($r = 0.461$) and in extension ($r = 0.475$) were observed with the body mass index. A high correlation was also found between the total work at 120°/s in extension ($r = 0.668$) and the number of hours per week of sport activities.
The mean power in extension at 120°/s was correlated positively ($r = 0.453$) to the lumbar radiological lordosis.
The endurance of agonist (flexors) and antagonist (extensors) ratio were high in both populations compared to expected values in general population (0.91 vs 0.89).
*Conclusion*.– This study reveals no significant difference in the isokinetic trunk strength of both flexors and extensors in the two groups.
Based on the results, the usefulness of studying the effect of isokinetic rehabilitation is to remove the inhibition at high speed.
So, isokinetic strength parameters, as measured in this study, do not seem to explain the occurrence of low back pain among children.
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## Neuromuscular adaptations induced by a short rehabilitation program in chronic low back pain

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*Keywords:* Low-back pain; Neuromuscular adaptation; Rehabilitation program

*Purpose*.– It is not known whether abdominal or back neuromuscular changes induced by chronic low back pain are reversible or not [1]. To investigate the effect of a short rehabilitation program on the trunk reflex gain and feed-forward activation induced by a postural perturbation.
*Patient sample*.– Thirty chronic low back patients were included in an observational study.
*Methods*.– Abdominal and spinal force and endurance, feed forward activation and responses to postural perturbation with superficial EMG were recorded in non-expected and expected conditions. Subjects were analysed before, just after and one month after a 1-week non-specific training and educational rehabilitation program for low back pain.
*Results*.– Force and endurance parameters were significantly improved after intervention. No main intervention effect was found for EMG recordings. However, we observed a shift in the motor control between conditions with, in non-expected condition, a muscular response aggregation after perturbation while feedforward activation was dissociated before perturbation. It is proposed that unspecific movement-based exercises probably lead to (i): a better recruitment optimizing load sharing of lumbar stabilizers; (ii): a better representation of trunk muscles related to a better control as demonstrated yet by transcortical stimulation [2]; (iii): a reduction of fear of movement as trunk movements never led to increased pain during the rehabilitation program.
*Conclusions*.– It is suggested that a short-term rehabilitation can modify paraspinal functional patterns with more adapted muscular responses to sudden load.
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## Chronic low back pain patient, a candidate for cardiac rehabilitation?

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*Keywords:* Low-back pain; Cardiovascular risk; Rehabilitation

*Objective*.– Chronic back pain is linked to deconditioning with reduced aerobic capacity [1]. It shares some of its risk factors (CVRF) with cardiovascular diseases: smoking, hypertension, dyslipidemia, overweight, sedentary lifestyle [2]. The distribution of cardiovascular risk factors was studied in a population of patients referred for an intensive reconditioning program of 4 weeks.
*Patients and methods*.– One hundred and eighty-five patients from 205 (55.98% men, mean age $49.9 \pm 11$, 32 years) divided into three groups (non-smokers, smokers and weaned) were reviewed at 5 months. The evaluation criteria were: scores of Quebec, CVRF control, physical performance, experienced changes of habit, analgesic consumption, and overall feel. Analysis of the results was performed with the Kruskal-Wallis univariate ($\alpha = 0.05$).
*Results*.– CVRF distribution was similar to that found in the general population in France: 31.58% dyslipidemia (35.7%), 4.78% diabetics (5.5%), 39% tobacco (22.1%), hypertension 14.35% (27%) [3]. Quebec score's decreases of 11, eight and six points respectively for non-smokers, smokers and weaned (NS). But more CVRF were controlled the better the benefit over time.
*Discussion*.– The assessment of chronic low-back pain should include a screening for CVRF and implementation of recommendations in lifestyle management and medication, particularly for smoking cessation. The similarities with cardiac rehabilitation in terms of effort rehabilitation, therapeutic education, technical requirement (assessment of exercise ability) and human needs (multidisciplinarity), must consider reconciliation between these two activities. The long-term impact (insertion, pain control) of this new approach must be evaluated in large cohorts of patients.
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## Limiting the educational failures of chronic low-back pain patients

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*Keywords:* Education; Chronic low-back pain

Fear, avoidance and believes are major cognitive factors in the development of chronic disability in low-back pain (LBP) patients. The pain intensity account