

TABLE E-1 The Postoperative Use of Lumbar Bracing/Corset Following Lumbar Spinal Arthrodesis

Primary Author	Year	Journal	Study Type, JBJS Level of Evidence	Country of Origin	Study Size	Surgery Type	Instrumentation Used	Brace/Support Type Used Postoperatively	Duration and Regimen Reported
Fritzell et al. ^{6,7}	2001	Spine (26:2521-34)	Therapeutic, I	Sweden	294	PLF	Yes	Reinforced canvas corset in instrumentation group	5 months (worn at night)
	2002	Spine (27:1131-41)							
Vaccaro et al. ⁸	2005	Spine (30:2709-16)	Therapeutic, II	United States	36	PLF	No	Rigid lumbosacral brace	3 months (when patient out of bed)
Sasso et al. ⁴	2004	Spine (29:113-22)	Therapeutic, I	United States	140	ALIF	Yes	Corset or TLSO sometimes used (no numbers reported)	Not mentioned
Inamdar et al. ⁵	2006	J Orthop Surg [Hong Kong] (14:21-6)	Therapeutic, II	India	20	PLIF/PLF	Yes	Lumbosacral corset	4 months
Zdeblick ⁹	1993	Spine (18:983-91)	Therapeutic, II	United States	124	PLF	Yes	Custom lumbosacral orthosis	3 months (when patient out of bed)
Thomsen et al. ¹⁴	1997	Spine (22:2813-22)	RCT	Denmark	130	PLF	Yes	“External support in custom-made orthosis”	3 months
Chen et al. ¹⁰	2005	Spine (30:2293-7)	Therapeutic, II	Taiwan	74	PLF	Yes	“Lumbar orthosis”	Until fusion documented on dynamic radiographs
Blumenthal et al. ¹¹	2005	Spine (30:1565-75)	Therapeutic, I	United States	304	ALIF/TDR	Yes	TLSO	6 weeks
Carragee ¹²	1997	J Bone Joint Surg Am (79:1175-80)	Therapeutic, II	United States	42	PLF	Yes	Boston-type “wrap around” brace	Full-time at least 6 weeks
Epstein ¹³	2006	J Spinal Disord Tech (19:424-9)	Therapeutic, II	United States	40	PLF	Yes	“Lumbosacral orthoses”	Until fusion documented

RCT = randomized controlled trial. PLIF = posterior lumbar interbody fusion. PLF = posterior lumbar fusion. ALIF = anterior lumbar interbody fusion. TDR = total disc replacement. TLSO = thoracolumbosacral orthosis.

TABLE E-2 Differences in Effect Measures Between Control and Experimental Groups at Baseline Prior to Surgery

Parameter	Mean Difference Estimate (95% Confidence Interval)
DPQ (% Daily Activity Category)	-1.2 (-8.7, 6.2)
DPQ (% Work-Leisure Category)	1.7 (-9.7, 13.0)
DPQ (% Anxiety-Depression Category)	-5.2 (-18.4, 8.0)
DPQ (% Social Category)	1.1 (-11.5, 13.7)
SF-36 (PF Domain)	-1.9 (-10.4, 6.5)
SF-36 (RP Domain)	1.5 (-4.8, 7.7)
SF-36 (BP Domain)	-3.9 (-9.7, 1.9)
SF-36 (GH Domain)	-3.9 (-14.2, 6.4)
SF-36 (VT Domain)	-4.5 (-13.5, 4.5)
SF-36 (SF Domain)	-5.1 (-15.7, 5.6)
SF-36 (RE Domain)	5.7 (-14.0, 25.4)
SF-36 (MH Domain)	-0.3 (-10.0, 9.4)
SF-36 (Physical Component Score)	-1.6 (-4.2, 1.2)
SF-36 (Mental Component Score)	-0.1 (-5.9, 5.7)

DPQ = Dallas Pain Questionnaire. SF-36 = Short Form-36. PF = Physical Functioning. RP = Role Physical. BP = Bodily Pain. GH = General Health. VT = Vitality. SF = Social Functioning. RE = Role Emotional. MH = Mental Health.

TABLE E-3 Differences in Effect Measures Between Control and Experimental Groups One Year Following Surgery

Parameter	Mean Difference Estimate (95% Confidence Interval)
DPQ (% Daily Activity Category)	-6.7 (-19.9, 6.6)
DPQ (% Work-Leisure Category)	-3.8 (-20.8, 13.2)
DPQ (% Anxiety-Depression Category)	-9.4 (-22.4, 3.7)
DPQ (% Social Category)	-6.7 (-21.3, 8.0)
SF-36 (PF Domain)	7.0 (-8.0, 22.0)
SF-36 (RP Domain)	7.8 (-14.7, 30.3)
SF-36 (BP Domain)	1.9 (-11.8, 15.6)
SF-36 (GH Domain)	7.6 (-4.2, 19.4)
SF-36 (VT Domain)	11.6 (-0.4, 23.5)
SF-36 (SF Domain)	7.0 (-7.9, 22.0)
SF-36 (RE Domain)	4.2 (-17.4, 25.7)
SF-36 (MH Domain)	5.9 (-3.0, 14.8)
SF-36 (Physical Component Score)	2.5 (-3.6, 8.6)
SF-36 (Mental Component Score)	3.2 (-2.2, 8.5)

DPQ = Dallas Pain Questionnaire. SF-36 = Short Form-36. PF = Physical Functioning. RP = Role Physical. BP = Bodily Pain. GH = General Health. VT = Vitality. SF = Social Functioning. RE = Role Emotional. MH = Mental Health.

TABLE E-4 Differences in Effect Measures Between Control and Experimental Groups Two Years Following Surgery

Parameter	Mean Difference Estimate (95% Confidence Interval)
DPQ (% Daily Activity Category)	-12.6 (-29.3, 4.0)
DPQ (% Work-Leisure Category)	-13.7 (-31.5, 4.1)
DPQ (% Anxiety-Depression Category)	-8.2 (-23.8, 7.4)
DPQ (% Social Category)	-9.1 (-23.3, 5.2)
SF-36 (PF Domain)	6.0 (-9.6, 21.7)
SF-36 (RP Domain)	8.0 (-17.6, 33.6)
SF-36 (BP Domain)	8.9 (-8.3, 26.1)
SF-36 (GH Domain)	5.9 (-6.8, 18.6)
SF-36 (VT Domain)	8.2 (-4.6, 21.1)
SF-36 (SF Domain)	5.9 (-10.3, 22.1)
SF-36 (RE Domain)	2.2 (-23.0, 27.5)
SF-36 (MH Domain)	3.1 (-7.0, 13.2)
SF-36 (Physical Component Score)	3.5 (-3.6, 10.5)
SF-36 (Mental Component Score)	1.4 (-5.1, 8.0)

DPQ = Dallas Pain Questionnaire. SF-36 = Short Form-36. PF = Physical Functioning. RP = Role Physical. BP = Bodily Pain. GH = General Health. VT = Vitality. SF = Social Functioning. RE = Role Emotional. MH = Mental Health.

TABLE E-5 Differences Between Preoperative and Two-Year Postoperative Effect Measures

Parameter	Mean Difference Estimate (95% Confidence Interval)
DPQ (% Daily Activity Category)	28.5 (20.4, 36.6)*
DPQ (% Work-Leisure Category)	33.6 (23.6, 43.6)*
DPQ (% Anxiety-Depression Category)	17.6 (7.4, 27.7)
DPQ (% Social Category)	26.2 (16.6, 35.7)
SF-36 (PF Domain)	-31.7 (-39.7, -23.6)*
SF-36 (RP Domain)	-36.9 (-47.7, -26.1)*
SF-36 (BP Domain)	-35.0 (-42.7, -27.3)*
SF-36 (GH Domain)	-3.7 (-11.7, 4.4)
SF-36 (VT Domain)	-21.4 (-28.9, -13.8)
SF-36 (SF Domain)	-33.8 (-42.9, -24.7)*
SF-36 (RE Domain)	-22.5 (-38.0, -7.0)
SF-36 (MH Domain)	-14.9 (-21.9, -7.8)
SF-36 (Physical Component Score)	-11.9 (-14.2, -8.7)*
SF-36 (Mental Component Score)	-7.4 (-11.8, -3.1)

*p < 0.05. DPQ = Dallas Pain Questionnaire. SF-36 = Short Form-36. PF = Physical Functioning. RP = Role Physical. BP = Bodily Pain. GH = General Health. VT = Vitality. SF = Social Functioning. RE = Role Emotional. MH = Mental Health.