

A centralization and directional preference : a systematic review

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Published version

MAY, Stephen and AINA, A (2012). A centralization and directional preference : a systematic review. *Manual Therapy*, 17 (6), 497-506.

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Table 2. Prevalence – centralisation

Reference	Duration	Symptoms	Centralisation
Brotz et al 2003	Mixed	Disc herniation	50 / 86 (58%)
Broetz et al 2008	Mixed	Disc herniation	8 / 11 (73%)
Browder et al 2007	Mixed	Distal to buttock	63 / 300 (21%)
Bybee et al 2009	Not stated	Referred symptoms	33 / 42 (79%)
Christiansen et al 2009/ 2010	Mixed	37% nerve root	100 / 331 (30%)
Delitto et al 1993	Sub-acute	Back pain	24 / 39 (61.5%)
Donelson et al 1990	Mixed	Referred symptoms	76 / 87 (87%)
Donelson et al 1991	Mixed	Referred symptoms	68 / 145 (47%)
Donelson et al 1997	Chronic	Back pain +/-	31 / 63 (49%)
Erhard et al 1994	Sub-acute	Back pain	13 / 24 (55%)
George et al 2005	Acute	Back pain	14 / 28 (50%)
Karas et al 1997	Mixed	Back pain +/-	92 / 126 (73%)
Kilpikoski et al 2002	Chronic	Back pain +/-	34 / 39 (87%)
Kilpikoski et al 2010	Mixed	Back pain +/-	119 / 134 (89%)
Laslett et al 2005	Chronic	Back pain	22 / 69 (32%)
Laslett et al 2006	Chronic	Back pain	26 / 92 (28%)
Long 1995	Chronic	Back pain	105 / 223 (47%)
Mitchell et al 2001	Mixed	Back pain & sciatica	13 / 15 (87%)
Murphy et al 2009	Mixed	Disc herniation	30 / 49 (61%)
Rapala et al 2006	Not stated	Disc herniation	55 / 98 (56%)
Schmidt et al 2008	Mixed	Back & referred pain	307 ¹ / 793 (39%)
Skikic & Suad 2003	Mixed	Back Pain	21 / 34 (61.5%)
Skytte et al 2005	Sub-acute	Sciatica	25 / 60 (42%)
Sufka et al 1998	Mixed	Back pain	25 / 36 (69%)
Werneke et al 1999	Acute	Back / neck pain	222 ² / 289 (77%)

Werneke et al 2008	Mixed	Back / neck pain	57 / 342 (17%)
Werneke et al 2010	Mixed	Back pain	270 / 628 (43%)
Werneke et al 2011	Mixed	Back pain	197 / 481 (41%)
Young et al 2003	Chronic	LBP	9 / 81 (11%)
Mixed / not stated duration			1584 / 3738 (42.4%)
Acute³			236 / 317 (76.8%)
Sub-acute			62 / 123 (50.4%)
Chronic			227 / 567 (40%)
Neck pain			62 / 168 (36.9%)
TOTAL			2109 / 4745 (44.4%)

Prevalence – directional preference / derangement classification

Hefford 2008	Mixed	Back/neck/thoracic	250 / 340 Der (78%)
Long et al 2004	Mixed	Back pain +/-	230 / 312 DP (74%)
May 2006	Mixed	Spine pain	473 / 607 Der (78%)
Werneke et al 2010	Mixed	Back pain	421 / 628 Der (67%)
Werneke et al 2011	Mixed	Back pain	287 / 481 DP (60%)
TOTAL			1661 / 2368 (70%)

¹ = centralisation and non-lasting centralisation

² = centralisation and partial reduction groups

³ = includes patients with neck pain