

TABLE E-1 Coding of the Candidate Risk Factors for Recurrent Instability After a Primary Glenohumeral Dislocation

Variable	Categories
Occupation	Sedentary work or unemployed Light work Medium work Heavy work Very heavy work
Gender	Male Female
Age cohort	15 to 20 years 21 to 25 years 26 to 30 years 31 to 35 years
Dislocation side	Left Right
Handedness	Left Right
Dislocation of dominant shoulder	Dominant Non-dominant
Injury mechanism	Fall from less than 2 meters Fall from more than 2 meters Sporting injury Motor vehicle accident Assault Seizure Other
Previous instability of other shoulder	Yes No
History of dislocation in first degree relatives	Yes No
Evidence of generalized ligamentous laxity	Beighton score of 4 or more (hyperlaxity) Beighton score less than 4
Medical comorbidity	Present Absent
Compensation claim	Yes No
Level of risk of main sport played	Nil Non-contact/general fitness sports Contact or overhead sports
Level of participation in sport	Nil Occasional/social Regular amateur Professional
Return to sport at three months after the primary dislocation	Did not return to sports Played at reduced level Returned to full sports
Return to work or full activities of daily living at six weeks	Did not return Returned
Associated greater tuberosity fracture	Present Absent
Associated nerve palsy	Present Absent
Associated glenoid rim fracture	Present Absent
Size of Hill-Sachs lesion	Berganeau Grade I Berganeau Grade II Berganeau Grade III

TABLE E-2 The Functional Scores and Range of Shoulder Movement in the 54 Patients Who Underwent Assessment at Two Years After Dislocation (for Patients Who Had Not Had Recurrent Instability) or Instability Surgery (for Patients Who Had Operative Treatment for Recurrent Instability)*

Measurement	Total cohort (N=54)	Nonoperatively treated pts (Group I, N=23)	Operatively-treated pts (Group II, N=31)	P value
Mean percentage deficit in WOSI score	30.6 (23.4 to 37.9)	31.6 (18.8 to 44.4)	29.9 (21.5 to 38.4)	0.83
Mean percentage deficit in DASH score	5.6 (3.8 to 7.4)	5.7 (2.6 to 8.7)	5.6 (3.4 to 7.8)	0.97
Mean percentage deficit in range of motion compared with the contralateral shoulder				
Abduction	2.4 (1.1 to 3.7)	1.3 (0.1 to 2.8)	3.2 (1.3 to 5.1)	0.14
Flexion	1.8 (0.5 to 3.1)	0.9 (0.1 to 2.1)	2.5 (0.5 to 4.5)	0.17
External rotation (arm at side)	8.1 (4.5 to 11.6)	3.9 (0.2 to 7.6)	11.1 (5.7 to 16.5)	0.04†
External rotation (90° abduction)	6.1 (3.1 to 9.0)	3.1 (0.1 to 6.0)	8.3 (3.8 to 12.8)	0.07
Internal rotation (90° abduction)	6.5 (3.5 to 9.5)	4.6 (0.3 to 9.0)	7.9 (3.8 to 12.0)	0.29

*The mean WOSI (Western Ontario Shoulder Index) and DASH (Disabilities of the Arm, Shoulder and Hand) scores are expressed as a percentage deficit compared with normal function, whereas the mean ranges of shoulder movement are expressed as a percentage of the contralateral shoulder. The 95% confidence intervals are shown in parentheses. The p values refer to the unpaired t test comparisons of the operatively treated and non-operatively treated groups. †The difference was significant ($p < 0.05$).

TABLE E-3 Summary of the Previously Published Studies on the Rate of Recurrent Instability After a First-Time Traumatic Anterior Glenohumeral Dislocation

Study	Age range (years)	Number of patients with recurrence	Number of patients with primary dislocation	Recurrence rate (percent)	Follow-up period (average in years)
McLaughlin and Cavallaro ¹ (1950)	Under 20	7	9	78	At least 6 months
	20 to 40	10	20	50	
Rowe ² (1956)	Under 20	47	57	83	4.8
	20 to 40	84	134	63	
Kazar and Relovszky ³⁸ (1969)	Under 20	13	28	46	Not stated
	21 to 40	11	35	31	
Kiviluoto et al. ²⁶ (1980)	16 to 20	10	18	56	1
	21 to 30	9	35	26	
Yoneda et al. ²⁵ (1982)	Average 21.5	18	104	17	13
Henry and Genung ²⁸ (1982)	12 to 32	106	121	88	Not stated
Simonet and Cofield ³ (1984)	Under 20	21	32	66	4.6
	20 to 40	17	43	40	
Aronen and Regan ¹² (1984)	18 to 22	5	20	25	3
Wheeler et al. ¹¹ (1989)	17 to 22	35	38	92	Minimum 1
Hoelen et al. ⁴ (1990)	Under 30	35	55	64	4
Marans et al. ²⁹ 1992	Under 16	21	21	100	6.6
Vermeiren et al. ³¹ (1993)	Under 20	15	22	68	4.5
	21 to 30	13	28	46	
Arciero et al. ³² (1994)	18 to 21	12	15	80	2
Sandow and Liu ³⁵ (1996)	14 to 26	17	20	85	1.4
Hovellius et al. ²⁷ (1996)	12 to 40	118	247	48	10
Kirkley et al. ⁸ (1999)	16 to 30	11	19	58	Minimum 2
Postacchini et al. ³⁰ (2000)	12 to 17	24	28	86	7.1
DeBerardino et al. ³⁶ (2001)	17 to 23	4	6	67	1.4
Larrain et al. ³⁴ (2001)	17 to 27	17	18	94	5.6
Bottoni et al. ³³ (2002)	19 to 26	9	12	75	3
Kralinger et al. ⁵ (2002)	0 to 20	2	12	17	3.6
	21 to 30	19	31	61	
Deitch et al. ⁶ (2003)	11 to 18	24	32	75	4
Chroustovsky et al. ³⁷ (2003)	Under 30	13	20	65	2.2
te Slaa et al. ³⁹ (2003)	Under 20	9	14	64	5.9
	20 to 40	16	43	37	
Total		772	1337	58	