



Best Research Evidence Summary

Education by physiotherapists compared with standard physiotherapy care in reducing pain and improving function for adult chronic specific or non-specific LBP patients

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Course: Evidence Based Practice 3

Period conducted: First half of 2013

Question: What is the evidence of effectiveness of education by physiotherapists for adult patients with chronic specific or non-specific LBP patients in reducing pain and improving function when compared with standard physiotherapy care without education?

Search Strategy: The databases searched were MEDLINE, Embase, PsycINFO, CINAHL, and The Cochrane Library. The table below summarizes the search strategy.

Databases	Search terms				Limits
	P	I	C	O	
MEDLINE Embase PsycINFO	Back pain/ OR Low back pain/ OR Back pain OR LBP	Patient education OR Patient Education as topic/ OR education/	Standard care OR Usual care OR Manual therap* OR Control OR Placebo OR No treatment OR Physiotherapy* OR Physical therap* OR Conservative management OR Non-pharmacological treatment OR Non-surgical	pain AND function*	Human Studies Adult (aged 18+) English language Studies published from 2006
CINAHL	Low* back pain OR LBP AND Chronic OR Long term OR	Patient education			
The Cochrane library	Title, abstract, keywords: Low* back pain AND Chronic				

Key: /MESH headings; *truncation symbol



Clinical effects of the intervention on outcomes

There is substantial evidence to indicate that education is an effective treatment in reducing pain and improving function for adult patients with chronic low back pain. While evidence supports the role of education, there is ambiguity in terms of which education parameters works best. There is emerging evidence for the role of education underpinned by the bio psychosocial approach but more research is required. The aim of the education should be to develop coping strategies for pain, promote health and prevent recurrent episodes of back pain (Ryan et al. 2010). Two of the included studies used a bio psychosocial approach to education and suggested that this was more beneficial than a traditional biomedical approach as it allowed patients an opportunity to understand their condition and pain.

Similarly, it is quite unclear if education is best delivered as a standalone intervention or as a co-intervention. There is limited evidence regarding whether a combination of education and physical treatment is more or less beneficial than education alone. Therefore we recommend that physiotherapists use a combined approach as there is evidence for both education alone and physical treatment alone. There is conflicting evidence regarding the best type of intervention to combine with education. However, we recommend that physiotherapists use an active physiotherapy treatment to improve pain and function rather than a passive intervention to promote self-management.

While there is consistent evidence on the positive outcomes from education, three of the seven included studies were pre-post studies and as a lower level study design they may have confounding factors affecting the results. Overall, the studies supported the review question which indicates that in clinical settings physiotherapists should be advised to include education as part of their treatment of patients with chronic LBP.

Therefore, there is currently consistent evidence to recommend education as a preferred treatment that can also be used in combination with other treatment options for reducing pain and improving function in adults with chronic LBP.

Summary of the best research evidence

Study	Research design	CEBM & CATScores	n [^]	Population (P)/ Intervention (I)/ Comparator (C)	Outcome Measures	Main findings
Cecchi et al. 2010	RCT	CEBM 2 CASP RCT 9	210	P Chronic, non-specific low back pain (LBP). Age 59 ± 14 years I 'Manual Medicine' Spinal manipulation C Back school and individual tailored physiotherapy	Roland Morris Disability Questionnaire & Pain Rating Scale at baseline, 3 wks, 6 & 12 months.	Spinal manipulation had greater functional improvement and long-term pain relief. Pain recurrences and drug intake ↓ compared.
Jaromi et al. 2012	RCT	CEBM 2 CASP RCT 7	124	P Nurses with LBP Age 24-57 years. I Back school & ergonomics training C Passive physiotherapy	VAS and Zebris 3D biomechanical motion analysis system at baseline, 6wks, 6 & 12 months.	Significant decrease in back pain in both groups compared with pre-therapy. Back school group showed better results at 6 and 12 months.
Meng et al. 2011	RCT	CEBM 2 CASP RCT 9	360	P Chronic LBP patients in an inpatient orthopaedic rehabilitation clinic in Germany. Mean age = 49 years. I Biopsychosocial approach back school C 'Traditional' back school program	Primary: Illness knowledge, Secondary: Behavioural and health outcomes (questionnaire designed by authors of study) at baseline, 24 days, 6 & 12 months	Treatment group had greater knowledge about back pain and its treatment. Small-medium effects observed for secondary behavioural outcomes at both 6 and 12 months.
Gaskell, Enright & Tyson 2007	Pre-Post	CEBM 3 aster 6	877	P Chronic LBP. Mean age 50 years. Back rehabilitation program (BRP) consisting of exercise and education I C Nil	VAS, Roland Morris Disability Questionnaire, Hospital Anxiety and Depression scale & 5 minute walk test, step-up test and sit-to-stand test at baseline & 6wks.	Significant improvement in all outcome measures post-BRP.



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Study	Research design	CEBM & CATScores	n [^]	Population (P)/ Intervention (I)/ Comparator (C)	Outcome Measures	Main findings
Yang, Park & Shin 2010	Pre-Post	CEBM 3 McMaster 6	142	P LBP >3 months duration. Mean age 54.1 years I Swedish-type back school and practical guidance on core-stabilization techniques C Nil	Owestry LBP Disability Questionnaire, Brief Pain Inventory, SF-36, trunk muscle strength using isokinetic device, Back Performance Scale, Core Side Bridge Test, Chronic Pain Coping Inventory at baseline & post intervention. Sub group (n=28) followed up at an average of 4.03 ± 1.53 months.	Participants improved significantly in back-specific disability, pain, general health, and quantitative functional tests after 4 weeks.
Ryan et al. 2010	RCT	CEBM 2 CASP RCT 8	38	P Non-specific LBP >3 months. Mean age 45 years I Single 2.5hr education session based on Butler and Moseley & an education booklet C Education and exercise	Roland Morris Disability Questionnaire, numerical rating scale, sit-to-stand test, 5 minute walk test, 50 foot walk test, Tampa Scale of Kinesiophobia, pain self-efficacy questionnaire, step count using activPAL at baseline, 8wks & 3 months	Pain biology education was more effective for pain. No statistically significant effect for remaining secondary outcomes.
Pensri & Janwantanakul 2012	Pre-Post	CEBM 3 McMaster 6	30	P LBP >3 months, Mean age 40.5 ± 6.8 years I Single education session & individualized home exercise program. C Nil.	VAS & Roland-Morris Disability Questionnaire at baseline, 8 weeks, 10, 12, 14 weeks.	The combination of a brief education and an individualized home exercise program gradually reduced pain intensity post-intervention. No significant difference in disability level.



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