Appendix 2: Rehabilitation intervention [posted as supplied by author]

The rehabilitation was based on the treatment model described by Brox et al,[1] and consisted of a cognitive approach and supervised physical exercise. The multidisciplinary treatment was directed by a team of experienced physiotherapists and specialists in physical medicine and rehabilitation. Other specialists (psychologist, nurse, social worker, ergonomist, etc.), completed the team, dependent of local resources and needs. The intervention was organized as an outpatient treatment in groups of 6-10 patients over 3-5 weeks for 12-15 days, with each treatment day lasting 3-5 hours, leading to a total quantity of the rehabilitation program for about 60 hours. Since patients were recruited from the entire area covered by each participating university hospital, many patients stayed at a patient hotel and treatment was conducted at the outpatient clinic during the day. Treatment was standardized through three seminars and videos and lecture sessions for the treatment providers in the pre-study phase.

	Content / activity
Day 1	Individual screening ("mental"; questionnaires completed at inclusion, "physically"; examination by physiotherapist and/or specialist in physical medicine and rehabilitation). Results from the screening forms the basis for an individual discussion focusing thoughts, feelings, behavior and physical symptoms[2]). Establish a plan for the rehabilitation process with clearly defined individual goals, based on patient's answers to questionnaires (thoughts and feelings) and individual evaluation of patients' physical capacity. The plan is revised every week in individual discussions with treatment providers. Emphasize that the main responsibility for the rehabilitation process lied on the patient him/herself and that the main role of the rehabilitation personnel is to coach patients' trough the treatment.
Day 2	• Start endurance, strength, stretching, relaxation and coordination training (group training and/or individual, indoor and/or outdoor). Two or three work-out sessions per day, at least one "heavy" and one "light" and one group based and one individual daily session. General exercise for increasing overall fitness (cardiovascular, strength (particular thighs, back- and abdominal muscles), flexibility, coordination, body awareness and relaxation), and for specific individual needs (strength (including the transverse abdominal muscles and multifidus muscles[3], flexibility, endurance, etc). Examples of general exercise are group exercise accompanied by music ("Aerobics"), circuit training, swimming / water games, biking, Nordic walking, treadmill walking, cross country skiing and games (i.e. ball games). Intensity was gradually increased through the

	rehabilitation period. Most exercise was supervised by physiotherapists, but patients were also encouraged to exercise by themselves. Overall goal for the training was to increase patients' belief and confidence in being able to perform daily activities of life and to increase functional capacity although the back may hurt. Patients are encouraged to continue activities and exercising after end of the rehabilitation period. • Group lesson and/or discussion of relevant topics like diagnostics, imaging, pain medicine, normal reactions, coping strategies, exercise physiology, family- and social life, and workplace conditions (1-3 lessons per week). • Social activities like excursions, café visits, bowling, etc (1-3 times per week)
Week 1	A lecture to describe the anatomy and the physiological aspects of the back (pain receptors in the discs, facet joints, and muscles; the reflexive interplay between various structures; and the ability to suppress and reinforce various peripheral stimuli). The information aimed to give patients a new understanding of their back problem, to get patients to understand that ordinary activity of daily life will not harm the back and that it is safe to use the back without restrictions. Further, patients were challenged in their thoughts about, and participation in, physical activities previously labeled as not recommended. This information was reinforced every treatment day during various physical activities and discussions[1 4].
Day 3-5	Start confrontation / fear-avoidance training (after the lecture described above): practical training / testing of activities patients are afraid of or are told not to participate in, e.g. lifting, jumping, vacuum cleaning, gardening, dancing, running, ball games.
Week 2	Meeting a peer (former participant in the program) for exchanging experiences.
Every day	Two or three exercise sessions, one lesson/discussion session and/or social activity. Reinforce message from the lecture of anatomy and physiological aspects of the back during physical activities and discussions.
Every week	• Revising patient's individual goals / rehabilitation plan decided at day 1 (individual consultation with treatment providers). Additional individual consultations if needed. • Group lessons and discussion of relevant topics (1-3×). • Social activities (1-3×) • Confrontation / fear-avoidance training • Encourage patients to continue activities and exercising after end of the rehabilitation period.
Post treatment	Follow-up consultations 6 weeks, 3 months, 6 months and 1 year post intervention.

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2. Sharpe M. *Treatment of functional somatic symptoms*. Oxford University Press, 1995.
3. O'Sullivan PB. Lumbar segmental "instability": clinical presentation and specific stabilizing exercise management. *Man Ther* 2000;5:2-12.
4. Indahl A, Velund L, Reikeraas O. Good prognosis for low back pain when left untampered. A randomized clinical trial. *Spine* 1995;20:473-7.