Daily Exercise Eases Back Pain in Overweight Men

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BUENOS AIRES — Overweight men with chronic or subacute lower back pain can reduce pain intensity and improve overall quality of life by losing weight and exercising daily, according to the results of a study reported by Dr. Eiichhiro Nakamura at the annual conference of the International Society of Orthopaedic Surgery and Traumatology.

Dr. Nakamura and colleagues conducted a clinical trial to investigate the effect of lifestyle change, specifically diet and exercise, on overweight men with lower back pain. The trial was based on a previous cohort study by the same investigators, which had shown that overweight and inactive employees had a higher risk of low back pain than did physically active employees who were not overweight, said Dr. Nakamura of the orthopedic surgery department at the University of Occupational and Environmental Health, Kitakyushu, Japan.

In the current study, the researchers screened 2,521 male company employees, and identified 682 men whose body mass index (BMI) at their annual physical examination was 24 kg/m² or higher. When these 682 subjects were contacted and asked if they suffered from lower back pain, 168 responded affirmatively. Of these, 126 agreed to undergo further screening for the study. Inclusion criteria were age between 20 and 60 years, BMI of 25 or greater, and lower back pain for more than 1 month. Exclusion criteria included any significant neurologic finding, malignant disease, cerebral infarction or ischemic heart disease, and mental disorder, as well as trauma in the past 6 months or a history of lumbar spine surgery or infection.

A total of 44 subjects met the inclusion and exclusion criteria. These subjects were randomized to the intervention group (23 people) or the control group (21 people).

At baseline, subjects in the intervention group participated in an educational session on nutrition and were shown general back and abdominal muscle exercises. They were instructed to perform 2 sets of 20 repetitions of each exercise every day, and to keep a diary for 2 months, in which

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they reported their daily exercise frequency and body weight. They received a letter of support at weeks 2 and 4. Control subjects were given guidance on good and bad workplace posture.

Both groups completed a questionnaire at weeks 4 and 8 concerning job status; history of low back pain; physical status including height, weight, waist circumference, and BMI; and lifestyle, particularly diet, alcohol consumption, and exercise. All subjects underwent a physical examination at the final study visit at week 8.

Self-reported pain intensity in daily life and at work was assessed using the visual analog scale (VAS), and disability was assessed using the Roland-Morris Disability Questionnaire (RDQ). The Short Form 36 questionnaire (SF-36 v2) was used to assess overall health status. There were no significant differences between the intervention and control groups at baseline.

At 2 months, 22 subjects in the intervention group and 19 in the control group were available for follow-up, Dr. Nakamura reported. The change in BMI from baseline was significantly different between the groups. In addition, waist circumference fell significantly from baseline in the intervention group but not in the control group.

Significant differences between the two groups also were seen in mean change in SF-36 domain scores for vitality and social function. Comparison of baseline and 2-month scores in the intervention group showed significant changes for general health, vitality, and social function, as well as for bodily pain.

Significant improvements from baseline were seen in mean values of VAS scores in both daily life and work in the intervention group, but not in the control group. A significant correlation was found between the reduction of waist circumference and improvement in VAS scores. ∎