

ABSTRAKTA - Centralisation (v anglickém jazyce)

<b>Abstract Title:</b>	Low Back and Referred Pain Response to Mechanical Lumbar Movements in the Frontal Plane.
<b>Summary:</b>	Centralisation can be achieved with end range frontal plane spinal movements in a majority of patients who failed to centralise with sagittal plane movements.
<b>Abstract Content:</b>	Presented at International Society for the Study of the Lumbar Spine Meeting, Heidelberg
<b>Abstract Author:</b>	Donelson RG, Grant WD et al
<b>Journal:</b>	
<b>Biblio:</b>	May 12-16
<b>Year Published:</b>	1991
<b>Category:</b>	Centralisation
<b>Abstract Title:</b>	Use of McKenzie cervical protocol in the treatment of radicular neck pain in a machine operator.
<b>Summary:</b>	Case study of patient with cervical radicular pain, demonstrating centralisation in response to retraction and extension, categorised as derangement and treated with retraction and extension exercises.
<b>Abstract Author:</b>	Rathore S
<b>Journal:</b>	J Can Chiropr Assoc
<b>Biblio:</b>	47:291-297
<b>Year Published:</b>	2003
<b>Category:</b>	Centralisation
<b>Abstract Title:</b>	The centralization phenomenon in chiropractic spinal manipulation of discogenic low back pain and sciatica
<b>Summary:</b>	3 case studies demonstrating value of centralisation. 2 patients displayed centralisation and responded to mobilisation / manipulation treatment. One patient only able to peripheralise came to surgery.
<b>Abstract Content:</b>	OBJECTIVE: To describe 3 cases of discogenic low back pain and leg pain in which the centralization phenomenon was used in determining chiropractic treatment and prognosis. Clinical Features: Three men with low back pain and sciatica, positive straight leg raise, mild neurologic deficits, and evidence of discogenic disease requested chiropractic treatment. Two of the patients exhibited centralization of pain on provocation testing; the third did not. Intervention and Outcome: All patients were treated with chiropractic side-posture manipulation, ancillary therapies, and pain medications. The 2 subjects whose pain centralized had excellent outcomes to treatment. The one whose pain did not centralize had a poor outcome and eventually required surgery. CONCLUSION: Assessment of the centralization phenomenon provided valuable diagnostic and prognostic information regarding chiropractic side-posture manipulation in this case series.
<b>Abstract Author:</b>	Lisi AJ.
<b>Journal:</b>	J Manipulative Physiol Ther
<b>Biblio:</b>	Nov-Dec;24(9):596-602
<b>Year Published:</b>	2001
<b>Category:</b>	Centralisation
<b>Abstract Title:</b>	A prospective trial of mechanical physiotherapy for lumbar disk prolapse
<b>Summary:</b>	Retrospective review of 50 / 150 patients with suspected disc herniation who responded to first 5 daily sessions with centralisation and were then treated with mechanical therapy. Exclusions: 64 disc herniation not confirmed on neuroimaging; 36 referred for surgery. There were immediate reductions in severe pain, and at 1-year high rates of recovery on all outcomes, with 5 patients who came to surgery.
<b>Abstract Author:</b>	Brotz D, Kuker W, Maschke E, Wick W, Dichgans J, Weller M
<b>Journal:</b>	J Neurol
<b>Biblio:</b>	250:746-749
<b>Year Published:</b>	2003
<b>Category:</b>	Centralisation
<b>Abstract Title:</b>	Centralization of low back pain and perceived functional outcome.
<b>Summary:</b>	Of 36 patients 70% centralised within 14-day test period ♦ centralisation was less amongst those with chronic symptoms and those with more referred pain. Centralisation was associated with significantly more improvement on one of the functional outcome measures used.

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<b>Abstract Content:</b>	McKenzie's methods for evaluating and treating low back pain are used often but studied little. When using the McKenzie system, it is important to observe signs of symptom movement to a central location (centralization). This study investigated the relationships between centralization of low back pain and/or radiculopathy and the subjects' rating of functional outcome. Thirty-six subjects with low back pain volunteered to participate and were evaluated and treated by six researchers. Subjects were tested initially and again 14 days after initiation of treatment using the Oswestry Low Back Pain Disability Questionnaire and the Performance Assessment and Capacity Testing Spinal Function Sort (SFS). Symptoms were monitored for the occurrence of "complete centralization." Of the 36 subjects, 25 showed complete centralization within 14 days. The SFS score changes were significantly higher for subjects who completely centralized (p = 0.015). The results supported the hypothesis that subjects who centralize will have improved functional outcome and, thus, quality of life. However, shorter time to occurrence of complete centralization does not necessarily correlate with improved outcome.
<b>Abstract Author:</b>	Sufka A, Hauger B, Trenary M, Bishop B, Hagen A, Lozon R, Martens B.
<b>Journal:</b>	J Orth & Sports Phys Ther
<b>Biblio:</b>	Mar;27(3):205-12
<b>Year Published:</b>	1998
<b>Category:</b>	Centralisation
<b>Abstract Title:</b>	The centralization phenomenon of spinal symptoms - a systematic review
<b>Summary:</b>	Systematic review of 14 studies into centralisation. Prevalence 70% in 731 sub-acute back pain patients and 52% in 325 chronic back pain patients. Centralisation was reliably assessed (kappa values 0.51 to 1.0). Centralisation was consistently associated with good outcomes, and failure to centralise with poor outcomes. Association was confirmed by high quality studies.
<b>Abstract Author:</b>	Aina A, May S, Clare H
<b>Journal:</b>	Manual Therapy
<b>Biblio:</b>	9.134-143
<b>Year Published:</b>	2004
<b>Category:</b>	Centralisation
<b>Abstract Title:</b>	Cervical and referred pain response to repeated end-range testing: a prospective, randomised trial.
<b>Summary:</b>	In patients with neck and referred symptoms 45% had pain reduced or centralised with sagittal plane movements. Of this group 67% had a preference for extension and retraction and 33% had a preference for flexion and protrusion. In the remaining patients 14% showed a preference for extension, but not retraction, and 12% were worse with flexion, but not better with extension.
<b>Abstract Author:</b>	Donelson R, Grant W, Kamps C, Richman P.
<b>Journal:</b>	Nth Am Spine Soc
<b>Biblio:</b>	1997
<b>Year Published:</b>	
<b>Category:</b>	Centralisation
<b>Abstract Title:</b>	The Relationship Between Nonorganic Signs and Centralization of Symptoms in the Prediction of Return to Work for Patients With Low Back Pain
<b>Summary:</b>	Inability to centralize indicated a decreased probability of returning to work, regardless of the Waddell score. A high Waddell score predicted a poor chance of returning to work regardless of the patients' ability to centralize symptoms. Waddell scores appear to be a better predictor of poor outcomes.

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<b>Abstract Content:</b>	Background and Purpose: The purpose of this study was to assess the relationship between the nonorganic signs (Waddell scores) of patients with low back pain, their response to repetitive end-range lumbar spine test movements (centralization of symptoms), and the rate of return to work at a Month follow-up. Subjects: Patients were assessed at five locations of the Canadian Back Institute. A consecutive sample of 126 patients with low back pain, with or without referred leg pain, was selected and reviewed. Methods: Physical therapists assessed patients' responses to repetitive test movements (centralization), as described by McKenzie, and tested the patients for nonorganic signs (Waddell scores). Therapists completed a data sheet that classified patients as either those who centralize their symptoms or those who do not centralize their symptoms and recorded their Waddell scores. Although the patients were classified at assessment, they remained in treatment. All patients followed a structured Canadian Back Institute protocol of active exercise, regardless of centralization status or Waddell score. Results: The inability to centralize symptoms indicated a decreased likelihood of returning to work, regardless of the Waddell score. A high Waddell score predicted a poor chance of returning to work, regardless of the patients' ability to centralize symptoms. Conclusion and Discussion: A high Waddell score appears to be the best predictor of outcome, as indicated by return to work. [Key Words: Centralization, Nonorganic signs, Outcome, Return to work.]
<b>Abstract Author:</b>	Karas, R.; McIntosh, G.; Hall, H.; Wilson, L.; Melles, T.
<b>Journal:</b>	Phys Ther
<b>Biblio:</b>	77:354-360
<b>Year Published:</b>	1997
<b>Category:</b>	Centralisation
<b>Abstract Title:</b>	Categorizing patients with occupational low back pain by use of the Quebec Task Force Classification system versus pain pattern classification procedures: discriminant and predictive validity
<b>Summary:</b>	Re-analysis of previously collected data comparing different methods of classifying back pain patients for their ability to predict outcome. QTF 3 or 4 predicted high levels of pain and disability at intake, but only centralisation / non-centralisation categories predicted pain and disability at discharge. Non-centralisation was stronger predictor of work status at 1 year than fear-avoidance. Predictive value of centralisation / non-centralisation stronger when followed through rehabilitation period, than just at intake.
<b>Abstract Author:</b>	Werneke MW, Hart DL
<b>Journal:</b>	Phys Ther
<b>Biblio:</b>	84:243-254
<b>Year Published:</b>	2004
<b>Category:</b>	Centralisation
<b>Abstract Title:</b>	The centralization phenomenon: its usefulness as a predictor of outcome in conservative treatment of chronic low back pain (a pilot study)
<b>Summary:</b>	A pilot study indicating that centralisation is useful as an outcome predictor in chronic patients. There was a superior outcome comparing centralisers to non-centralisers in an interdisciplinary work-hardening programme.
<b>Abstract Content:</b>	Two-hundred-forty-three patients with chronic low back pain were studied in a prospective comparative survey to determine whether the "centralization phenomenon" was associated with outcome after an interdisciplinary work-hardening program. Patients were classified as either centralizers or noncentralizers, based on results of their initial assessment. Changes in pain ratings, one-time maximal weights lifted, Oswestry scores, and return-to-work status were compared between groups. The centralizers reported significant decreases in their maximum pain ratings (centralizers, 16%; noncentralizers 6%) and had a higher return-to-work rate (centralizers, 68%; noncentralizers, 52%) than the noncentralizers. Centralization can help identify subgroups within the population with chronic low back pain and could be a useful goal setting and case management tool in the rehabilitation of low back pain.
<b>Abstract Author:</b>	Long A
<b>Journal:</b>	Spine
<b>Biblio:</b>	20(23):2513-2521
<b>Year Published:</b>	1995
<b>Category:</b>	Centralisation
<b>Abstract Title:</b>	A descriptive study of the centralization phenomenon. A prospective analysis.

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<p><b>Summary:</b></p>	<p>Of 289 patients with acute neck and back pain 31% centralised during repeated movement testing in the clinic and achieved abolition of symptoms on an average of 4 sessions; 46% showed some centralisation or reduction of symptoms on an average of 8 sessions (partial response); 23% showed no change in symptom site or intensity over an average of 8 sessions. The authors question whether in the partial response group changes were a product of the natural history or exercise programme. Both centralisers and partial responders showed significant improvement in pain intensity and function, whilst the non-response group did not. Assessment of initial pain location was reliably assessed.</p>
<p><b>Abstract Content:</b></p>	<p>STUDY DESIGN: Occurrence and treatment responses associated with the centralization phenomenon were analyzed prospectively in 289 patients with acute neck and back pain with or without referred spinal symptoms. OBJECTIVES: To document symptom changes to mechanical assessment during initial evaluation and during consecutive visits. Using standard operational definitions, patients were categorized reliably into three inclusive and mutually exclusive pain pattern groups: centralization, noncentralization, and partial reduction. It was hypothesized that the occurrence of centralization would be less than previously reported and that the centralization group would have better treatment results. SUMMARY OF BACKGROUND DATA: Centralization has been reported to occur with high frequency during mechanical assessments of patients with acute spinal syndromes. When centralization is observed, a favorable treatment result is expected. Because centralization has not been defined consistently in the literature, the true prevalence and treatment responses associated with centralization have not been confirmed. METHODS: Consecutive patients with neck or back pain syndromes and referred to outpatient physical therapy services were categorized into three pain pattern groups by experienced therapists trained in the McKenzie system. Changes in distal pain location were scored and documented before and after each visit. Maximal pain intensity over 24 hours, perceived functional status, and number of treatment visits were compared between groups. RESULTS: Patients could be categorized reliably according to movement signs and symptoms. The centralization pain pattern group had significantly fewer visits than the other two groups (<math>P &lt; 0.001</math>). Pain intensity rating and perceived function were different between the centralization and noncentralization groups (<math>P &lt; 0.001</math>). There was no difference in treatment response between the centralization and partial-reduction groups (<math>P = 0.306</math>). Prevalence of patients assigned to the three groups was 30.8% in the centralization group, 23.2% in noncentralization, and 46% in the partial-reduction group. CONCLUSION: Categorization by changes in pain location to mechanical assessment and treatment allowed identification of patients with improved treatment outcomes and facilitated planning of conservative treatment of patients with acute spinal pain syndromes. If a proximal change in pain location is not observed by the seventh treatment visit, the results of this study support additional medical evaluation for physical or nonphysical factors that could be delaying quick resolution of the acute episode. NovaCare at Southern Ocean Center for Health, Forked River, New Jersey, USA.</p>
<p><b>Abstract Author:</b></p>	<p>Werneke M, Hart DL, Cook D</p>
<p><b>Journal:</b></p>	<p>Spine</p>
<p><b>Biblio:</b></p>	<p>Apr 1;24(7):676-83</p>
<p><b>Year Published:</b></p>	<p>1999</p>
<p><b>Category:</b></p>	<p>Centralisation</p>
<p><b>Abstract Title:</b></p>	<p>Centralization phenomenon as a prognostic factor for chronic low back pain and disability.</p>
<p><b>Summary:</b></p>	<p>In 225 patients with acute back pain 24 psychosocial, somatic and demographic variables were recorded at initial assessment. Patient outcomes at one year were predicted by a range of independent variables. When all these variables were entered in a multivariate analysis only pain pattern classification (centralisation or partial centralisation v non-centralisation), and leg pain at intake were significant predictors of chronic pain and disability.</p>

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<b>Abstract Content:</b>	<p>STUDY DESIGN: Two hundred twenty-three consecutive adults with acute low back pain with or without referred spinal symptoms were treated conservatively and followed prospectively for 1 year. OBJECTIVES: To investigate the predictive value of centralization phenomenon (CP) with psychosocial variables previously identified as important risk factors for patients with acute onset of nonserious or nonspecific low back pain who subsequently develop chronic pain or disability. SUMMARY OF BACKGROUND DATA: Psychosocial factors have been shown to be predictors of chronic disability, but measures from physical examination rarely predict chronic behavior. The authors of the present study investigated whether dynamic assessment of changes in clinical measures during treatment could be used to classify patients and predict occurrence of chronic pain or disability. METHODS: Patients with acute symptoms and no history of surgery were treated by five physical therapists trained in McKenzie evaluation/treatment methods. Seventy-three percent were receiving workers' compensation benefits. At initial evaluation and discharge, 23 independent variables were assessed representing psychosocial, clinical, and demographic factors. Pain location changes to repeated trunk movements were assessed at every visit. Patients were placed in two groups: 1) those with pain that did not centralize and 2) those who completely centralized or demonstrated partial reduction of pain location with time. Treatment was individualized and based on McKenzie methods. Patients were contacted at 12 months after discharge, and dependent variables of pain intensity, return to work status, sick leave at work, activity interference at home, and continued use of health care were assessed. RESULTS: Nine independent variables influenced pain symptoms or disability. Pain pattern classification (noncentralization) and leg pain at intake were the strongest predictive variables of chronicity. CONCLUSION: Dynamic assessment of change in anatomic pain location during treatment and leg pain at intake were predictors of developing chronic pain and disability.</p>
<b>Abstract Author:</b>	Werneke M, Hart DL.
<b>Journal:</b>	Spine
<b>Biblio:</b>	Apr 1;26(7):758-65
<b>Year Published:</b>	2001
<b>Category:</b>	Centralisation
<b>Abstract Title:</b>	Centralization phenomenon. Its usefulness in evaluating and treating referred pain.
<b>Summary:</b>	The centralisation phenomenon is found to be a reliable predictor of good or excellent treatment outcome. In 87 patients centralisation occurred in 87% - with centralisation occurring in 100% of 59 patients with excellent outcomes.
<b>Abstract Content:</b>	<p>In patients with low-back and radiating leg pain, a clinical phenomenon has been described known as "centralization," which occurs during a mechanical evaluation protocol described by McKenzie. Relocation of the most distal pain in a proximal or central direction characterizes the pain behavior when patients are assessed in this fashion. Centralization typically occurs rapidly and can be maintained. In a review of 87 such patients, centralization occurred in 76 (87%). Its occurrence during initial mechanical evaluation is a very accurate predictor of successful treatment outcome and reliably determines the appropriate direction of treatment exercise. Nonoccurrence of centralization accurately predicts poor treatment outcome and was a helpful early predictor of the need for surgical treatment.</p>
<b>Abstract Author:</b>	Donelson R, Silva G, Murphy K.
<b>Journal:</b>	Spine
<b>Biblio:</b>	Mar;15(3):211-3
<b>Year Published:</b>	1990
<b>Category:</b>	Centralisation
<b>Abstract Title:</b>	Pain response to sagittal end-range spinal motion. A prospective, randomized, multicentered trial.
<b>Summary:</b>	Donelson found that 47% of low back pain patients with or without referred pain displayed a directional preference to end range sagittal spinal movement ♦ 40% preferred extension, 7% preferred flexion.

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<b>Abstract Content:</b>	This article reports a prospective, randomized, multicentered study documenting changes in the intensity and location of low-back and referred pain to repeated end-range lumbar flexion and extension movements performed first while standing and then while recumbent during a single clinical patient evaluation. Significant and rapid changes in central and distal pain intensity and location of peripheral pain resulted from the performance of these movements. For the mean in both protocols, regardless of the order of spinal movements, end-range extension significantly decreased central and distal pain intensity and centralized referred pain. Flexion spinal movements, however, significantly increased mean central and distal pain intensity and peripheralized the pain. Forty percent of individual subjects had a clear preference for extension and 7% a clear preference for flexion.
<b>Abstract Author:</b>	Donelson R, Grant W, Kamps C, Medcalf R.
<b>Journal:</b>	Spine
<b>Biblio:</b>	Jun;16(6 Suppl):S206-12
<b>Year Published:</b>	1991
<b>Category:</b>	Centralisation
<b>Abstract Title:</b>	A comparison of the effects of two sitting postures on back and referred pain.
<b>Summary:</b>	Over a 24-48 hour period 2 groups of patients with back and referred pain were encouraged to sit in lordosis or in a kyphotic posture. Lordotic sitting group had back and leg pain significantly reduced and pain centralised compared to kyphotic group.
<b>Abstract Content:</b>	This study compared the effects of sitting with portable supports in either a kyphotic or lordotic posture on low-back and referred pain. Two hundred ten patients with low-back and/or referred pain were randomly assigned to either a kyphotic posture or lordotic posture group. The kyphotic and lordotic postures were facilitated by the use of a flat foam cushion or lumbar roll, respectively. Pain location, back pain, and leg pain intensity were assessed over a 24-48-hour period under both standardized clinical settings and general sitting environments. When sitting with a lordotic posture, back and leg pain were significantly reduced and referred pain shifted towards the low back. This study demonstrates that in general sitting environments a lumbar roll results in: 1) reductions in back and leg pain; and 2) centralization of pain. These findings do not apply to patients with stenosis or spondylolisthesis, whose symptoms may be aggravated by use of a lumbar roll.
<b>Abstract Author:</b>	Williams MM, Hawley JA, McKenzie RA, van Wijmen PM.
<b>Journal:</b>	Spine
<b>Biblio:</b>	Oct;16(10):1185-91
<b>Year Published:</b>	1991
<b>Category:</b>	Centralisation
<b>Abstract Title:</b>	Discriminant validity and relative precision for classifying patients with non-specific neck and back pain by anatomical pain patterns
<b>Summary:</b>	Re-analysis of data from earlier study comparing prognostic usefulness of classifying patients as centralisers on the first visit compared to during subsequent visits. At first visit 130 (45%) were classified as centralisers, only 4 became non-centralisers, but 43 became partial centralisers. At first visit 157 (55%) were classified as non-centralisers ♦ of these 95 (60%) became partial or full centralisers at later sessions.

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<p><b>Abstract Content:</b></p>	<p>STUDY DESIGN: Secondary analysis of a previously described cohort of prospective, consecutive patients with acute neck or low back pain referred to outpatient rehabilitation was performed. OBJECTIVE: To estimate discriminant validity and relative precision of two classification procedures (first visit vs multiple visit) in discriminating short-term pain intensity and perceived disability outcomes. SUMMARY OF BACKGROUND DATA: Centralization and noncentralization are pain responses used to classify patients and predict outcomes. Different time frames have been proposed for operationally defining these responses, which are problematic for comparing outcomes across clinical trials. Classifying patients according to pain response observed from initial examination (first visit) and over time (multiple visits) influences prevalence within categories and interpretation of classification usefulness, which merits further investigation. METHODS: Patients with acute onset of nonspecific neck or low back pain referred to two outpatient physical therapy clinics completed body pain diagrams, pain intensity ratings, and disability questionnaires at initial evaluation, during each visit, and at discharge. Therapists collected data enabling patient classification on initial examination and throughout treatment. Differences in pain and disability from intake to discharge from rehabilitation across classification categories were used to assess discriminant validity. Relative precision was estimated by determining ratios of analysis of covariance F values between classification procedures for pain and disability. RESULTS: Both classification procedures discriminated categories for change in pain and disability. The multiple-visit classification procedure was more precise for discriminating outcomes than the first-visit classification procedure. CONCLUSION: Multiple-visit classification of patients into specific pain pattern subgroups is recommended when pain intensity and disability outcomes are of interest.</p>
<p><b>Abstract Author:</b></p>	<p>Werneke M, Hart DL:</p>
<p><b>Journal:</b></p>	<p>Spine</p>
<p><b>Biblio:</b></p>	<p>28(2), 161-166</p>
<p><b>Year Published:</b></p>	<p>2003</p>
<p><b>Category:</b></p>	<p>Centralisation</p>