

**Appendix A. Subjective Findings (Pain, Patient-Reported Outcomes, and Satisfaction)
before and after Proximal Interphalangeal Joint Implant Arthroplasty**

Authors	Evaluation	Preop Pain	Postop Pain	Evaluation	Pre PRO	Post PRO	Satisfaction
Silicone with volar approach							
Proubasta et al. ⁹	VAS (0-10)	7.2	0.4	quick DASH	N/A	7	all patients satisfied
Lautenbach et al. ¹⁰		N/A	only one patient had pain	N/A			4 (11%) patients dissatisfied
Bouacida et al. ¹²	VAS (0-10)	6.5	0.7	DASH	N/A	35	47% very satisfied, 21% satisfied, 21% fairly satisfied, 4% dissatisfied, 7% very dissatisfied
Herren et al. ³¹	significant, occasionally, none	N/A	2 significant, 3 occasionally, 33 none	N/A			92% good, 8% satisfactory, 0% poor
Lin et al. ¹¹		N/A	97% relieved of pain	N/A			N/A
Schneider ⁴⁴		N/A	the joints were painless	N/A			N/A
Silicone with lateral approach							
Merle et al. ¹³	VAS (0-10)	5.1	1.9	quick DASH	69.2	12.3	47% were not satisfied with cosmetic appearance
Stahlenbrecher et al. ¹⁴	painless, load pain, rest pain	0 painless, 29 load pain, 15 rest pain	37 painless, 11 load pain, 0 rest pain	N/A			59% very satisfied, 26% satisfied, 15% dissatisfied

Hage et al. ¹⁵		N/A	VAS (0-100) for daily function and ADL	N/A	72.1	N/A	
Silicone with dorsal approach							
Daecke et al. ²¹	VAS (0-10) at rest, at maximal hand effort	3.9, 8.1	0.3, 0.7	DASH	57	19	N/A
Namdari et al. ⁴⁷	VAS (0-10)	N/A	1.5	MHQ	N/A	87 (total score)	88 (MHQ satisfaction), 6/11 very satisfied, 4/11 somewhat satisfied, 1/11 somewhat dissatisfied
Herren et al. ³¹	significant, occasionally, none	N/A	5 significant, 1 occasionally, 15 none	N/A		62% good, 19% satisfactory, 19% poor	
Mathoulin et al. ³³		3 permanent pain, 18 incapacitating	18 no pain, 3 moderate pain, 0 permanent pain, 0 incapacitating	N/A		6 very satisfied, 13 improve, 2 worse	
Silva et al. ³⁴		N/A	no pain in all	N/A		N/A	
Cesari et al. ³⁵		N/A	19 no pain, 7 climatic pain, 1 moderate pain [#]	N/A		N/A	
Pellegrini et al. ⁴		N/A	no pain in all	N/A		only one patient was unhappy	

Swanson et al. ⁷		N/A	pain relief by 98.3%	N/A			N/A
Surface replacement with volar approach							
Jennings et al. ³²		N/A	5 better, 1 worse	N/A			69% very satisfied, 21% fairly satisfied, 10% not satisfied ^{##}
Stoecklein et al. ²⁶	Scale of 1 to 5	N/A	2 (40%) patients occasional pain at a level of 3, and 3 (60%) reported a level of 2 or less	DASH	N/A	14	N/A
Surface replacement with dorsal approach							
Jennings et al. ³²		N/A	26 better, 1 unchange, 7 worse	N/A			69% very satisfied, 21% fairly satisfied, 10% not satisfied ^{##}
Lawson-Smith et al. ⁴⁸		N/A	none of the patients complained of significant pain	DASH	N/A	28	all patients would have the surgery again
Vogt et al. ⁴⁹	VAS (0-10)	7.3	1.4	N/A			7.5 (VAS 0-10)
Daecke et al. ²¹	VAS (0-10) at rest, at maximal hand effort	4.7, 6.8	0.5, 3.9	DASH	65	42	N/A
Amirtharajah et al. ²⁷	MHQ (0-100)	N/A	22	DASH	N/A	17	70 (MHQ satisfaction)
Luther et al. ⁵⁰	Pain free at	N/A	84%, 42% of	DASH	N/A	24*	70% satisfied

	rest, on exercise		patients				
Johnstone et al. ⁵¹	VAS (0-10)	6.5	1	N/A			N/A
Dickson et al. ²³	VAS (0-10) at 2y, 5y	N/A	0 (2y), 2 (5y)	PEM, DASH at 2y, 5y	N/A	34 (2y), 33 (5y), 22 (2y), 35 (5y)	8 (2y), 7 (5y) (VAS 0-10)
Tagil et al. ³⁷	VAS (0-10) at rest, during activity	3.4, 6.3	0.5, 2.0	DASH, COPM performance	42, 4.5	28, 6.1	5.9 (COPM satisfaction)
Reissner et al. ⁴²	VAS (0-10)	7.6	1.4 (2y), 0.7 (10y)	DASH, PRWE	N/A	24 (2y), 21 (10y), 20 (2y), 19 (10y)	N/A
Daecke et al. ²¹	VAS (0-10) at rest, at maximal hand effort	6, 8.1	0.2, 2.7	DASH	68	48	N/A
Desai et al. ⁵²	VAS (0-10)	8	2	DASH	N/A	30	4 (Likert Scale 1-5)
Heers et al. ²⁸	VAS (0-10)	N/A	38% free of pain	N/A			9/10 satisfied
Ono et al. ²⁰	MHQ (0- 100)	66	33	MHQ (overall)	43	63	51 (MHQ satisfaction)
McGuire et			pain relief was	N/A			4.2 (Likert Scale 1-5)

al. ⁵³			excellent				
Mashhadi et al. ⁵⁴	VAS (0-10)	N/A	0.9	N/A			all patients would recommend the procedure to a friend
Hutt et al. ²⁹	VAS (0-10) at rest, on active motion	4.2, 8.6	0, 0	N/A			N/A
Sweets et al. ¹⁹	VAS (0-10)	N/A	3	MHQ (total score)	N/A	53 (involved hand)	3.4 points on a 5-point Likert scale, 48 (MHQ satisfaction)
Meier et al. ⁵⁵	VAS (0-10) at rest, on weight bearing	N/A	0.9 at rest, 2.8 on weight bearing	N/A			16/20 satisfied
Bravo et al. ³⁸	VAS (0-10)	6	1	N/A			27/34 satisfied
Nunley et al. ³⁶	VAS (0-10)	6	4	DASH	32	35	3 very dissatisfied, 1 moderate dissatisfied, 1 moderate satisfied
Wesemann et al. ⁵⁶	VAS (1-5)	N/A	80% of patients improved	DASH	N/A	29.5	most patients were well satisfied
Pettersson et al. ³⁹	VAS (0-10) at rest, after repeated movement, after lifting, maximum pain	3.0, 4.5, 6.3, 7.2	0.8, 1.9, 2.7, 3	COPM for performance	3.8	6.3	6.6 (COPM satisfaction)

Schindele et al. ⁴⁰	NRS (0-10)	7.9	1.1	quick DASH, PEM	43, 51	15, 25	N/A
Flannery et al. ⁴¹	VAS (0-10)	5.4	1.2	MHQ, quick DASH, PEM	39, 42, 54	61, 34, 38	N/A

including patients with other implants. ## mixed results with volar and dorsal approach. * median value.

PIP-proximal interphalangeal. VAS, Visual Analogue Scale. NRS, Numerical Rating Scale. ADL, Activities of Daily Living. DASH, Disabilities of the Arm, Shoulder and Hand. MHQ, The Michigan Hand Outcomes Questionnaire. PEM, Patient Evaluation Measure. COPM, Canadian Occupational Performance Measure. PRWE, Patient-Rated Wrist Evaluation. y, year. N/A, not available.