

TABLE E-1 Characteristics of All Eligible Studies

Study	Sample Size	Results (Positive, Neutral, Negative)	Quality Rating (%)	Study Design (Primary or Meta-analysis)	Journal
Internal fixation vs. arthroplasty					
Söreide ¹¹ (1979)	104	Positive	8	Primary	<i>British Journal of Surgery</i>
Sikorski ¹² (1981)	190	Positive	42	Primary	<i>The Journal of Bone and Joint Surgery Br.</i>
Jensen ¹³ (1984)	102	Negative	50	Primary	<i>Acta Orthopaedica Scandinavica</i>
Svenningsen ¹⁴ (1985)	169	Negative	33	Primary	<i>Nordisk Medicin</i>
Bray ¹⁵ (1988)	34	Positive	25	Primary	<i>Clinical Orthopedics and Related Research</i>
Skinner ¹⁶ (1989)	271	Positive	17	Primary	<i>Injury</i>
van Vugt ¹⁷ (1993)	43	Negative	50	Primary	<i>Archives of Orthopaedic and Trauma Surgery</i>
Lu-Yao ¹⁸ (1994)	1109	Positive	71	Meta-analysis	<i>The Journal of Bone and Joint Surgery Am.</i>
Jónsson ¹⁹ (1996)	47	Positive	58	Primary	<i>Acta Orthopaedica Scandinavica</i>
Neander ²⁰ (1997)	20	Neutral	33	Primary	<i>Archives of Orthopaedic and Trauma Surgery</i>
Johansson ²¹ (2000)	100	Positive	58	Primary	<i>Acta Orthopaedica Scandinavica</i>
Parker ²² (2000)	208	Neutral	75	Primary	<i>Acta Orthopaedica Scandinavica</i>
Ravikumar ²³ (2000)	271	Positive	17	Primary	<i>Injury</i>
van Dortmont ²⁴ (2000)	60	Negative	75	Primary	<i>Annales Chirurgiae et Gynaecologiae</i>
Puolakka ²⁵ (2001)	32	Positive	58	Primary	<i>Annales Chirurgiae et Gynaecologiae</i>
Davison ²⁶ (2001)	280	Positive	58	Primary	<i>The Journal of Bone and Joint Surgery Br.</i>
Parker ²⁷ (2002)	455	Positive	75	Primary	<i>The Journal of Bone and Joint Surgery Br.</i>
Rogmark ²⁸ (2002)	409	Positive	75	Primary	<i>The Journal of Bone and Joint Surgery Br.</i>
Bhandari ³¹ (2003)	1933	Positive	100	Meta-analysis	<i>The Journal of Bone and Joint</i>

					<i>Surgery Am.</i>
Roden ²⁹ (2003)	100	Positive	58	Primary	<i>Acta Orthopaedica Scandinavica</i>
Tidermark ³⁰ (2003)	102	Positive	75	Primary	<i>The Journal of Bone and Joint Surgery Br.</i>
Blomfeldt ³² (2005)	60	Neutral	83	Primary	<i>The Journal of Bone and Joint Surgery Br.</i>
El-Abed ³³ (2005)	102	Negative	42	Primary	<i>Acta Orthopaedica Belgica</i>
Parker ³⁶ (2006)	2694	Positive	100	Meta-analysis	<i>Cochrane Review</i>
Rogmark ³⁴ (2006)	2289	Positive	71	Meta-analysis	<i>Acta Orthopaedica</i>
Keating ³⁵ (2006)	298	Positive	67	Primary	<i>The Journal of Bone and Joint Surgery Am.</i>
Frihagen ³⁷ (2007)	222	Positive	83	Primary	<i>British Medical Journal</i>
Wang ³⁸ (2009)	3109	Positive	100	Meta-analysis	<i>International Orthopaedics</i>
Leonardsson ³⁹ (2010)	409	Positive	75	Primary	<i>The Journal of Bone and Joint Surgery Br.</i>
Arthroplasty vs. hemiarthroplasty					
Dorr ⁴⁰ (1986)	89	Positive	50	Primary	<i>Journal of Arthroplasty</i>
Skinner ¹⁶ (1989)	180	Positive	33	Primary	<i>Injury</i>
Ravikumar ²³ (2000)	180	Positive	33	Primary	<i>Injury</i>
Baker ⁴¹ (2006)	81	Positive	83	Primary	<i>The Journal of Bone and Joint Surgery Am.</i>
Keating ³⁵ (2006)	138	Positive	67	Primary	<i>The Journal of Bone and Joint Surgery Am.</i>
Blomfeldt ⁴² (2007)	120	Positive	83	Primary	<i>The Journal of Bone and Joint Surgery Br.</i>
Macaulay ⁴³ (2008)	40	Positive	75	Primary	<i>Journal of Arthroplasty</i>
Sliding hip screws vs. other forms of fixation					
Svenningsen ⁴⁴ (1984)	255	Positive	50	Primary	<i>Acta Orthopaedica Scandinavica</i>
Nordkild ⁴⁵ (1985)	49	Positive	42	Primary	<i>Injury</i>
Madsen ⁴⁶ (1987)	103	Negative	42	Primary	<i>Acta Orthopaedica Scandinavica</i>
Christie ⁴⁷ (1988)	127	Negative	50	Primary	<i>The Journal of Bone and Joint Surgery Br.</i>
Kuokkanen ⁴⁸ (1991)	33	Neutral	50	Primary	<i>Acta Orthopaedica Belgica</i>
Sorensen ⁴⁹ (1992)	73	Positive	67	Primary	<i>Acta Orthopaedica Scandinavica</i>

Elmerson ⁵⁰ (1995)	222	Neutral	67	Primary	<i>Acta Orthopaedica Scandinavica</i>
Effect of surgical delay in hip fracture patients					
Parker ⁵¹ (1992)	468	Neutral	56	Primary	<i>The Journal of Bone and Joint Surgery Br.</i>
Zuckerman ⁵² (1995)	367	Positive	89	Primary	<i>The Journal of Bone and Joint Surgery Am.</i>
Stoddart ⁵³ (2002)	138	Neutral	56	Primary	<i>ANZ Journal of Surgery</i>
Grimes ⁵⁴ (2002)	8383	Neutral	78	Primary	<i>American Journal of Medicine</i>
Elliott ⁵⁵ (2003)	1780	Positive	67	Primary	<i>Journal of Clinical Epidemiology</i>
Gdalevich ⁵⁶ (2004)	651	Positive	89	Primary	<i>Archives of Orthopaedic and Trauma Surgery</i>
McGuire ⁵⁷ (2004)	18,209	Positive	78	Primary	<i>Clinical Orthopedics and Related Research</i>
Moran ⁵⁸ (2005)	2660	Neutral	89	Primary	<i>The Journal of Bone and Joint Surgery Am.</i>
Weller ⁵⁹ (2005)	57,315	Positive	89	Primary	<i>The Journal of Bone and Joint Surgery Br.</i>
Siegmeth ⁶⁰ (2005)	3628	Neutral	89	Primary	<i>The Journal of Bone and Joint Surgery Br.</i>
Sund ⁶¹ (2005)	16,881	Positive	89	Primary	<i>Quality and Safety in Health Care</i>
Bergeron ⁶² (2006)	977	Neutral	67	Primary	<i>Journal of Trauma</i>
Bottle ⁶³ (2006)	129522	Positive	89	Primary	<i>British Medical Journal</i>
Novack ⁶⁴ (2007)	4633	Positive	89	Primary	<i>International Journal for Quality in Health Care</i>
Rae ⁶⁵ (2007)	222	Neutral	100	Primary	<i>ANZ Journal of Surgery</i>
Verbeek ⁶⁶ (2008)	192	Positive	56	Primary	<i>International Orthopaedics</i>
Sebestyén ⁶⁷ (2008)	3777	Neutral	89	Primary	<i>International Orthopaedics</i>

TABLE- E-2 Electronic Search Strategy

MEDLINE	Embase
exp Hip Fractures/ ((hip\$ or femur\$ or femoral\$ or trochant\$ or pertrochant\$ or intertrochant\$ or subtrochant\$ or intracapsular\$ or extracapsular\$) adj4 fracture\$).tw.	exp Hip Fractures/ ((hip\$ or femur\$ or femoral\$ or trochant\$ or pertrochant\$ or intertrochant\$ or subtrochant\$ or intracapsular\$ or extracapsular\$) adj4 fracture\$).tw.
1 or 2	1 or 2
Internal Fixators/ or Bone Plates/ or Fracture Fixation, Internal/ or Bone Screws/	exp fracture fixation/
(pin\$ or nail\$ or screw\$ or plate\$ or fix\$).tw.	exp osteosynthesis/
Arthroplasty/or Arthroplasty, Replacement, Hip/	(pin\$ or nail\$ or screw\$ or plate\$ or fix\$).tw.
(arthroplast\$ or hemiarthroplast\$ or prosthes\$).tw.	arthroplasty/ or hip arthroplasty/
4 or 5	(arthroplast\$ or hemiarthroplast\$ or prosthes\$).tw.
6 or 7	4 or 5 or 6
3 and 8 and 9	7 or 8
limit 10 to (humans and randomized controlled trial)	3 and 9 and 10
	limit 11 to human
	randomized controlled trial/
	12 and 13

TABLE -E-3 The Oxman-Guyatt Index*

Index of Scientific Quality for Research Overviews						
1. Were the search methods used to find evidence (original research) on the primary question or questions stated?						
No		Partially		Yes		
2. Was the search for evidence reasonably comprehensive?						
No		Can't tell		Yes		
3. Were the criteria used for deciding which studies to include in the overview reported?						
No		Partially		Yes		
4. Was bias in the selection of studies avoided?						
No		Can't tell		Yes		
5. Were the criteria used for assessing the validity of the included studies reported?						
No		Partially		Yes		
6. Was the validity of all of the studies referred to in the text assessed with use of appropriate criteria (either in selecting the studies for inclusion or in analyzing the studies that were cited)?						
No		Can't tell		Yes		
7. Were the methods used to combine the findings of the relevant studies (to reach a conclusion) reported?						
No		Partially		Yes		
8. Were the findings of the relevant studies combined appropriately relative to the primary question that the overview addresses?						
No		Can't tell		Yes		
9. Were the conclusions made by the author or authors supported by the data and/or analysis reported in the overview?						
No		Partially		Yes		
10. How would you rate the scientific quality of this review?						
Extensive flaws		Major flaws		Minor flaws		Minimal flaws
1	2	3	4	5	6	7

*Reprinted, with modification, from: Dijkman BG, Abouali JA, Kooistra BW, Conter HJ, Poolman RW, Kulkarni AV, Tornetta P 3rd, Bhandari M. Twenty years of meta-analyses in orthopaedic surgery: has quality kept up with quantity? J Bone Joint Surg Am. 2010;92:48-57.