

Effect of Endurance Training Of Trunk Extensor Muscles on Pain and Endurance in Patients with Sub Acute Nonspecific Low Backache

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Abstract

Objective: the study aimed to find out the effect of endurance exercises on trunk extensor muscles endurance and pain. Methods: Total 38 subjects of both genders ranging in age between 18 to 40 years suffering from subacute non specific low back pain were taken and equally divided into two groups, group A(control group) and group B (experimental group).The values of VAS and modified Biering Sorensen test were taken from each subject prior to the intervention. Then subjects of both groups received hot pack for 15 minutes and then group A received general mobility exercises including stretching and strengthening exercises of lumbar spine, and group B received 5 levels of endurance exercises for 5 times a week for conclusively 3 weeks. The values of VAS and modified Biering Sorensen test were again measured on 8th, 15th and 22nd day. Results: Comparison of baseline values of both groups showed a highly significant improvement in pain and endurance. Conclusion: Both trunk extensors endurance training and general mobility stretching strengthening exercises are equally effective in reducing pain and increasing endurance in patients with non-specific subacute low back pain.

Key words: Endurance, low back ache, Biering Sorensen test, trunk extensors

Introduction

Low back pain can be defined as any form of pain, muscle tension, or stiffness localized between the costal margins and the inferior gluteal folds, with or without radiation into the lower limbs. For the majority of cases however, no medical cause can be found for their back complaints and therefore no definitive diagnosis can be given labeled as “nonspecific” low back pain. The symptoms of nonspecific low back pain may be related to mechanical strain (e.g., manual material handlings, sports activities) and/or psychosocial stressors (e.g., complex cognitive demands, job dissatisfaction), but they can also develop spontaneously. (Vanrhijn, et al, 2009) Some authorities report that poor endurance of trunk extensor muscles may

induce strain on passive structures of lumbar spine, leading eventually to low back pain. Evidence suggests that muscle endurance is low for people with low back pain than individuals without low back pain (Hultman et al, 1993). Fatigue can affect the ability of people with low back pain to respond to the demands of an unexpected load. Fatigue after repetitive loading also leads to a loss of control and precision, which may predispose an individual to developing low back pain. (Parnianpour et al, 1988). Therefore, trunk muscle endurance training has been recommended to elevate fatigue threshold and improve performance, thus reducing disability. The results of the study may help the physiotherapists to understand the muscular cause provoking the pain