

Supplementary data

Table 1. Preoperative data and postoperative results for the “young” and “old” groups. The p-values for comparisons between pre- and postoperative values were < 0.001 for all variables. Values are points unless otherwise indicated

Age group Variable	Preoperatively			Postoperatively			95% CI of difference
	Mean	SD	Range	Mean	SD	Range	
Young							
CS	28	13	5 to 66	60	20	12 to 85	27–37
CS%	31	14	5 to 72	67	23	15 to 100	30–42
Pain	3	3	0 to 10	11	4	0 to 15	7–9
Activity	8	3	0 to 18	16	5	2 to 25	6–9
Mobility	14	7	2 to 38	28	10	6 to 40	11–16
Strength	3	4	0 to 20	6	5	0 to 20	2–4
Flexion (°)	82	30	20 to 160	133	40	40 to 180	41–61
Abduction (°)	72	29	20 to 160	126	44	40 to 180	43–64
Ext. rotation (°)	9	16	–30 to 70	35	21	0 to 80	21–31
Old							
CS	25	12	2 to 61	60	18	9 to 91	33–36
CS%	30	14	3 to 74	72	22	11 to 112	39–44
Pain	3	3	0 to 15	12	4	0 to 15	9–10
Activity	8	3	0 to 23	16	4	3 to 25	8–9
Mobility	13	7	0 to 36	27	10	2 to 40	13–15
Strength	2	3	0 to 20	4	4	0 to 20	2–3
Flexion (°)	79	32	0 to 170	131	42	20 to 180	47–56
Abduction (°)	70	31	0 to 170	123	44	15 to 180	48–58
Ext. rotation (°)	8	15	–50 to 80	37	21	–15 to 90	27–32

Table 2. The differences between preoperative and postoperative values for TSA and HA. Values are points unless otherwise indicated

Variable	TSA (n = 282)			HA (n = 214)			TSA vs. HA p-value
	Mean	SD	p-value	Mean	SD	p-value	
CS	40	17	< 0.0001	26	21	< 0.0001	< 0.0001
CS%	48	21	< 0.0001	31	25	< 0.0001	< 0.0001
Pain	10	4	< 0.0001	8	5	< 0.0001	< 0.0001
Activity	10	5	< 0.0001	6	5	< 0.0001	< 0.0001
Mobility	17	9	< 0.0001	10	11	< 0.0001	< 0.0001
Strength	3	4	< 0.0001	2	6	< 0.0001	0.04
Flexion (°)	65	44	< 0.0001	34	46	< 0.0001	< 0.0001
Abduction (°)	68	46	< 0.0001	34	48	< 0.0001	< 0.0001
Ext. rotation (°)	33	22	< 0.0001	23	24	< 0.0001	< 0.0001

Table 4. The differences between preoperative and postoperative values for for the different diagnoses. Values are points unless otherwise indicated

Diagnosis Variable	Difference between pre- and postoperative value		
	Mean	SD	p-value
Posttraumatic OA (n = 78)			
CS	29	22	< 0.0001
CS%	34	26	< 0.0001
Pain	8	5	< 0.0001
Activity	7	6	< 0.0001
Mobility	12	11	< 0.0001
Strength	3	5	< 0.0001
Flexion (°)	37	48	< 0.0001
Abduction (°)	41	48	< 0.0001
External rotation (°)	24	25	< 0.0001
Rheumatoid arthritis (n = 13)			
CS	37	18	< 0.0001
CS%	47	22	< 0.0001
Pain	8	5	< 0.0001
Activity	10	6	< 0.0001
Mobility	17	11	< 0.0001
Strength	2	5	0.1
Flexion (°)	68	53	0.001
Abduction (°)	58	55	0.003
External rotation (°)	37	21	< 0.0001
Primary OA (n = 339)			
CS	36	19	< 0.0001
CS%	43	23	< 0.0001
Pain	9	5	< 0.0001
Activity	9	5	< 0.0001
Mobility	16	10	< 0.0001
Strength	3	5	< 0.0001
Flexion (°)	58	44	< 0.0001
Abduction (°)	61	46	< 0.0001
External rotation (°)	30	23	< 0.0001
Cuff tear arthropathy (n = 36)			
CS	22	21	< 0.0001
CS%	27	25	< 0.0001
Pain	8	5	< 0.0001
Activity	6	6	< 0.0001
Mobility	6	12	0.003
Strength	2	4	0.03
Flexion (°)	18	52	0.05
Abduction (°)	15	58	0.1
External rotation (°)	18	25	0.0001
Avascular necrosis (n = 30)			
CS	34	16	< 0.0001
CS%	41	20	< 0.0001
Pain	9	4	< 0.0001
Activity	8	5	< 0.0001
Mobility	13	8	< 0.0001
Strength	3	5	0.007
Flexion (°)	52	52	< 0.0001
Abduction (°)	45	53	< 0.0001
External rotation (°)	30	27	< 0.0001