

## Ordinary activity was best for acute low-back pain

Malmivaara A, Häkkinen U, Aro T, et al. *The treatment of acute low back pain—bed rest, exercise, or ordinary activity?* *N Engl J Med.* 1995 Feb 9; 332:351-5.

### Objective

To compare the effectiveness of bed rest and back-mobilizing exercises with ordinary activity as tolerated in patients with acute low-back pain.

### Design

Randomized controlled trial with 12-week follow-up.

### Setting

Occupational Health Care Centers for city employees in Helsinki, Finland.

### Patients

186 patients (mean age, 40 y; 67% women) with acute low-back pain or exacerbations of chronic pain lasting < 3 weeks. Exclusion criteria were sciatic syndrome, history of cancer, fracture of the lumbar spine, urinary tract disease, or pregnancy. 162 patients (87%) completed the study.

### Intervention

67 patients were assigned to bed rest, 52 to exercise, and 67 to the

control group. Bed rest included 2 days of bed rest and only essential walking. Exercise included both instruction from a physiotherapist in 1 session and written recommendations for back-extension and lateral bending movements to be done at home every other hour during the day until the pain was gone. Patients in the control group were told to avoid bed rest and to continue routines as actively as possible if permitted by their back pain. Most patients received analgesics or anti-inflammatory medications.

### Main Outcome Measures

Duration of pain, pain intensity, lumbar flexion, ability to work, Oswestry back-disability index, and number of days absent from work.

### Main Results

At 12 weeks and after adjustment for baseline variables, patients in the bed-rest group recovered more slowly than those in the control group in terms of pain intensity (2.1 vs. 1.3; difference in adjusted group mean, 0.7; 95% CI, 0.03 to 1.4), lumbar flexion (6.3 vs. 6.6 cm; difference in adjusted group mean, -0.6 cm; CI, -1.1 to -0.1 cm), ability to work (7.7 vs. 8.5; difference in adjusted group mean, -0.8; CI, -1.5 to

-0.1), the Oswestry back disability index (11.8 vs. 7.4; difference in adjusted group mean, 3.8; CI, 0.1 to 7.5), and number of sick days (9.2 vs. 4.7 days; difference in adjusted group mean, 3.4 days; CI, 0.2 to 6.5 days). Recovery also was slower in the exercise group than in the control group in terms of lumbar flexion (6.0 vs. 6.6 cm; difference in adjusted group mean, -0.6 cm; CI, -1.1 to -0.1 cm) and number of sick days (7.2 vs. 4.7 days; difference in adjusted group mean, 2.5 days; CI, 0.2 to 4.9 days). Visits to the physician were more frequent in the exercise than in the control group. Similar differences in outcomes were also seen at 3 weeks.

### Conclusion

Among patients with acute low-back pain, maintaining ordinary activity as tolerated and avoiding bed rest led to the most rapid recovery when compared with bed rest or back-mobilizing exercises.

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### Commentary

The study by Malmivaara and colleagues puts another nail in the coffin of the "old style" of managing acute back pain: strict (and occasionally prolonged) bed rest and avoidance of any activity that provokes pain. Additionally, the study shows that starting back exercises immediately is probably unwise. These results validate the management of back pain advocated in the recently released Agency for Health Care Policy and Research Practice Guidelines (1). The guidelines stress the avoidance of bed rest for all patients (except those in the most extreme pain), continued activity as tolerated (realizing that some pain is

likely and that avoiding all activities that produce pain is undesirable), and pain relief measures (acetaminophen, nonsteroidal anti-inflammatory medications, and spinal manipulation are recommended options). Back exercises, which may reduce the likelihood of recurrent back pain (2), may be started after several weeks. A tantalizing question in my mind is, if we now avoid "over-medicalizing" acute low-back pain, will we also reduce the rate of progression to chronic back pain, which currently occurs in about 5% of patients and ultimately accounts for 85% of the total costs for low-back pain?

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