeric Pain Rating Scale (NPRS), and QOL 36-Item Short Form Survey Instrument (SF-36) questionnaire which were assessed in the beginning and at the

end of study period of 10 weeks. Control group was given placebo LASER whereas the study group was treated with high-intensity LASER. Moist heat, core strengthening exercise and use of lumbar corset was advised for both the groups.

**Results:** There was a significant ( $p < 0.05$ ) decrease in NPRS and SF-36 score in both the groups at the end of the study. However, study group showed significant improvement compared to control group ( $p < 0.001$ ).

**Conclusion:** Class IV LASER treatment has been found more effective reducing pain and improving QoL. This can be a better choice of treatment in patients with lumbar disc herniation.

**Keywords:** Herniated lumbar disc, Light amplification by stimulated emission of radiation, Quality of life.