

The aim of the work was to get concrete and objective view of the movement of defined parts in lumbar spine during postural task. The other goal was to measure respiratory muscle strength and find if there was a connection between measured parameters. 35 subjects with chronic low back pain and 25 asymptomatic subjects underwent dynamic MRI examination and measurement of maximal mouth pressures. This study showed lower values of P<sub>imax</sub> and displacement of vertebra L1 in group of patients. Also showed correlation between P<sub>imax</sub> and L1 displacement, sacrum displacement and the sacral slope difference during postural task in group of patients. No significant correlations in control group were found.