# Electrical stimulation effect on extensor lag and length of hospital stay after total knee arthroplasty

**Gotlin RS, Hershkowitz S, Juris PM, Gonzalez EG, Scott WN, Insall JN,**
**Arch Phys Med Rehabil. 1994 Sep;75(9):957-9**

Department of Physical Medicine and Rehabilitation, Beth Israel Medical Center, New York, NY 10128.

## OBJECTIVE:
The effects of electrical stimulation in conjunction with traditional physical therapy, on knee extensor lag and length of hospital stay among patients recovering from total knee arthroplasty were assessed.

## STUDY DESIGN:
Forty patients who underwent total knee replacement (TKR) were randomly assigned to either an electrical stimulation group (16 females, 5 males), or a control group (15 females, 4 males). Both groups received conventional physical therapy including continuous passive motion (CPM) to the affected limb, ambulation training, range of motion exercises, and activities of daily living (ADL) training. The experimental group additionally received electrical stimulation during CPM treatment.

## RESULTS:
Experimental group subjects reduced their extensor lag from 7.5 to 5.7 degrees, whereas control group extensor lag increased from 5.3 to 8.3 degrees. These trends were significantly different ($p < .01$). Rehabilitation discharge criteria were reached in 6.7 days in the experimental group and 7.4 days in the control group. These differences were also significant ($p < .05$).

## CONCLUSION:
The results of this study indicate that the application of electrical stimulation during recovery from TKR can effectively reduce extensor lag and decrease the length of hospital stay.
PMID: 8085929 [PubMed – indexed for MEDLINE]