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## **Effect of rehabilitation of training on lumbar extension strength and pain between Medx exercise group and combined exercise group in korean women patients of low back pain**

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The purpose of this study was to determine the effect of rehabilitation training on lumbar extension strength and pain change between Medx exercise group and Combined exercise group in korean women patients of Low back pain. Subjects were recruited from KSP hospital and divided into a Medx Exercise Group (MEG) (n=12, 47.50±8.03years, 156.41±4.83cm, 54.75±6.65kg) and Combined Exercise Group (CEG) (n=8, 47.00±7.76years, 158.00±4.27cm, 54.62±5.01kg). Both group received resistance training twice a week in exercise protocol of Medx lumbar extension machine (Ocala,FL) and Combined exercise group(CEG) were taken additional training in upper-body weight training. Both groups were tested on a MedX machine at baseline and after 8 weeks for lumbar extension strength at 0°, 12°, 24°, 36°, 48°, 60° and 72° angles and pain change were tested with VAS. Statistics were Compiled using spss/windows (15.0). Result showed both group indicated significant improvement of lumbar extension strength (p<.001) (MEG: 59.99%, CEG: 44.53%) and In terms of the maximum extension strength on lumbar flexion angles, lumbar strength indicated significant difference (p<.001) at all angles in both group. The strength at 0°.12o angles increased higher than at 60°, 72° angles in MEG & CEG. MEG showed higher improvement than CEG at all angles. The ratio of lumbar flexion/extension 72o, and 0o angles showed significant (p<.05) decrease (26.24%) in MEG while CEG showed no significant decrease (18.93%). there was significant difference (p<.001) for pain change in two group, MEG showed significant pain decrease (46.54%: from 6.08±1.08 to 3.25±0.96) and CEG showed pain decrease (55.13%: from 6.13±0.83 to 2.75±0.70) after 8week training. CEG appeared more decrease (8.59%) than MEG in pain changes. Thus, Lumbar extension muscles training may have improved lumbar strength and spine stability in successful treatment of LBP. The training of lumbar muscles including upper body exercise can be a viable alternative treatment for pain reduction.

### **Biography**

Gundokim has completed his PhD in sports rehabilitation of LBP from Kunkuk University He is the professor of department of sports and leisure studies, Semyung University. He has published more than 25 books and 40 papers in reputed journals and has been serving as Panel of National Research Foundation of Korea and Executive director of international exchange for the journal of Asian studies.

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