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Physiotherapy and back pain
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Guidance

CG88 Low Back Pain: Early Management Of Persistent Non-Specific Low Back Pain
Full guideline May 2009
National Collaborating Centre for Primary Care and the Royal college of General Practitioners
This guideline discusses the use of physiotherapy for a number of lower back pain treatments and compares it with other methods. Full reading is advisable as it discusses many of the activities and methods that could be carried out by a physiotherapist rather than physiotherapy per se. There are sections on

Assessment and imaging
Information, education and patient preferences
Physical activity and exercise
Manual therapy
Other non-pharmacological therapies
Invasive procedures
Combined physical and psychological treatment programme


Evidence

Systematic Reviews and Other Reviews

Can Cognitive Behavioural Therapy Based Strategies Be Integrated into Physiotherapy for the Prevention of Chronic Low Back Pain? A Systematic Review.
Citation: Disability & Rehabilitation, January 2013, vol./is. 35/1(1-10), 0963-8288;1464-5165 (2013 Jan) Brunner E; De Herdt A; Minguet P; Baldew SS; Probst M
PURPOSE: The primary purpose was to detect randomized controlled trials investigating cognitive behaviour therapy-based (CBT) treatments applied in acute/sub-acute low back pain (LBP). The secondary purpose was to analyse the methodological properties of the included studies, and to identify theory-based treatment strategies that are applicable for physiotherapists.METHOD: A systematic literature search was conducted using four databases. Risk of bias of included studies was assessed and the methodological properties summarized. In addition, content and treatment theory of detected CBT-based strategies were systematically analysed and classified into three distinctive concepts of CBT: operant, cognitive and respondent treatment. Finally, applicability of treatment strategies in physiotherapy practice was discussed.RESULTS: Eight studies were included in the present systematic review. Half of the studies suffered from high risk of bias, and study characteristics varied in all domains of methodology, particularly in terms of treatment design and outcome measures. Graded activity, an operant treatment approach based on principles of operant conditioning, was identified as a CBT-based strategy with traceable theoretical justification that can be applied by physiotherapists.CONCLUSION: Operant conditioning can be integrated in ambulant physiotherapy practice and is a promising CBT-based strategy for the prevention of chronic LBP.

Publication Type: Journal Article; Review Source: MEDLINE
Critical Appraisal

Centre for Reviews and Dissemination

**Outpatient Physiotherapy Services for Low Back Pain**
Fischbacher C21/01/2004

Authors' objectives
This study aims to assess the effects of an outpatient physiotherapy service versus no service or other forms of treatment on pain, functional limitation and activities of daily living in people with acute or chronic non-specific lower back pain.

Authors' conclusions

We found no evidence about the effectiveness of an outpatient physiotherapy service without regard for the particular treatment method used. Outpatient physiotherapy includes a heterogeneous group of interventions. Although appraisal of each intervention is beyond the scope of this report, a recent high quality review has examined effectiveness of many specific interventions among people with low back pain. Evidence suggests that services which include advice to stay active during acute back pain and which provide exercise therapy for chronic back pain are more likely to be effective. The effectiveness of services that emphasise interventions such as massage, manipulation, shortwave diathermy, ultrasound, heat, ice packs or lumbar supports is more uncertain. However, effectiveness of a service as a whole is likely to depend on the package of interventions included, which should be clearly defined. The present review suggests that it is difficult or impossible to draw general conclusions about outpatient physiotherapy as a treatment strategy independently of the interventions included within a particular service. Decisions to provide a physiotherapy service for back pain must, therefore, pay close attention to the treatment modalities and protocols employed.

Centre for Reviews and Dissemination

**A Comparison of Physical Therapy, Chiropractic Manipulation, and Provision of an Educational Booklet for the Treatment of Patients with Lower Back Pain**
Cherkin D C, Deyo R A, Battie M, Street J, Barlow W

Health technology

The McKenzie method, a popular form of physical therapy, and chiropractic manipulation for the treatment of patients with low back pain. In the McKenzie approach, patients are placed in one of three broad categories (derangement, dysfunction, and postural syndrome); patients are taught to perform exercises that centralise their symptoms and to avoid movements that peripheralise them; this method relies on patient-generated forces and emphasises self-care; the McKenzie Institute faculty trained the therapists before the study; patients were given McKenzie's Treat Your Own Back book and a lumbar-support cushion; therapists were asked to avoid adjuncts such as heat, ice, transcutaneous electrical nerve stimulation (TENS), ultrasonography, and back classes.

Chiropractic manipulation involved the use of a short-lever, high-velocity thrust directed specifically at a "manipulable lesion" (as the most common method of chiropractic manipulation); no other physical treatments were permitted; an exercise sheet was used, which emphasised stretching and strengthening but excluded extension exercises (an important part of McKenzie therapy); patients' radiographs less than three years old were...
given to the chiropractors who also determined the need for additional radiographs; a chiropractor consultant observed the chiropractors at the start and end of the study and confirmed their compliance with the treatment protocol. After the first visit, up to eight visits during the one-month period of the treatment could be scheduled at the discretion of the therapist.

**Clinical conclusions**

For patients with low back pain, the study found that physical therapy and chiropractic manipulation had similar effects on symptoms, function, satisfaction with care, disability, recurrence of back pain, and subsequent visits for back pain. The study also found that patients who received chiropractic manipulation or physical therapy had only marginally better outcomes than those who received only an educational booklet did.

**Authors' conclusions**

For patients with low back pain, the McKenzie method of physical therapy and chiropractic manipulation had similar effects and costs, and patients receiving these treatments had only marginally better outcomes than those receiving the minimal intervention of an educational booklet.

http://www.crd.york.ac.uk/crdweb/ShowRecord.asp?LinkFrom=OAI&ID=21998008234

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**Health Technology Assessments**

**Evidence-Based Physiotherapy for Patients with Low-Back Pain (Structured abstract)**

K Harms-Ringdahl, E Holmstrom, T Jonsson, I Lindstrom

Health Technology Assessment Database 2013 Issue 4


Authors' conclusions

This review supports the following conclusions and recommendations for interventions in patients who self-refer or are referred to a physiotherapist for low-back problems. Patients with acute problems that have persisted less than 3 weeks should be thoroughly examined by a physiotherapist to identify their mobility-related condition (impairment), capability (activity), and behavior (participation), and be given the opportunity to discuss attitudes and possible apprehension toward their problem. Considering the findings from examination, the physiotherapist should challenge the patient to continue to be physically active. The physiotherapist should offer personalized, oral (in addition to written) advice on the importance of changing positions often, suggest how the patient can find positions that generate less pain where movement can be carried out, encourage the patient to think about how he/she can move different parts of the body without increasing pain, and suggest how tasks might be modified so the patient can continue working. During the first days, excessive physical activity or treatments which subject body tissue to major stress should be avoided. Patients with sub-acute problems lasting 3 to 6 weeks should be examined thoroughly by a physiotherapist to identify their mobility-related condition (impairment), capability (activity), and behavior (participation), and be given the opportunity to discuss attitudes and possible apprehension toward their problem. Manual treatment methods and certain behavioral modification methods may be valuable complements to physiotherapy for some groups of patients. Treatment and intervention should be goal related, and the physiotherapist should set appropriate limits so the patient can carry out the exercises independently, regularly, and over a long period. Exercises may cover different types of activity that engage major muscle groups and continue for at least 20 minutes per occasion, during work-time or free time, and over a longer period, i.e., for as long as the patient wants to see results from training. Different means should be used to monitor patient training, since changes in exercise habits appear to depend on the physiotherapist taking notice of the patient’s exercise habits. In cases where work capability is impaired, the interventions should also be work-oriented. Patients with chronic problems that last more than 12 weeks should
be thoroughly examined by a physiotherapist to identify their mobility-related condition (impairment), capability (activity), and behavior (participation), and be given the opportunity to discuss attitudes and possible apprehension toward their problem. Treatment and intervention should be goal related, and the physiotherapist should set appropriate limits so the patient can carry out the exercises independently, regularly, and over a long period. Methods aimed exclusively at pain relief have fewer, if any, effects, eg, manual treatment methods. The focus should be placed on function-oriented exercises in combination with behavioral modification aimed at increasing the patient's ability to be active. Patient compliance with treatment is higher with individual treatment (or if the individual has access to a physiotherapist) than with group treatment. Multi-program treatment, where physiotherapy interventions are carried out in collaboration with other team members and people at the workplace, has an impact on work capacity.


Outpatient Physiotherapy Services for Low Back Pain (Structured abstract)

C Fischbacher Health Technology Assessment Database 2013 Issue 4

Original article: Fischbacher C. Outpatient physiotherapy services for low back pain. London: Bazian Ltd (Editors), Wessex Institute for Health Research and Development, University of Southampton. 2002:8..

Authors' conclusions
We found no evidence about the effectiveness of an outpatient physiotherapy service without regard for the particular treatment method used. Outpatient physiotherapy includes a heterogeneous group of interventions. Although appraisal of each intervention is beyond the scope of this report, a recent high quality review has examined effectiveness of many specific interventions among people with low back pain. Evidence suggests that services which include advice to stay active during acute back pain and which provide exercise therapy for chronic back pain are more likely to be effective. The effectiveness of services that emphasise interventions such as massage, manipulation, shortwave diathermy, ultrasound, heat, ice packs or lumbar supports is more uncertain. However, effectiveness of a service as a whole is likely to depend on the package of interventions included, which should be clearly defined. The present review suggests that it is difficult or impossible to draw general conclusions about outpatient physiotherapy as a treatment strategy independently of the interventions included within a particular service. Decisions to provide a physiotherapy service for back pain must, therefore, pay close attention to the treatment modalities and protocols employed.

Are Physiotherapy Exercises Effective in Reducing Chronic Low Back Pain?  
(Structured abstract)
Centre for Reviews and Dissemination Database of Abstracts of Reviews of Effects 2013 Issue 4


CRD summary
The review aimed to determine the effectiveness of physiotherapy prescribed exercise in reducing chronic low back pain. The authors concluded that physiotherapy exercise programmes were effective in reducing pain but that there was no consensus for the superiority of any specific technique or exercise format. Lack study details and effect sizes limited interpretation of the results presented and the authors' conclusions might not be reliable.

Authors’ objectives
To determine the effectiveness of physiotherapy exercises in reducing chronic low back pain (CLBP).

Authors’ conclusions
Overall, physiotherapy prescribed exercise programmes were found to be effective in reducing pain in patients with CLBP. Results were inconclusive for the superiority of any specific technique or exercise format.


Economic Evaluations
Critically appraised economic evaluations

One-Year Follow-Up Comparison of the Cost and Effectiveness of Chiropractic and Physiotherapy as Primary Management for Back Pain: Subgroup Analysis, Recurrence, and Additional Health Care Utilization (Structured abstract)
Centre for Reviews and Dissemination

NHS Economic Evaluation Database (NHSEED) 2013 Issue 4


Health technology : Primary management of back and neck pain.

Type of intervention : Treatment.

Hypothesis/study question: To compare the cost-effectiveness of chiropractic and physiotherapy as primary treatment for patients with back and neck pain.

Economic study type : Cost-effectiveness analysis.

Study population: Patients aged 18-60 years who had no contraindication to manipulation.

Effectiveness and Cost-Effectiveness of Three Types Of Physiotherapy Used to Reduce Chronic Low Back Pain Disability: A Pragmatic Randomized Trial with Economic Evaluation (Structured abstract)

Centre for Reviews and Dissemination NHS Economic Evaluation Database (NHSEED) 2013 Issue 4


Health technology: The study examined three treatments for low back pain. These were usual outpatient physiotherapy, spinal stabilisation classes, and physiotherapist-led pain management classes. Usual outpatient physiotherapy involved individual advice, exercises and joint manipulation or mobilisations (individual physiotherapy). Spinal stabilisation training consisted of very specific exercises of deeper trunk muscles. Physiotherapist-led general exercise involved brief education in small groups. A detailed description of each of these strategies was given.

Type of intervention: Treatment.

Hypothesis/study question: The objective of the study was to assess the costs and benefits of the three treatments for low back pain in order to identify the most cost-effective strategy, using the framework of a clinical trial. Several outcome measures were considered so that a deep analysis of the impact of these strategies on patient quality of life could be conducted. The analysis was carried out from the perspective of the National Health Service (NHS).

Economic study type: Cost-utility analysis.

Clinical conclusions: The effectiveness analysis showed that the three treatments were similarly effective.

Measure of benefits used in the economic analysis: The summary benefit measure used was the expected number of quality-adjusted life-years (QALYs). These were estimated using the health-related quality of life estimates derived directly from the clinical trial. The QALYs were discounted at an annual rate of 3.5%.

Direct costs: The analysis of the costs was performed from the viewpoint of the NHS. It included the costs physiotherapy, health care visits (general practitioners, consultants and others), medications and investigations. The unit costs and the quantities of resources used were presented separately for most items. Resource use was estimated using data derived from the sample of trial participants with complete economic data (53 in the individual physiotherapy group, 53 in the spinal stabilisation group, and 44 in the pain management group). The costs were derived from the Personal Social Services Research Unit Database, NHS Reference Costs and the British National Formulary.
Discounting was considered relevant, although only 18-month costs were evaluated, and an annual rate of 3.5% was applied. The costs were expressed using 2003/04 prices.

**Authors’ conclusions**: All three interventions for low back pain improved quality of life, time off work, and health service utilisation. However, from the perspective of the National Health Service (NHS), pain management is likely to be the most cost-effective strategy because of a marginally greater effectiveness and lower health care costs.


Critically appraised economic evaluations

**Cost-Utility Analysis of Physiotherapy Treatment Compared with Physiotherapy Advice in Low Back Pain (Structured abstract)**

Centre for Reviews and Dissemination NHS Economic Evaluation Database (NHSEED) 2013 Issue 4


Health technology

The use of therapeutic physiotherapy was compared with physiotherapy advice in patients with low back pain. Advice consisted of a session given by a physiotherapist, along with a standardised advice book (the principal advice being to remain active). Physiotherapy treatment consisted of five 30-minutes treatment sessions, in addition to the advice book. The techniques that could be used, according to the treatment package devised for the patient in light of the clinical findings, were joint mobilisation, soft tissue techniques, individual exercise programmes, heat or cold treatment, and advice.

Clinical conclusions

The trial found no significant differences between the two strategies in terms of the primary outcome (the Oswestry Disability Index) or most secondary outcomes (the Roland and Morris disability questionnaire and the SF-36). Nevertheless, patients in the physiotherapy group perceived more benefit.

**Authors’ conclusions**: The study showed no significant difference between groups in either National Health Service (NHS) costs or effects. However, the significantly higher patient expenses in the physiotherapy group suggest that the advice strategy should be considered as the first-line approach for this group of patients.

Economic Evaluation of an Intensive Group Training Protocol Compared With Usual Care Physiotherapy in Patients With Chronic Low Back Pain


Objective. To evaluate the cost effectiveness and cost utility of an intensive group training protocol compared with usual care physiotherapy in patients with nonspecific chronic low back pain. The intensive group training protocol combines exercise therapy, back school, and behavioral principles.

Conclusion. The results of this economic evaluation showed no difference in total costs between the protocol group and the guideline group. The differences in effects were small and not statistically significant. At present, national implementation of the protocol is not recommended.

http://ovidsp.uk.ovid.com/sp3.11.0a/ovidweb.cgi

RCTS and Other Trials

Multidisciplinary Intensive Functional Restoration versus Outpatient Active Physiotherapy in Chronic Low Back Pain: A Randomized Controlled Trial.

Citation: Spine, 15 December 2011, vol./is. 36/26(2235-2242), 03622436

Roche-Leboucher G; Petit-Lemanauc'h A; Bontoux L; Dubus-Bausière V; Parot-Shinkel E; Fanello S; Penneau-Fontbonne D; Fouquet N; Legrand E; Roquelaure Y; Richard I

STUDY DESIGN: Randomized parallel group comparative trial with a 1-year follow-up period. OBJECTIVE: To compare in a population of patients with chronic low back pain, the effectiveness of a functional restoration program (FRP), including intensive physical training and a multidisciplinary approach, with an outpatient active physiotherapy program at 1-year follow-up. SUMMARY OF BACKGROUND DATA: Controlled studies conducted in the United States and in Northern Europe showed a benefit of FRPs, especially on return to work. Randomized studies have compared these programs with standard care. A previously reported study presented the effectiveness at 6 months of both functional restoration and active physiotherapy, with a significantly greater reduction of sick-leave days for functional restoration. METHODS: A total of 132 patients with low back pain were randomized to either FRP (68 patients) or active individual therapy (64 patients). One patient did not complete the FRP; 19 patients were lost to follow-up (4 in the FRP group and 15 in the active individual treatment group). The number of sick-leave days in 2 years before the program was similar in both groups (180 ± 135.1 days in active individual treatment vs. 185 ± 149.8 days in FRP, P = 0.847). RESULTS: In both groups, at 1-year follow-up, intensity of pain, flexibility, trunk muscle endurance, Dallas daily activities and work and leisure scores, and number of sick-leave days were significantly improved compared with baseline. The number of sick-leave days was significantly lower in the FRP group.
CONCLUSION: Both programs are efficient in reducing disability and sick-leave days. The FRP is significantly more effective in reducing sick-leave days. Further analysis is required to determine if this overweighs the difference in costs of both programs.

Source: CINAH

**Specific Treatment of Problems of the Spine (STOPs): Design of a Randomised Controlled Trial Comparing Specific Physiotherapy versus Advice for People With Subacute Low Back Disorders.**

BMC Musculoskeletal Disorders, 2011, vol./is. 12(104), 1471-2474;1471-2474 (2011) Hahne AJ et al

BACKGROUND: Low back disorders are a common and costly cause of pain and activity limitation in adults. Few treatment options have demonstrated clinically meaningful benefits apart from advice which is recommended in all international guidelines. Clinical heterogeneity of participants in clinical trials is hypothesised as reducing the likelihood of demonstrating treatment effects, and sampling of more homogenous subgroups is recommended. We propose five subgroups that allow the delivery of specific physiotherapy treatment targeting the pathoanatomical, neurophysiological and psychosocial components of low back disorders. The aim of this article is to describe the methodology of a randomised controlled trial comparing specific physiotherapy treatment to advice for people classified into five subacute low back disorder subgroups.

METHODS/DESIGN: A multi-centre parallel group randomised controlled trial is proposed. A minimum of 250 participants with subacute (6 weeks to 6 months) low back pain and/or referred leg pain will be classified into one of five subgroups and then randomly allocated to receive either physiotherapy advice (2 sessions over 10 weeks) or specific physiotherapy treatment (10 sessions over 10 weeks) tailored according to the subgroup of the participant. Outcomes will be assessed at 5 weeks, 10 weeks, 6 months and 12 months following randomisation. Primary outcomes will be activity limitation measured with a modified Oswestry Disability Index as well as leg and back pain intensity measured on separate 0-10 Numerical Rating Scales. Secondary outcomes will include a 7-point global rating of change scale, satisfaction with physiotherapy treatment, satisfaction with treatment results, the Sciatica Frequency and Bothersomeness Scale, quality of life (EuroQol-5D), interference with work, and psychosocial risk factors (Orebro Musculoskeletal Pain Questionnaire). Adverse events and co-interventions will also be measured. Data will be analysed according to intention to treat principles, using linear mixed models for continuous outcomes, Mann Whitney U tests for ordinal outcomes, and Chi-square, risk ratios and risk differences for dichotomous outcomes.

DISCUSSION: This trial will determine the difference in outcomes between specific physiotherapy treatment tailored to each of the five subgroups versus advice which is recommended in guidelines as a suitable treatment for most people with a low back disorder.

TRIAL REGISTRATION: Australia and New Zealand Clinical Trials Register (ANZCTR): ACTRN12609000834257.

Publication Type: Comparative Study; Journal Article; Multicenter Study; Randomized Controlled Trial;

Source: MEDLINE Full Text: Available from BioMedCentral in BMC Musculoskeletal Disorders Available from National Library of Medicine in BMC Musculoskeletal Disorders
Effectiveness of Holistic Physiotherapy for Low Back Pain.
Ortopedia Traumatologia Rehabilitacja, November 2009, vol./is. 11/6(562-76), 1509-3492;1509-3492 (2009 Nov-Dec)
Adamczyk A; Kiebzak W; Wilk-Frankczuk M; Sliwinski Z

BACKGROUND: Low back pain is a term used to designate a wide and complete assemblage of symptoms that has become a cause of disability in the 21th century man. Until recently, it was believed that low back pain caused by intervertebral disc disease and degenerative progresses. At present, an increasing number of studies are linking the condition to conditions of osteoarticular and musculoligamentous structures in the spine and the associated statics of the pelvis.

MATERIAL AND METHODS: The study compared the outcomes of two different physiotherapeutic approaches to treatment of low back pain in group of 60 female patients. In the experimental group, a customised programme of treatment was based on postisometric relaxation of muscles and ligaments, active mobilisation of the spine, Kibler Fold mobilisation, Kinesiology Taping and Maigne's relaxing exercises. The control group underwent electrotherapy procedures and performed a set of exercises usually recommended for low back pain. Intensity of pain and difficulty in performing daily activities were evaluated at baseline and on completion of the treatment: the measurements included mobility of the spine, static balance of the pelvis, tenderness and tension of muscles and ligaments and presence of cell-pain zones.

Statistics analysis used basic statistics concerning the distribution of the examined characteristics and a comparison of means in independent groups using the Mann-Whitney U test.

RESULTS: As a result of the treatment, low back pain was reduced in about 90% of patients in the experimental group, while static balance of the pelvis, tone of the muscles and ligaments and spinal mobility improved in approximately 80% of these patients. In the control group, radiating pain decreased and ligaments in 25% of participants, while the other parameters did not change significantly. The results were statistically significant at < 0.05.

CONCLUSION: These results confirm a high holistic physiotherapy including elements of osteopathy such as post-isometric muscle relaxation, active mobilisation, Kibler Fold mobilisation, customised self-therapy and Kinesiology Taping.

Publication Type: Journal Article; Randomized Controlled Trial
Source: MEDLINE
Early Physiotherapy Intervention in an Accident and Emergency Department Reduces Pain and Improves Satisfaction for Patients with Acute Low Back Pain: A Randomised Trial.


QUESTION: What is the effect of early physiotherapy intervention on pain and patient satisfaction in acute low back pain?

DESIGN: Randomised trial with concealed allocation, assessor blinding, and intention-to-treat analysis.

PARTICIPANTS: 110 patients attending the Accident and Emergency Department of a local acute hospital.

INTERVENTION: The experimental group received early physiotherapy intervention which consisted of education, reassurance, pain management, mobility training, interferential therapy, walking training, and walking aids as indicated. The control group received only walking training and walking aids as indicated. All participants received conventional medical intervention and outpatient physiotherapy intervention.

OUTCOME MEASURES: Pain was measured using the Numeric Pain Rating Scale and satisfaction was measured using the Numeric Global Rating of Change Scale at baseline, discharge from the Accident and Emergency Department, admission to the Physiotherapy Outpatient Department, 1 month, 3 months, and 6 months.

RESULTS: Participants in the experimental group had 1.6 out of 10 points (97.5% CI 0.8 to 2.3) less pain than the control group on discharge from the Accident and Emergency Department and still had 0.9 points (97.5% CI 0.1 to 1.6) less pain on admission to the Physiotherapy Outpatient Department. Participants in the experimental group were 2.1 out of 20 points (97.5% CI 1.2 to 2.9) more satisfied than the control group on discharge from the Accident and Emergency Department.

CONCLUSION: Early physiotherapy intervention was effective in reducing pain and increasing satisfaction for patients with acute low back pain in an Accident and Emergency Department but the effect tailed off.

Publication Type: Clinical Trial; Journal Article; Randomized Controlled Trial

Source: MEDLINE

Linking Health Promotion with Physiotherapy for Low Back Pain: A Review.


OBJECTIVE: The objectives of this paper are: (i) to present the results of a descriptive literature review highlighting conceptual and practical links between the fields of physiotherapy and health promotion, and (ii) to provide recommendations based on this review of the literature in order to contribute towards the improvement of physiotherapists' interventions with people presenting low back pain.

METHODS: A literature review of publications in the fields of health promotion, public health, physiotherapy and rehabilitation. The concepts of health and empowerment are discussed. Health promotion strategies used in the field of physiotherapy are also reported.

RESULTS: The results of the literature review indicate that conceptualizations of health differ between the fields of health promotion and physiotherapy, although there are some common points. Empowerment, a central concept in health promotion, is probably not facilitated in physiotherapy interventions based on the biomedical model. Health education is the most used health promotion strategy in physiotherapy practice.

Recommendations are put forward.
CONCLUSION: In the future, further efforts should be made towards linking the principles and practices of health promotion with physiotherapy. This may help improve physiotherapists' interventions with people presenting low back pain.

Publication Type: Journal Article; Review
Source: MEDLINE

Effectiveness and Cost-Effectiveness of Three Types of Physiotherapy Used To Reduce Chronic Low Back Pain Disability: A Pragmatic Randomized Trial With Economic Evaluation.
Spine, June 2007, vol./is. 32/14(1474-81), 0362-2436;1528-1159 (2007 Jun 15)
Critchley DJ; Ratcliffe J; Noonan S; Jones RH; Hurley MV
STUDY DESIGN: Pragmatic, randomized, assessor blinded, clinical trial with economic analysis.OBJECTIVE: To compare the effectiveness and cost-effectiveness of three kinds of physiotherapy commonly used to reduce disability in chronic low back pain.SUMMARY OF BACKGROUND DATA: Physiotherapy reduces disability in chronic back pain, but there are several forms of physiotherapy and it is unclear which is most effective or cost effective.METHODS: A total of 212 patients referred to physiotherapy with chronic low back pain were randomized to receive usual outpatient physiotherapy, spinal stabilization classes, or physiotherapist-led pain management classes. Primary outcome was Roland Disability Questionnaire score 18 months from baseline; secondary measures were pain, health-related quality of life, and time off work. Healthcare costs associated with low back pain and quality-adjusted life years (QALYs) were also measured. RESULTS: A total of 71 participants were assigned to usual outpatient physiotherapy, 72 to spinal stabilization, and 69 to physiotherapist-led pain management. A total of 160 (75%) provided follow-up data at 18 months, showing similar improvements with all interventions: mean (95% confidence intervals) Roland Disability Questionnaire score improved from 11.1 (9.6-12.6) to 6.9 (5.3-8.4) with usual outpatient physiotherapy, 12.8 (11.4-14.2) to 6.8 (4.9-8.6) with spinal stabilization, and 11.5 (9.8-13.1) to 6.5 (4.5-8.6) following pain management classes. Pain, quality of life, and time off work also improved within all groups with no between-group differences. Mean (SD) healthcare costs and QALY gain were pound474 (840) and 0.99 (0.27) for individual physiotherapy, pound379 (1040) and 0.90 (0.37) for spinal stabilization, and pound165 (202) and 1.00 (0.28) for pain management.CONCLUSIONS: For chronic low back pain, all three physiotherapy regimens improved disability and other relevant health outcomes, regardless of their content. Physiotherapist-led pain management classes offer a cost-effective alternative to usual outpatient physiotherapy and are associated with less healthcare use. A more widespread adoption of physiotherapist-led pain management could result in considerable cost savings for healthcare providers.
Publication Type: Comparative Study; Journal Article; Randomized Controlled Trial; Source: MEDLINE
Effectiveness and Cost-Effectiveness of Three Types of Physiotherapy Used To Reduce Chronic Low Back Pain Disability: A Pragmatic Randomized Trial With Economic Evaluation.

Spine, June 2007, vol./is. 32/14(1474-81), 0362-2436;1528-1159 (2007 Jun 15)
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Publication Type: Comparative Study; Journal Article; Randomized Controlled Trial; Research Support, Non-U.S. Gov't
Source: MEDLINE
Epidural Neuroplasty versus Physiotherapy to Relieve Pain in Patients with Sciatica: A Prospective Randomized Blinded Clinical Trial.

Citation: Journal of Orthopaedic Science, July 2006, vol./is. 11/4(365-9), 0949-2658;0949-2658 (2006 Jul)
Veihelmann A; Devens C; Trouillier H; Birkenmaier C; Gerdesmeyer L; Refior HJ

BACKGROUND: Epidural neuroplasty seems to be one of the promising minimally invasive techniques for adhesiolysis in patients with chronic sciatica with or without low back pain. However, because no data exist from randomized studies the aim was to investigate whether this procedure is superior to conservative treatment with physiotherapy.

METHODS: A total of 99 patients with chronic low back pain were enrolled in this study and randomly assigned into either a group with physiotherapy (n = 52) or a second group undergoing epidural neuroplasty (n = 47). Patients were assessed before and 3, 6, and 12 months after treatment by a blinded investigator.

RESULTS: After 3 months, the visual analog scale (VAS) score for back and leg pain was significantly reduced in the epidural neuroplasty group, and the need for pain medication was reduced in both groups. Furthermore, the VAS for back and leg pain as well as the Oswestry disability score were significantly reduced until 12 months after the procedure in contrast to the group that received conservative treatment.

CONCLUSIONS: Epidural neuroplasty results in significant alleviation of pain and functional disability in patients with chronic low back pain and sciatica based on disc protrusion/prolapse or failed back surgery on a short-term basis as well as at 12 months of follow-up.

Publication Type: Comparative Study; Journal Article; Randomized Controlled Trial
Source: MEDLINE

Randomized Controlled Trial of Specific Spinal Stabilization Exercises and Conventional Physiotherapy for Recurrent Low Back Pain.

Spine, 01 September 2006, vol./is. 31/19(0-), 03622436 Cairns MC; Foster NE; Wright C

STUDY DESIGN: Pragmatic, multicentered randomized controlled trial, with 12-month follow-up. OBJECTIVE: To evaluate the effect of adding specific spinal stabilization exercises to conventional physiotherapy for patients with recurrent low back pain (LBP) in the United Kingdom. SUMMARY OF BACKGROUND DATA: Spinal stabilization exercises are a popular form of physiotherapy management for LBP, and previous small-scale studies on specific LBP subgroups have identified improvement in outcomes as a result. METHODS: A total of 97 patients (18-60 years old) with recurrent LBP were recruited. Stratified randomization was undertaken into 2 groups: "conventional," physiotherapy consisting of general active exercise and manual therapy; and conventional physiotherapy plus specific spinal stabilization exercises. Stratifying variables used were laterality of symptoms, duration of symptoms, and Roland Morris Disability Questionnaire score at baseline. Both groups received The Back Book, by Roland et al. Back-specific functional disability (Roland Morris Disability Questionnaire) at 12 months was the primary outcome. Pain, quality of life, and psychologic measures were also collected at 6 and 12 months. Analysis was by intention to treat. RESULTS: A total of 68 patients (70%) provided 12-month follow-up data. Both groups showed improved physical functioning, reduced pain intensity, and an improvement in the physical component of quality of life.
Mean change in physical functioning, measured by the Roland Morris Disability Questionnaire, was -5.1 (95% confidence interval -6.3 to -3.9) for the specific spinal stabilization exercises group and -5.4 (95% confidence interval -6.5 to -4.2) for the conventional physiotherapy group. No statistically significant differences between the 2 groups were shown for any of the outcomes measured, at any time.

CONCLUSIONS: Patients with LBP had improvement with both treatment packages to a similar degree. There was no additional benefit of adding specific spinal stabilization exercises to a conventional physiotherapy package for patients with recurrent LBP.

Source: CINAHL

Randomized Controlled Trial Investigating the Efficiency of Musculoskeletal Physiotherapy on Chronic Low Back Disorder.
Spine, 01 May 2006, vol./is. 31/10(1083-1093), 03622436
Goldby LJ; Moore AP; Doust J; Trew ME
STUDY DESIGN: Randomized, single blind, controlled trial. OBJECTIVE: To determine the efficacy of 2 components of musculoskeletal physiotherapy on chronic low back disorder. SUMMARY OF BACKGROUND DATA: Musculoskeletal physiotherapy encompasses many treatment methods, however, manual therapy and exercises to rehabilitate spinal stabilization are the most frequently used. Despite their popularity, scant evidence supports their use on subjects with chronic low back disorder. METHODS: A total of 346 subjects were randomized to manual therapy, a 10-week spinal stabilization rehabilitation program, or a minimal intervention control group. Data were collected at baseline, and 3, 6, 12, and 24 months after intervention. Outcome measures recorded intensity of low back pain, disability, handicap, medication, and quality of life. There were 4 main variables combined in a primary component analysis to form a single outcome measure (i.e., a measure of dysfunction). RESULTS: The results indicated statistically significant improvements in favor of the spinal stabilization group at the 6-month stage in pain (65.9% reduction in symptoms) and dysfunction (combined mean reduction of 134, standard error 23.84), and at the 1-year stage in medication (34.3% reduction in medication), dysfunction (combined mean reduction of 134, standard error 18.2), and disability (mean difference in change 15.71 Oswestry Disability Index, 95% confidence interval 19.3-10.01). CONCLUSIONS: As a component of musculoskeletal physiotherapy, the spinal stabilization program is more effective than manually applied therapy or an education booklet in treating chronic low back disorder over time. Both manual therapy and the spinal stabilization program are significantly effective in pain reduction in comparison to an active control. To our knowledge and up until now, this result has not been shown in patients with chronic low back disorder.

Source: CINAHL
Efficiency and Costs of Medical Exercise Therapy, Conventional Physiotherapy, and Self-Exercise In Patients with Chronic Low Back Pain: A Pragmatic, Randomized, Single-Blinded, Controlled Trial with 1-Year Follow-Up.

Spine, 01 December 1998, vol./is. 23/2(2616-2624), 03622436
Torstensen TA; Ljunggren AE; Meen HD; Odland E; Mowinckel P; af Geijerstam S

STUDY DESIGN: A multicenter, randomized, single-blinded controlled trial with 1-year follow-up. OBJECTIVES: To evaluate the efficiency of progressively graded medical exercise therapy, conventional physiotherapy, and self-exercise by walking in patients with chronic low back pain. SUMMARY AND BACKGROUND DATA: Varieties of medical exercise therapy and conventional physiotherapy are considered to reduce symptoms, improve function, and decrease sickness absence, but this opinion is controversial. METHODS: Patients with chronic low back pain or radicular pain sick-listed for more than 8 weeks and less than 52 weeks (Sickness Certificate II) were included. The treatment lasted 3 months (36 treatments). Pain intensity, functional ability, patient satisfaction, return to work, number of days on sick leave, and costs were recorded. RESULTS: Of the 208 patients included in this study, 71 were randomly assigned to medical exercise therapy, 67 to conventional physiotherapy, and 70 to self-exercise. Thirty-three (15.8%) patients dropped out during the treatment period. No difference was observed between the medical exercise therapy and conventional physiotherapy groups, but both were significantly better than self-exercise group. Patient satisfaction was highest for medical exercise therapy. Return to work rates were equal for all 3 intervention groups at assessment 15 months after therapy was started, with 123 patients were back to work. In terms of costs for days on sick leave, the medical exercise therapy group saved 906,732 Norwegian Kroner (NOK) ($122,531.00), and the conventional physiotherapy group saved NOK 1,882,560 ($254,200.00), compared with the self-exercise group. CONCLUSIONS: The efficiency of medical exercise therapy and conventional physiotherapy is shown. Leaving patients with chronic low back pain untampered poses a risk of worsening the disability, resulting in longer periods of sick leave.

Source: CINAHL
Other Evidence

Best Bets

Fear-avoidance-based physical therapy for acute lower back pain

- Report By: Saad Bindawas - Rehabilitation Science doctoral student
- Institution: University of Texas Medical Branch
- Date Submitted: 17th March 2008
- Last Modified: 18th April 2008
- Status: Blue (submitted but not checked)

Three Part Question
In [acute low back pain patients presenting with high fear-avoidance of physical activity] is [fear-avoidance-based physical therapy better than standard care physical therapy] in [reducing pain, fear-avoidance beliefs of physical activity and disability]

Clinical Scenario
A 39 year old man referred to the PT clinic with a 3 weeks history of low back pain. There is no history of back pain or work-related back injury. At the L4-L5 level, there is herniated nucleus pulposus without nerve root compromise as shown in the MRI images. He has limitation of lumbar spinal mobility without red flags. He is normally fit and well. He is extremely afraid that any physical activity might damage his back. You wonder how to plan a rehabilitation program that will help to reduce his fear along with pain and risk of disability.

<table>
<thead>
<tr>
<th>Author, date and country</th>
<th>Patient group</th>
<th>Study type (level of evidence)</th>
<th>Outcomes</th>
<th>Key results</th>
<th>Study Weaknesses</th>
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<td>George et. al., 2003 USA</td>
<td>66 patients with low back pain of less than 8 weeks' duration (aged 18 to 55 years). Randomised to either standard care physical therapy (n=32) (G1) or fear-avoidance–based physical therapy (n=34) (G2). Total treatment time was limited to 1 hour per patient per therapy session for 4 weeks. Both groups were comparable in all measured parameters at baseline. Follow-up were conducted at 4 weeks and 6 months after treatment.</td>
<td>PRCT</td>
<td>Pain Intensity (mean). (0-10)</td>
<td>At 4 weeks: 2.6 for G1 vs. 1.9 for G2. Mean Difference = 0.7 (95% CI -0.5 to1.5) <em>p</em> = 0.288. At 6 months: 1.5 for G1 vs. 1.7 for G2. Mean Difference = 0.1 (95% CI -1.2 to 0.9) <em>p</em> = 0.779.</td>
<td>Blinding of the patients and clinicians were not possible in this trial. No adequate follow-up.</td>
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<td>Fear-Avoidance Beliefs Questionnaire about physical activity (FABQ-PA) (mean). (0-24)</td>
<td>At 4 weeks: 14.9 for G1 vs. 10.7 for G2. Mean Difference = 4.2 (95% CI 1.3 to 7.1) <em>p</em> = 0.006. At 6 months: 13.5 for G1 vs. 10.1 for G2.</td>
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<td>Oswestry Disability Questionnaire (ODQ) (mean). (0-100)</td>
<td>Mean Difference = 3.4 (95% CI 0.2 to 6.6) P = 0.037.</td>
<td>At 4 weeks: 21.5 for G1 vs. 17.7 for G2. Mean Difference = 3.8 (95% CI -5.5 to 13.1) P = 0.422. At 6 months: 15.5 for G1 vs. 11.9 for G2. Mean Difference = 3.6 (95% CI -3.5 to 10.8) P = 0.317.</td>
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**Comment(s)**

High fear-avoidance beliefs about physical activity can be determined by scoring 15 or more on the fear-avoidance beliefs questionnaire about physical activity (FABQ-PA). The fear-avoidance-based physical therapy intervention is including a graded exercise program combined with fear-avoidance education that involves the Back Book educational pamphlet. According to this well designed trial, a significant decrease in fear-avoidance beliefs about physical activity was observed in patients receiving the fear avoidance–based physical therapy at 4 weeks and 6 months, respectively. However, this trial has short follow up periods. Future RCTs should attempt to determine outcome over a longer period of time.

**Clinical Bottom Line**

In adult patients with acute low back pain and elevated fear-avoidance beliefs of physical activities the fear-avoidance-based physical therapy intervention is significantly better in reducing fear-avoidance beliefs only when compared to the standard care physical therapy.

http://www.bestbets.org/bets/bet.php?id=1583
Measurement of the Functional Improvement in Patients Receiving Physiotherapy for Musculoskeletal Conditions.

New Zealand Journal of Physiotherapy, 01 July 2006, vol./is. 34/2(50-55), 03037193

Monk C

Purpose: In order to objectively assess whether a clinically significant improvement in a patient's function has occurred, it is important that physiotherapists monitor change in their patients' functional disability.; Methods: This study assessed the difference between the functional disability score (FDS) during the initial assessment with the FDS recorded on discharge, for each patient presenting with low back pain or a lower extremity condition. Two validated FDSs were used: The Roland-Morris Disability Index and the Lower Extremity Functional Scale. Sixty-eight (68) consecutive participants with low back pain or lower extremity conditions completed a functional disability questionnaire on their initial assessment and again on discharge from the clinic following a course of physiotherapy treatment.; Results: The patients' functional disability was reduced by an average of 70%. The mean number of treatments given was 5.1.; Conclusion: A statistically significant improvement was seen in the patients' functional ability following a course of physiotherapy treatment for low back pain or lower extremity conditions. This process provides an objective measurement of functional improvement in individual patients, as well as average improvement across patients with varying presenting conditions. It is hoped this report will encourage other physiotherapists to perform similar studies within their own clinical settings.

Publication Type: journal article
Source: CINAHL
Full Text: Available from EBSCOhost in New Zealand Journal of Physiotherapy

Physical Therapy for Low Back Pain

Bhargava A., Gelb D., Ludwig S., DePalma M.J.

Current Opinion in Orthopaedics, June 2006, vol./is. 17/3(199-207), 1041-9918 (June 2006)

Purpose of review: The aim of this article is to critically review the recently available trials investigating physical therapy for low back pain. Recent findings: A medical literature search was conducted for articles published in 2005 that incorporated the key words of physical therapy, low back pain, and lumbar spine. We included all articles and abstracts on physical therapy for low back pain. Data were compiled for each of the following categories: documentation of technique, number of patients, outcome measures, follow-up intervals, results, and reported complications. The studies were divided into exercise, muscle activity, traction, work related, psychological and social factors, comparison with other treatments, physical therapists, economics, and other studies. Multiple studies addressed the different aspects of physical therapy of the low back, and there were no similarities. The literature had limitations regarding heterogeneous outcome measures and various treatment options. Individually designed programs, including stretching and strengthening and brief pain management techniques, improved pain. Summary: Low back pain continues to be a significant healthcare problem in developed societies. Little consensus has been reached in practice about how to manage persistent disabling low back pain for which the only structural
findings are non-specific. The treatment consists of bed rest, medication, physical therapy, minimally invasive procedures, acupuncture, and surgery. Physical activity programs have proved beneficial. 2006 Lippincott Williams & Wilkins.

Source: EMBASE

Available in fulltext from Current Opinion in Orthopaedics at East Midlands Ovid Archive

**GPs' Options for Patients with Low Back Pain.**
Frost, Helen Pulse, 21 May 2005, vol./is. 65/20(46-49), 00486000
Discusses what general practitioners in Great Britain can do for patients with low back pain. Percentage of the population seeking consultation each year for low back pain; Suggestion to no longer advice bed rest; Effectiveness of physiotherapy; Exercise therapy; Manipulative therapy; Royal College of General Practitioners' guidelines.
Health Business Elite
Available in fulltext from Pulse at EBSCOhost

**Measuring Cost-Effectiveness and Efficiency of Physical Therapy Intervention for Low Back Pain**
Cost-effectiveness and efficiency are important considerations in all decisions in which comparisons are made among alternative diagnostic procedures, treatment interventions, and health care providers. In this article, the measures of cost-effectiveness and efficiency are described relative to the framework of outcomes research. Identification and measurement issues encountered in assessing the cost-effectiveness and efficiency of physical therapy intervention for low back pain are addressed. Activity-based costing (ABC) techniques are suggested as appropriate for efficiency analyses of physical therapy services, and an illustration of ABC applied to a typical physical therapy treatment program for low back pain is included. A discussion of the limitations and research implications of cost analyses concludes the article.
Source: EMBASE

**Mechanical Back Pain**

**The short-term effect of a spinal manipulation on pain/pressure threshold in patients with chronic mechanical low back pain.**
Author(s) Côté P, Mior SA, Vernon H
Source Journal of manipulative and physiological therapeutics
Date of Publication 1994 Jul-Aug Volume 17 Issue 6 Pages 364-8
OBJECTIVE: The purpose of this study was to evaluate the pain/pressure threshold of selected myofascial points in subjects with chronic mechanical back pain after a single manipulation or mobilization.
DESIGN: The study design was a randomized control trial.
SETTING: Chiropractic College outpatient clinic.

PARTICIPANTS: Thirty subjects aged 18-50 yr (mean age 31 yr, SD = 7 yr) with chronic mechanical low back pain (mean duration of pain 74 months, SD = 83 months) were
randomized into two groups. One group received a manipulation and the other received a mobilization.

OUTCOME MEASURE: Pain/pressure threshold of selected myofascial points were measured before, immediately after, and 15 and 30 min postintervention.

RESULTS: Sixteen patients were allocated to the manipulation group and 14 to the mobilization group. Repeated measured analysis of variance for all locations failed to show clinical or statistical significance ($p > .287$). The overall effect between treatments and the interaction between treatment and time was not significant ($p > .268$).

CONCLUSION: The absence of significant changes may be attributed to the selection of myofascial points, the instrument sensitivity to small changes, the differences in baseline measures and the absence of effect from one intervention.


Manual Therapy Is More Effective Treatment Option for the Mechanical Low Back Pain in Middle Age Female Residence of Rural area of Azad Kashmir. M N et al

January-June 2013 International Journal of Rehabilitation Sciences (IJRS) Volume 02, Issue 01

Objectives: The study was done to evaluate the effectiveness of manual therapy in mechanical low back pain in middle age female patients. The study is done to create awareness about the physical therapy among the people living rural area of Azad Kashmir.

Methods: A single blinded randomized controlled trail was done with 42 female patients between 35 to 55 years with mechanical back pain. The patients were selected through convenient sampling technique. From them, 21 were allocated in experimental group and 21 in control group through simple random sampling. Two patients from each group did not complete the study due to unknown reason. Oswestry disability index 2.0, clinical signs and symptoms were taken as parameters to check effectiveness. “F test and t test” methods and Paired Sample t-test and independent sample t-test were used to evaluate the results of the study. Manual therapy included soft tissue manipulation and joint mobilization was performed in experimental group and TENS and hot packs were used to treat the patient allocated in control group.

Results: There was a difference in the pre- and post- therapy treatment in control and experimental groups (. The p-value =0 is less than 0.05, indicating that the difference is actual. The value of t falls in the critical region for t>2.42 with 38 degrees of freedom and two tailed. After completing treatment session it was found that there was a difference in the mean ODI score of both groups. So it was indicated that MT was more effective treatment option than the electro therapy for the management of mechanical low back pain.

Conclusion: It is determined that manual therapy interventions helped treatment of mechanical low back pain in female patients. Particularly when there is a mechanical cause of the back pain the manual therapy has a vital role in its treatment.

Sciatica

Effectiveness of Conservative Treatments for the Lumbosacral Radicular Syndrome: A Systematic Review.


Patients with a lumbosacral radicular syndrome are mostly treated conservatively first. The effect of the conservative treatments remains controversial. To assess the effectiveness of conservative treatments of the lumbosacral radicular syndrome (sciatica). Relevant electronic databases and the reference lists of articles up to May 2004 were searched. Randomised clinical trials of all types of conservative treatments for patients with the lumbosacral radicular syndrome selected by two reviewers. Two reviewers independently assessed the methodological quality and the clinical relevance. Because the trials were considered heterogeneous we decided not to perform a meta-analysis but to summarise the results using the rating system of levels of evidence. Thirty trials were included that evaluated injections, traction, physical therapy, bed rest, manipulation, medication, and acupuncture as treatment for the lumbosacral radicular syndrome. Because several trials indicated no evidence of an effect it is not recommended to use corticosteroid injections and traction as treatment option. Whether clinicians should prescribe physical therapy, bed rest, manipulation or medication could not be concluded from this review. At present there is no evidence that one type of treatment is clearly superior to others, including no treatment, for patients with a lumbosacral radicular syndrome.


Physical Therapy Plus General Practitioners' Care Versus General Practitioners' Care Alone For Sciatica: A Randomised Clinical Trial With A 12-Month Follow-Up.

Luijsterburg PA, Verhagen AP, Ostelo RW, van den Hoogen HJ, Peul WC, Avezaat CJ, Koes BW.

A randomised clinical trial in primary care with a 12-months follow-up period. About 135 patients with acute sciatica (recruited from May 2003 to November 2004) were randomised in two groups: (1) the intervention group received physical therapy (PT) added to the general practitioners' care, and (2) the control group with general practitioners' care only. To assess the effectiveness of PT additional to general practitioners' care compared to general practitioners' care alone, in patients with acute sciatica. There is a lack of knowledge concerning the effectiveness of PT in patients with sciatica. The primary outcome was patients' global perceived effect (GPE). Secondary outcomes were severity of leg and back pain, severity of disability, general health and absence from work. The outcomes were measured at 3, 6, 12 and 52 weeks after randomisation. At 3 months follow-up, 70% of the intervention group and 62% of the control group reported improvement (RR 1.1; 95% CI 0.9-1.5). At 12 months follow-up, 79% of the intervention group and 56% of the control group reported improvement (RR 1.4; 95% CI 1.1; 1.8). No significant differences regarding leg pain, functional status, fear of movement and health status were found at short-term or long-term follow-up.

At 12 months follow-up, evidence was found that PT added to general practitioners' care is only more effective regarding GPE, and not more cost-effective in the treatment of patients with acute sciatica than general practitioners' care alone.
There are indications that PT is especially effective regarding GPE in patients reporting severe disability at presentation.

Cost-Effectiveness of Physical Therapy and General Practitioner Care for Sciatica.

STUDY DESIGN: An economic evaluation alongside a randomized clinical trial in primary care. A total of 135 patients were randomly allocated to physical therapy added to general practitioners' care (n = 67) or to general practitioners' care alone (n = 68).

OBJECTIVE: To evaluate the cost-effectiveness of physical therapy and general practitioner care for patients with an acute lumbosacral radicular syndrome (LRS, also called sciatica) compared with general practitioner care only.

SUMMARY OF BACKGROUND DATA: There is a lack of knowledge concerning the cost-effectiveness of physical therapy in patients with sciatica.

METHODS: The clinical outcomes were global perceived effect and quality of life. The direct and indirect costs were measured by means of questionnaires. The follow-up period was 1 year. The Incremental Cost-effectiveness Ratio (ICER) between both study arms was constructed. Confidence intervals for the ICER were calculated using Fieller’s method and using bootstrapping.

RESULTS: There was a significant difference on perceived recovery at 1-year follow-up in favor of the physical therapy group. The additional physical therapy did not have an incremental effect on quality of life. At 1-year follow-up, the ICER for the total costs was 6224 euros (95% confidence interval, -10,419, 27,551) per improved patient gained. For direct costs only, the ICER was 837 euros (95% confidence interval, -731, 3186).

CONCLUSION: The treatment of patients with LRS with physical therapy and general practitioners' care is not more cost-effective than general practitioners' care alone.

No Abstract

Westeinde Sciatica Trial: Randomized Controlled Study of Bed Rest and Physiotherapy for Acute Sciatica.

OBJECT: The authors conducted a study to compare the efficacies of three nonsurgical treatment strategies in patients with sciatica. Their hypothesis was that bed rest, physiotherapy, and continuation of activities of daily living (ADLs) (control treatment) are each of equivalent efficacy.

METHODS: This randomized controlled trial was designed for comparison of bed rest, physiotherapy, and continuation of ADLs. The setting was an outpatient clinic. General practitioners were asked to refer patients for treatment as soon as possible. The authors enrolled 250 patients (< 60 years of age) with sciatica of less than 1-month's duration and who had not yet been treated with bed rest or physiotherapy. Primary outcome measures were radicular pain (based on a visual analog pain scale [VAPS]) and hampered ADLs.
(Quebec Disability Scale [QDS]). Secondary outcome measures were the rates of treatment-related failure and surgical treatment. Measures were assessed at baseline and during follow up at 1, 2, and 6 months. Mean differences in VAPS and QDS scores between bed rest and control treatment were 2.5 (95% confidence interval [CI] -6.4 to 11.4) and -4.8 (95% CI -10.6 to 0.9) at 1 month and 0.9 (95% CI -8.7 to 10.4) and -2.7 (95% CI -9.9 to 4.4) at 2 months, respectively. The respective differences between physiotherapy and control treatment were 0.8 (95% CI -8.2 to 9.8) and -0.5 (95% CI -6.3 to 5.3) at 1 month and -0.3 (95% CI -9.4 to 10) and 0.0 (95% CI -7.2 to 7.3) at 2 months. The respective odds ratios for treatment failure and surgical treatment of bed rest compared with control treatment were 1.6 (95% CI 0.8-3.5) and 1.5 (95% CI 0.7-3.6) at 6 months. When physiotherapy was compared with control treatment, these ratios were 1.5 (95% CI 0.7-3.2) and 1.2 (95% CI 0.5-2.9) at 6 months, respectively.

CONCLUSIONS: Bed rest and physiotherapy are not more effective in acute sciatica than continuation of ADLs.

Is Physical Therapy Treatment Cost-Effective for Sciatica?
Sciatica, also known as the lumbrosacral radicular syndrome (LRS) can be a painful and disabling problem. Pressure on the nerve as it leaves the spinal cord can lead to the back and leg pain common with sciatica.

A herniated disc is the most likely cause of LRS. But other problems such as tumors or stenosis (narrowing of the spinal canal) can also cause LRS.

In this study, researchers from the Netherlands examine the cost-effectiveness of physiotherapy treatment for sciatica. They compare two groups of patients. All patients had LRS but were divided by treatment.

One group had care with their general practitioner. They were given information and advice. Pain relievers were also prescribed when needed. The second group received physiotherapy. The patients in both groups were treated for up to nine sessions over a period of six weeks.

Results were measured by patient survey. Follow-up took place one year after treatment. Questions about symptoms, cost, and perceived benefits were asked and analyzed. The results showed a significant difference between the two groups.

More patients in the physiotherapy group reported improvement and satisfaction with the results. The extra direct costs of physiotherapy were calculated. The authors concluded that physiotherapy added to general care was not more cost-effective when compared with general care alone.

Factors that were not evaluated in this study included time away from work or change in productivity for each group. Further study is needed to assess if the cost of added treatment is valuable from a productivity point-of-view.