Bijlagen bij de conceptrichtlijn schouderluxaties

Inhoudsopgave

Module 1: Primaire diagnostiek

Evidence tabel
Niet van toepassing.

Risk of bias tabel
Niet van toepassing.

Exclusie tabel
Niet van toepassing.

Zoekverantwoording
Niet van toepassing.

Module 2: Prognostische factoren

Evidence tabel

Study reference	Study characteristics	Patient characteristics	Prognostic factor(s)	Follow-up	Estimates of prognostic effect
Olds (2015)	Type of study: Systematic review. Setting and country: Not reported. Studies: A: Hoelen (1990) B: Kralinger (2002) C: Pevny (1998) D: Robinson (2006) E: Sachs (2007) F: Safran (2010) G: Salomonsson (2009) H: Simonet and Cofield (1984) I: te Slaa (2003) J: Vermeiren (1993) Funding: This research received no specific grant from any funding agency in the public, commercial or not-for-profit sectors. Conflicts of interest: None declared.	Inclusion criteria: • Prospective and retrospective studies, which investigated risk factors for developing recurrent instability following a first-time traumatic anterior shoulder dislocation; • Cohort studies; • If the subluxation or dislocation was confirmed by either radiological evidence of clinical testing; • Rate of recurrence was documented as an outcome measure. • Follow-up of one year or more; • Studies published before 1 July 2014. Exclusion criteria: • Follow-up period less than 12 months; • Studies that reported posterior, multidirectional or atraumatic shoulder instability; • Patients that were under the age of 15 years. • Studies which investigated risk factors of recurrent instability following surgical intervention; • Studies which compared alternative surgical interventions. N: A: N = 168 B: N = 241 C: N = 52 D: N = 252 E: N = 131 F: N = 52 G: N = 51 H: N = 116 I: N = 107	Describe prognostic factor(s) and method of measurement: • Age; • Sex; • Mechanism of injury; • Pathological features: ○ tuberculum fractures; ○ bony Bankart lesion; ○ Hill Sachs lesion; ○ Nerve palsy • Occupation; • Apprehension test	Duration or endpoint of follow-up: One year (or longer). For how many participants were no complete outcome data available? None. Reasons for incomplete outcome data described? Not applicable.	**1. Age and recurrent instability** *15-40 vs >40 years of age:* Reported in 10 studies (A; B; C; D; E; F; G; H; I; J). OR = 13.46 (95% CI 5.25 to 34.49), Z=5.41, P<0.001, I^2=63.18. Increased risk of recurrence for those aged 40 or below. **2. Sex and recurrent instability** Reported in 7 studies (A; C; D; F; H; I; J). Overall recurrence rate of 46.84% in men compared with 27.22% in woman. Reported in 6 studies (A; C; D; H; I; J) OR = 3.18 (95% CI 1.28 to 7.89), Z=2.49, P=0.01, I^2=75.33. Men were found to be over three times more at risk or recurrent instability. **3. Greater tuberosity fractures and recurrent instability** Reported in 7 studies (A; B; C; D; G; I; J). OR = 0.135 (95% CI 0.061 to 0.296), Z=-4.992, P<0.001, I^2=0.00. People with a greater tuberosity fracture were over seven times less likely to suffer from recurrent instability compared with those without a fracture. **4. Bony Bankart lesions and recurrent instability** Reported in 4 studies (A; C; G; J). OR = 0.512 (95% CI 0.172 to 1.527), Z=-1.201, P=0.230, I^2=19.6 The presence of a Bony Bankart lesion was found to have a protective effect against recurrent instability, although this was not significant. **5. Hills Sachs lesion and recurrent instability** Reported in two studies (A; G).

		J: N = 154 <u>Age (range):</u> A: 15-94 years B: 13-86 years C: 40-79 years D: 15-35 years E: 20-82 years F: 17-27 years G: 17-69 years H: 20-96 years I: 20-88 years J: 15-85 years <u>Sex: N = M/F</u> A: 96/72 B: 176/65 C: 40/12 D: 225/27 E: 102/29 F: 52/0 G: 42/9 H: 82/34 I: 69/38 J: 82/72 <u>Potential confounders or effect modifiers:</u> No.			OR = 1.55 (95% CI 0.14 to 17.63), Z=-0.356, P=0.72, I^2=61.51. People are 1.55 times more likely to have recurrent instability in the presence of a Hill Sachs lesions compared with people who do not have a Hill Sachs lesion. **6. Nerve palsy and recurrent instability** Reported in two studies (C; D). OR = 0.401 (95% CI 0.043 to 3.762), Z=-0.800, P=0.424, I^2=45.57. People with a nerve palsy are 2.49 times less likely to suffer from recurrent instability in the presence of a nerve palsy. **7. Hyperlaxity and recurrent instability** Reported in two studies (D; G). OR = 2.678 (95% CI 1.332 to 5.385), Z=2.764, P=0.0057, I^2=0.00. **8. Predictive ability apprehension test at 6 weeks after dislocation on recurrent instability** Reported in 1 study (F). OR = 4.286 (95% CI 1.129 to 16.266), P=0.03). A negative apprehension test was significantly related to recurrent instability. However, the test was not significant in predicting length of time to dislocation.
Leroux (2013)	<u>Type of study:</u> Cohort study. <u>Setting and country:</u> Public health system of Ontario, Canada. <u>Funding and/or conflicts of interest:</u> One or more of the authors has declared the following potential conflict of interest or source of funding: T.L.: recipient of a 2013 OTA Resident Research Grant (Principle Investigator). C.V.: consultant, Association	<u>Inclusion criteria:</u> • Patients with an Ontario Health Insurance Plan (OHIP) physician fee code for a shoulder closed reduction. <u>Exclusion criteria:</u> • Patients less than 16 years old and non-Ontario residents; • Index events identified as a posterior shoulder dislocation or associated with a humeral neck fracture; • Persons with a history of shoulder dislocation, shoulder arthroplasty, or shoulder stabilization surgery dating back to July 1991 (start of OHIP). N = 20,719 Mean age ± SD: 37.39 (16.62) years	<u>Describe prognostic factor(s) and method of measurement:</u> Age; Sex; Tuberosity fracture.	<u>Duration or endpoint of follow-up:</u> Not reported. <u>For how many participants were no complete outcome data available?</u> N (%): 0 <u>Reasons for incomplete outcome data described?</u> Not applicable.	**1. Age and repeated closed reduction** HR = 0.97 (95% CI 0.97 to 0.98), P<0.001 **Sex and repeated closed reduction** HR = 1.26 (95% 1.16 to 1.36), P<0.001. Men have a 1.26 higher risk for repeated closed reduction compared to women. **2. Concurrent tuberosity fracture and repeated closed reduction** HR = 0.71 (95% CI 0.53 to 0.95), P=0.021 **3. Orthopaedic surgeon vs other and repeated closed reduction** HR = 0.76 (95% CI 0.64 to 0.90), P=0.002.

	of Bone and Joint Surgeons; grants, Biomet and Smith & Nephew; payment for lectures, Smith & Nephew and Stryker; other, founder/developer, Orthogate, Orthopaedic Web Links, and OrthopaedicsOne. P.H.: grants, OTA Resident Research Grant (Supervisor). N.M.: payment for lectures, Biomet and Smith & Nephew. This study was funded by an internal grant from the Arthritis Research Unit at Tor- onto Western Hospital, University Health Network, Toronto, Ontario, Canada. The Institute for Clinical Evaluative Sciences (ICES) supported the following study. The ICES is funded by an annual grant from the Ontario Ministry of Health and Long-Term Care (MOHLTC). The opinions, results and conclusions reported in this paper are those of the authors and are independent from the funding sources. No endorsement by ICES or the Ontario MOHLTC is intended or should be inferred.	Sex: % M / % F 15,399 males (74.3%) and 5320 females (25.7%). <u>Potential confounders or effect modifiers:</u> No.			
Olds (2019)	<u>Type of study:</u> Prospective cohort study. <u>Setting and country:</u> New Zealand. <u>Funding:</u> We thank NZ Manipulative Physiotherapy Association, Shoulder Elbow Physiotherapy Australasia, Sports Medicine New	<u>Inclusion criteria:</u> • Patients aged between 16 and 40 years; • Patients who sustained an first-time anterior shoulder dislocation in New Zealand; • Patients who had a shoulder radiograph; • Patients who had an NZ contact address; • Patients who had registered their shoulder dislocation with accident compensation corporation between the dates of May 2015 and April 2016; • Patients who provided verbal informed consent to take part in the study.	<u>Describe prognostic factor(s) and method of measurement:</u> Ages 16-25 vs other; Bony Bankart; Immobilised; SPADI-Total; Tampa Scale of Kinesiophobia.	<u>Duration or endpoint of follow-up:</u> 12 months. <u>For how many participants were no complete outcome data available?</u> N (%): 0 <u>Reasons for incomplete outcome data described?</u> Not applicable.	**1. Age and recurrent instability** <u>*16-25 years vs other ages (multivariate)*</u> OR = 2.892 (95% CI 1.124 to 7.439), P=0.028 **2. Bony Bankart and recurrent instability** OR = 6.040 (95% CI 1.40 to 26.062), P=0.016 **3. Immobilised and recurrent instability** OR = 0.281 (95% CI 0.092 to 0.859), P=0.026 **4. SPADI-total and recurrent instability**

	Zealand, Physiotherapy New Zealand-Auckland Branch and Auckland University of Technology for their financial assistance. Conflicts of interest: None declared.	Exclusion criteria: • Patients who underwent surgical intervention for their current shoulder injury within 12 weeks of the injury as they were no longer able to demonstrate the natural history of an FTASD; • Patients who reported a previous shoulder instability episode or other shoulder pathology such as impingement/acromioclavicular joint disruption at initial interview • Patients who showed radiological evidence of a previous shoulder instability episode in subsequent radiological report. • Radiological evidence excluded those who demonstrated pathology other than an anterior dislocation and people who did not speak conversational English N = 128 Mean age ± SD: 24.63 (7.10) Sex: % M / % F: 110 males (85.9%) and 18 females (14.1%). Potential confounders or effect modifiers: No.			OR = 1.034 (95% CI 1.003 to 1.066), P=0.015 **5. TSK-11 and recurrent instability** OR = 1.142 (95% CI 0.994 to 1.313), P=0.061
Shields (2018)	Type of study: Retrospective study. Setting and country: Two adjacent UK-based metropolitan university teaching hospitals in Glasgow. Funding: No information. Conflicts of interest: No information.	Inclusion criteria: • Patients who presented with a shoulder dislocation who are referred for follow-up after reduction at these two hospitals. • Patients aged 15 years and older who presented with a glenohumeral dislocation. Exclusion criteria: • Previous glenohumeral dislocation; • Ipsilateral injury to the upper limb (excluding a greater tuberosity fracture). N = 329 Mean age ± SD: 51 (21.5) years Sex: 199 (60.5%) males and 130 (39.5%) females Potential confounders or effect modifiers:	Describe prognostic factor(s) and method of measurement: Age; Sex	Duration or endpoint of follow-up: 28.5 months. For how many participants were no complete outcome data available? N (%): 0 Reasons for incomplete outcome data described? Not applicable.	**1. Age and dislocation** *15-19 years versus >35 years (reference)* OR = 7.4 (95% CI 2.7 to 20.7), P<0.001 *20-24 years versus >35 years (reference)* OR = 3.7 (95% CI 0.8 to 12.7), P=0.074 *25-29 years versus >35 years (reference)* OR = 1.9 (95% CI 0.6 to 6.3) *30-34 years versus >35 years (reference)* OR = 3.1 (95% CI 0.8 to 11.6) **2. Sex and dislocation** OR = 1.8 (95% CI 0.7 to 5.2), P=0.245 Men were found to be about almost two times more at risk for recurrent dislocation compared to women. **3. Age and any instability** *15-19 years versus >35 years (reference)*

		No.			OR = 5.7 (95% CI 2.5 to 12.8), P<0.001 *20-24 years versus >35 years (reference)* OR = 4.2 (95% CI 1.6 to 10.9), P=0.003 *25-29 years versus >35 years (reference)* OR = 2.3 (95% CI 0.98 to 5.2), P=0.056 *30-34 years versus >35 years (reference)* OR = 2.6 (95% CI 0.87 to 8.0), P=0.088 **4. Sex and any instability** OR = 1.6 (95% CI 0.8 to 3.4), P=0.179 Men were found to be 1.6 times more at risk for any instability compared to women.
Szyuk (2018)	Type of study: Cohort study. Setting and country: Poland. Funding: All authors declare that they have nothing to disclose. Conflicts of interest: All authors declare that they have no conflict of interest.	Inclusion criteria: • A first-time diagnosis of shoulder dislocation coded through the follow-up period from 1st January 2010 to 31 December 2014; • A first-time post-traumatic dislocation of the shoulder diagnosed in emergency care in the years 2010 and 2011 as ICD-10 code S43.0; • Records of subsequent diagnosis of S43.0 and/orM24.4 in emergency, and inpatients or outpatient care throughout the follow-up period; • The patients were residents of Poland. Exclusion criteria: • Patients without a diagnosis of S43.0 in the emergency setting during the study period from 1st January 2010 to 31 December 2014; • Patients not residing in Poland. N = 51,409 shoulder dislocations (N = 21,739 patients) Mean age ± SD: 60 (20.9) years Sex: N = 7273 females (33.5%) and 14,466 males (66.5%)	Describe prognostic factor(s) and method of measurement: Sex; Age;	Duration or endpoint of follow-up: Five years. For how many participants were no complete outcome data available? N (%): 0 Reasons for incomplete outcome data described? Not applicable.	**1. Age and recurrent shoulder dislocation** *<40 years of age vs >40 years of age* OR = 2.25 (95% CI 2.09 to 2.43), P<10^{-10} The risk of recurrence of shoulder dislocation was over twice as high in patients under 40 years of age relative to the older subgroup. **2. Sex and recurrent shoulder dislocation** OR = 1.92 (95% CI 1.76 to 2.09), P<10^{-10} The risk of recurrence of shoulder dislocation was nearly double in men than in woman.

Risk of bias tabel

Niet van toepassing.

Exclusie tabel

Author and year	Reason for exclusion
Dyrna (2021)	Wrong study design.
Milgrom (2014)	Wrong study design.
Olds (2016)	Wrong population.
Wasserstein (2016)	Studies included in systematic review did not meet the inclusion criteria of this guideline.

Zoekverantwoording

Algemene informatie

Richtlijn: Schouderluxaties	
Uitgangsvraag/modules: Welke factoren zijn voorspellend voor instabiliteit op de lange termijn bij (jonge) patiënten na een primaire, gereponeerde anterieure schouderluxatie?	
Database(s): Ovid/Medline, Embase.com	Datum: 20-06-2022
Periode: Zie toelichting	Talen: Engels, Nederlands
Literatuurspecialist: Miriam van der Maten	
BMI-zoekblokken: voor verschillende opdrachten wordt (deels) gebruik gemaakt van de zoekblokken van BMI-Online https://blocks.bmi-online.nl/ Bij gebruikmaking van een volledig zoekblok zal naar de betreffende link op de website worden verwezen.	
Toelichting: Voor deze vraag is gezocht op de elementen: • Schouderluxatie • Uitkomsten instabiliteit en subluxatie • Prognostisch stuk*/risicofactoren (*gebruikt gemaakt van een deel van het prognostisch filter bèta versie) Met de adviseur is besloten vanwege de hoge aantallen hits (door het prognostische karakter van de vraag) de systematische reviews over alle jaren heen te zoeken. De observationeel vergelijkende studies worden vanaf de zoekdatum (juli 2014) van de review van Olds doorzocht.	
Te gebruiken voor richtlijnen tekst: In de databases Embase.com en Ovid/Medline is op 20 juni 2022 met relevante zoektermen gezocht naar systematische reviews en observationele studies over factoren die voorspellend zijn voor instabiliteit op de lange termijn bij (jonge) patiënten na een primaire, gereponeerde anterieure schouderluxatie. De literatuurzoekactie leverde 504 unieke treffers op.	

Zoekopbrengst

	EMBASE	OVID/MEDLINE	Ontdubbeld
SRs	59	100	108
Observationeel vergelijkende studies	256	348	396
Totaal			**504**

Zoekstrategie

Embase.com

No.	Query	Results
#9	#7 AND #8 NOT #6 **= observationeel vanaf 2014**	256

#8	'case control study'/de OR 'comparative study'/exp OR 'control group'/de OR 'controlled study'/de OR 'controlled clinical trial'/de OR 'crossover procedure'/de OR 'double blind procedure'/de OR 'phase 2 clinical trial'/de OR 'phase 3 clinical trial'/de OR 'phase 4 clinical trial'/de OR 'pretest posttest design'/de OR 'pretest posttest control group design'/de OR 'quasi experimental study'/de OR 'single blind procedure'/de OR 'triple blind procedure'/de OR (((control OR controlled) NEAR/6 trial):ti,ab,kw) OR (((control OR controlled) NEAR/6 (study OR studies)):ti,ab,kw) OR (((control OR controlled) NEAR/1 active):ti,ab,kw) OR 'open label*':ti,ab,kw OR (((double OR two OR three OR multi OR trial) NEAR/1 (arm OR arms)):ti,ab,kw) OR ((allocat* NEAR/10 (arm OR arms)):ti,ab,kw) OR placebo*:ti,ab,kw OR 'sham-control*':ti,ab,kw OR (((single OR double OR triple OR assessor) NEAR/1 (blind* OR masked)):ti,ab,kw) OR nonrandom*:ti,ab,kw OR 'non-random*':ti,ab,kw OR 'quasi-experiment*':ti,ab,kw OR crossover:ti,ab,kw OR 'cross over':ti,ab,kw OR 'parallel group*':ti,ab,kw OR 'factorial trial':ti,ab,kw OR ((phase NEAR/5 (study OR trial)):ti,ab,kw) OR ((case* NEAR/6 (matched OR control*)):ti,ab,kw) OR ((match* NEAR/6 (pair OR pairs OR cohort* OR control* OR group* OR healthy OR age OR sex OR gender OR patient* OR subject* OR participant*)):ti,ab,kw) OR ((propensity NEAR/6 (scor* OR match*)):ti,ab,kw) OR versus:ti OR vs:ti OR compar*:ti OR ((compar* NEAR/1 study):ti,ab,kw) OR (('major clinical study'/de OR 'clinical study'/de OR 'cohort analysis'/de OR 'observational study'/de OR 'cross-sectional study'/de OR 'multicenter study'/de OR 'correlational study'/de OR 'follow up'/de OR cohort*:ti,ab,kw OR 'follow up':ti,ab,kw OR followup:ti,ab,kw OR longitudinal*:ti,ab,kw OR prospective*:ti,ab,kw OR retrospective*:ti,ab,kw OR observational*:ti,ab,kw OR 'cross sectional*':ti,ab,kw OR cross?ectional*:ti,ab,kw OR multicent*:ti,ab,kw OR 'multi-cent*':ti,ab,kw OR consecutive*:ti,ab,kw) AND (group:ti,ab,kw OR groups:ti,ab,kw OR subgroup*:ti,ab,kw OR versus:ti,ab,kw OR vs:ti,ab,kw OR compar*:ti,ab,kw OR 'odds ratio*':ab OR 'relative odds':ab OR 'risk ratio*':ab OR 'relative risk*':ab OR 'rate ratio':ab OR aor:ab OR arr:ab OR rrr:ab OR ((('or' OR 'rr') NEAR/6 ci):ab)))	13203138
#7	#1 AND #2 AND #3 AND ([english]/lim OR [dutch]/lim) AND [2014-2022]/py NOT ('conference abstract'/it OR 'editorial'/it OR 'letter'/it OR 'note'/it) NOT (('animal experiment'/exp OR 'animal model'/exp OR 'nonhuman'/exp) NOT 'human'/exp)	435
#6	#4 AND #5 **= SR**	59
#5	'meta analysis'/exp OR 'meta analysis (topic)'/exp OR metaanaly*:ti,ab OR 'meta analy*':ti,ab OR metanaly*:ti,ab OR 'systematic review'/de OR 'cochrane database of systematic reviews'/jt OR prisma:ti,ab OR prospero:ti,ab OR (((systemati* OR scoping OR umbrella OR 'structured literature') NEAR/3 (review* OR overview*)):ti,ab) OR ((systemic* NEAR/1 review*):ti,ab) OR (((systemati* OR literature OR database* OR 'data base*') NEAR/10 search*):ti,ab) OR (((structured OR comprehensive* OR systemic*) NEAR/3 search*):ti,ab) OR (((literature NEAR/3 review*):ti,ab) AND (search*:ti,ab OR database*:ti,ab OR 'data base*':ti,ab)) OR (('data extraction':ti,ab OR 'data source*':ti,ab) AND 'study selection':ti,ab) OR ('search strategy':ti,ab AND 'selection criteria':ti,ab) OR ('data source*':ti,ab AND 'data synthesis':ti,ab) OR medline:ab OR pubmed:ab OR embase:ab OR cochrane:ab OR (((critical OR rapid) NEAR/2 (review* OR overview* OR synthes*)):ti) OR ((((critical* OR rapid*) NEAR/3 (review* OR overview* OR synthes*)):ab) AND (search*:ab OR database*:ab OR 'data base*':ab)) OR metasynthes*:ti,ab OR 'meta synthes*':ti,ab	733409
#4	#1 AND #2 AND #3 AND ([english]/lim OR [dutch]/lim) NOT ('conference abstract'/it OR 'editorial'/it OR 'letter'/it OR 'note'/it) NOT (('animal experiment'/exp OR 'animal model'/exp OR 'nonhuman'/exp) NOT 'human'/exp)	746
#3	'risk factor'/exp/mj OR 'risk assessment'/exp/mj OR 'disease predisposition'/exp/mj OR 'recurrent disease'/exp/mj OR 'recurrence risk'/exp/mj OR predispos*:ti,kw OR recur*:ti,kw OR prognos*:ti,kw OR risk*:ti,kw OR reocurr*:ti,kw OR redislocat*:ti,kw OR repeat*:ti,kw OR 'area under the curve'/exp OR 'brier score'/exp OR 'computer prediction'/exp OR 'c statistic'/exp OR 'c statistics'/exp OR 'integrated discrimination improvement'/exp OR 'net reclassification improvement'/exp OR 'net reclassification index'/exp OR 'prediction'/exp OR 'predictive model'/exp OR 'predictive modeling'/exp OR 'predictive validity'/exp OR 'predictive value'/exp OR 'regression analysis'/exp OR 'statistical model'/exp OR 'area under the curve':ti,ab,kw OR 'brier score*':ti,ab,kw OR 'c	4026912

	statistic*' OR 'computer prediction':ti,ab,kw OR 'decision curve anal*':ti,ab,kw OR (('net reclassification' NEAR/2 (improvement OR index)):ti,ab,kw) OR (((predict* OR statistical*) NEAR/3 (model* OR validity OR value)):ti,ab,kw) OR 'proportional hazards model*':ti,ab,kw OR 'r square*':ti,ab,kw OR regression:ti,ab,kw OR predict*:ti OR multivariate:ti,ab,kw	
#2	'joint instability'/exp/mj OR 'recurrent shoulder dislocation'/exp/mj OR 'subluxation'/exp OR instabilit*:ti,ab,kw OR instable:ti,ab,kw OR 'sublux*':ti,ab,kw	188171
#1	('shoulder dislocation'/exp/mj OR (((shoulder* OR glenohumeral) NEAR/5 (dislocat* OR luxat* OR instab*)):ti,ab,kw)) AND (primary:ti,ab,kw OR first*:ti,ab,kw OR anterior:ti,ab,kw OR antero:ti,ab,kw)	5616

Ovid/Medline

#	Searches	Results
12	(11 and 9) not 10 **= observationeel vanaf 2014**	348
11	limit 7 to ((english language or dutch) and yr="2014 -Current")	701
10	7 and 8 **= SR**	100
9	Case-control Studies/ or clinical trial, phase ii/ or clinical trial, phase iii/ or clinical trial, phase iv/ or comparative study/ or control groups/ or controlled before-after studies/ or controlled clinical trial/ or double-blind method/ or historically controlled study/ or matched-pair analysis/ or single-blind method/ or (((control or controlled) adj6 (study or studies or trial)) or (compar* adj (study or studies)) or ((control or controlled) adj1 active) or "open label*" or ((double or two or three or multi or trial) adj (arm or arms)) or (allocat* adj10 (arm or arms)) or placebo* or "sham-control*" or ((single or double or triple or assessor) adj1 (blind* or masked)) or nonrandom* or "non-random*" or "quasi-experiment*" or "parallel group*" or "factorial trial" or "pretest posttest" or (phase adj5 (study or trial)) or (case* adj6 (matched or control*)) or (match* adj6 (pair or pairs or cohort* or control* or group* or healthy or age or sex or gender or patient* or subject* or participant*)) or (propensity adj6 (scor* or match*))).ti,ab,kf. or (confounding adj6 adjust*).ti,ab. or (versus or vs or compar*).ti. or ((exp cohort studies/ or epidemiologic studies/ or multicenter study/ or observational study/ or seroepidemiologic studies/ or (cohort* or 'follow up' or followup or longitudinal* or prospective* or retrospective* or observational* or multicent* or 'multi-cent*' or consecutive*).ti,ab,kf.) and ((group or groups or subgroup* or versus or vs or compar*).ti,ab,kf. or ('odds ratio*' or 'relative odds' or 'risk ratio*' or 'relative risk*' or aor or arr or rrr).ab. or (("OR" or "RR") adj6 CI).ab.))	5179908
8	(meta-analysis/ or meta-analysis as topic/ or (metaanaly* or meta-analy* or metanaly*).ti,ab,kf. or systematic review/ or cochrane.jw. or (prisma or prospero).ti,ab,kf. or ((systemati* or scoping or umbrella or "structured literature") adj3 (review* or overview*)).ti,ab,kf. or (systemic* adj1 review*).ti,ab,kf. or ((systemati* or literature or database* or data-base*) adj10 search*).ti,ab,kf. or ((structured or comprehensive* or systemic*) adj3 search*).ti,ab,kf. or ((literature adj3 review*) and (search* or database* or data-base*)).ti,ab,kf. or (("data extraction" or "data source*") and "study selection").ti,ab,kf. or ("search strategy" and "selection criteria").ti,ab,kf. or ("data source*" and "data synthesis").ti,ab,kf. or (medline or pubmed or embase or cochrane).ab. or ((critical or rapid) adj2 (review* or overview* or synthes*)).ti. or (((critical* or rapid*) adj3 (review* or overview* or synthes*)) and (search* or database* or data-base*)).ab. or (metasynthes* or meta-synthes*).ti,ab,kf.) not (comment/ or editorial/ or letter/ or ((exp animals/ or exp models, animal/) not humans/))	571569
7	5 or 6	1320
6	1 and 2 and 4	226
5	1 and 2 and 3	1211
4	Area Under Curve/ or exp Forecasting/ or "Predictive Value of Tests"/ or exp Multivariate Analysis/ or exp Regression Analysis/ or exp Models, Statistical/ or area under the curve.ti,ab,kf. or brier score*.ti,ab,kf. or c statistic*.ti,ab,kf. or computer prediction.ti,ab,kf. or decision curve anal*.ti,ab,kf. or (net reclassification adj2 (improvement or index)).ti,ab,kf. or ((predict* or statistical*) adj3 (model* or validity or value)).ti,ab,kf. or	2219963

	proportional hazards model*.ti,ab,kf. or r square*.ti,ab,kf. or regression.ti,ab,kf. or predict*.ti,kf. or multivariate.ti,ab,kf.	
3	exp Risk Factors/ or exp Risk Assessment/ or exp Recurrence/ or predispos*.ti,kf. or recur*.ti,kf. or prognos*.ti,kf. or risk*.ti,kf. or (reocurr* or redislocat* or repeat*).ti,kw.	1961802
2	exp Joint Instability/ or instabilit*.ti,ab,kf. or instable.ti,ab,kf. or 'sublux*'.ti,ab,kf.	157547
1	(exp *Shoulder Dislocation/ or ((shoulder* or glenohumeral) adj5 (dislocat* or luxat* or instab*)).ti,ab,kf.) and (primary or first* or anterior or antero).ti,ab,kf.	4964

Module 3: Repositietechnieken

Evidence tabel

Study reference	Study characteristics	Patient characteristics	Intervention (I)	Comparison / control (C)	Follow-up	Outcome measures and effect size	Comments
Dong (2021)	SR and meta-analysis of RCTs *Literature search up to 31st of March 2019* A. Amar (2012) B. Beattie (1986) C. Chang (2013) D. Fang (2013) E. Ghane (2014) F. Maity (2012) G. Rezende (2015) H. Sahin (2011) I. Sapkota (2015) J. Sayegh (2009) Study design: A. Quasi RCT B. Quasi RCT C. RCT D. RCT E. RCT F. RCT G. RCT H. RCT I. RCT J. RCT Setting and Country: A. Not reported. B. Not reported. C. Not reported.	Inclusion criteria SR: • Randomised controlled or quasi-controlled randomised controlled trials; • Acute anterior shoulder dislocations; Exclusion criteria SR: • Studies focusing on fracture-dislocations but greater tuberosity fractures were allowed. • Closed reduction methods. *10 studies included* Important patient characteristics at baseline: N A. N=60 B. N=111 C. N=32 D. N=120 E. N=97 F. N=160 G. N=105 H. N=64 I. N=52 J. N=154 mean age A. 43.9 (18-88)	Describe intervention: PICO 1: tractie vs biomechanisch A: Stimson C: Spaso E: Traction-countertraction J: Hippocratic PICO 2: tractie vs hefboom D: Hippocratic G: Spaso J: Hippocratic PICO 3: biomechanisch vs hefboom B: Milch F: Fares H: Scapular manipulation I: Milch J: Fares	Describe control: PICO 1: tractie vs biomechanisch A: Milch C: Fares E: Modified scapular manipulation J: Fares PICO 2: tractie vs hefboom D: Manipulative reduction G: Kocher J: Kocher PICO 3: biomechanisch vs hefboom B: Kocher F: Eachempati external rotation H: Kocher I: External rotation method J: Kocher	End-point of follow-up: A. Not reported. B. Not reported. C. Not reported. D. Not reported. E. Not reported. F. Not reported. G. Not reported. H. Not reported. I. Not reported. J. Not reported.	Outcome measure 1: reduction success after one attempt PICO 1: tractie vs biomechanisch *None.* PICO 2: tractie vs hefboom *D: Fang (2013), n/N (%)* I: 50/60 (83.3%) C: 59/60 (98.3%) PICO 3: biomechanisch vs hefboom *B: Beattie (1986), n/N (%)* I: 39/56 (69.6%) C: 40/55 (72.7%) *F: Maity (2012), n/N (%)* I: 65/80 (81.25%) C: 39/80 (48.75%) Outcome measure 2: Pain (measured using the 10-point VAS score) PICO 1: tractie vs biomechanisch *A: Amar (2012), mean (SD)* I: 5.3 (0.57) (n=25) C: 5.44 (0.54) (n=35) *C: Chang (2013), mean (SD)* I: 3.8 (2.65) C: 4.29 (1.69) PICO 2: tractie vs hefboom	Author's conclusion: For clinicians who regularly reduce shoulder dislocations, it is reassuring to conclude that, from the information avail- able, regardless of whether they choose traction–countertrac- tion, leverage or scapular manipulation methods, they all appear to be equally as effective as each other with minimal complications. We conclude that leverage techniques tend to be quicker but marginally more painful than traction–coun-tertraction methods which may affect the choice of reduction method based on patient factors.

	D. Not reported. E. Not reported. F. Not reported. G. Not reported. H. Not reported. I. Not reported. J. Not reported. <u>Source of funding</u> No trials specified any source of funding. <u>Conflicts of interest:</u> ll authors declare that they have no conflict of in- terest. The authors can confirm that, to the best of our knowledge, there has been no prior or duplicate submission or publication elsewhere of any part of the work. The manuscript has been read and approved by all authors, and each author believes that the manuscript represents honest work.	B. 52.5 (16-89) C. 49.1 (not reported) D. 34.8 (not reported) E. 34.2 (not reported) F. 36.2 (not reported) G. 30.6 (not reported) H. 42 (not reported) I. 27.7 (not reported) J. 43.6 (not reported. <u>Groups comparable at baseline?</u> Yes.				*J: Sayegh (2009), mean (SD)* I: 4.88 (2.17) C: 5.44 (1.92) PICO 3: biomechanisch vs hefboom *F: Maity (2012), mean (SD)* I: 1.596 (0.961) C: 3.387 (1.611) *J: Sayegh (2009), mean (SD)* I: 1.57 (1.43) (n=53) C: 5.44 (1.92) (n=25) <u>Outcome measure 3: complications</u> Complications were not looked at in detail in any of the studies but eight studies did mention that no short-term complications occurred following the reductions (Rezende 2015; Sayegh 2009; Chang 2013; Ghane 2014; Amar 2012; Maity 2012). Only Beattie (1986) reported a fracture of neck of humerus in one older woman.	

Risk of bias tabel

Systematic review(s)

Study **First author, year**	**Appropriate and clearly focused question?**[1] **Yes/no/unclear**	**Comprehensive and systematic literature search?**[2] **Yes/no/unclear**	**Description of included and excluded studies?**[3] **Yes/no/unclear**	**Description of relevant characteristics of included studies?**[4] **Yes/no/unclear**	**Appropriate adjustment for potential confounders in observational studies?**[5] **Yes/no/unclear/not applicable**	**Assessment of scientific quality of included studies?**[6] **Yes/no/unclear**	**Enough similarities between studies to make combining them reasonable?**[7] **Yes/no/unclear**	**Potential risk of publication bias taken into account?**[8] **Yes/no/unclear**	**Potential conflicts of interest reported?**[9] **Yes/no/unclear**
Dong (2021)	Yes	Yes	Yes	Yes	Not applicable	Yes	Yes	Yes	Yes

Randomized controlled trials

Study reference (first author, publication year)	**Was the allocation sequence adequately generated?** Definitely yes Probably yes Probably no Definitely no	**Was the allocation adequately concealed?** Definitely yes Probably yes Probably no Definitely no	**Blinding: Was knowledge of the allocated interventions adequately prevented?** Definitely yes Probably yes Probably no Definitely no	**Was loss to follow-up (missing outcome data) infrequent?** Definitely yes Probably yes Probably no Definitely no	**Are reports of the study free of selective outcome reporting?** Definitely yes Probably yes Probably no Definitely no	**Was the study apparently free of other problems that could put it at a risk of bias?** Definitely yes Probably yes Probably no Definitely no	**Overall risk of bias** **If applicable/necessary, per outcome measure** **LOW** **Some concerns** **HIGH**
Amar (2012)	Probably yes Reason: *"After confirmation of diagnosis, patients who met the inclusion criteria of this study and gave their consent to participate were randomly assigned to 1 of 2 study arms according to whether they received an even (Milch technique) or odd (Stimson technique) computer-generated number."*	No information Reason: -	Probably no Reason: *"Both the patient and surgeon were unaware of the method of treating the dislocation until the patient had provided consent."*	Definitely yes Reason: no lost to follow-up reported.	Probably yes Reason: all predefined outcomes were reported.	Probably yes. Reason: no other problems than already stated.	Some concerns Reason: no blinding and unclear allocation concealment.
Beattie (1986)	Definitely no Reason: *"patients were placed at random in one of two groups: on even days of the month."*	No information Reason: -	Definitely no Reason: no blinding.	Probably yes Reason: no lost to follow-up reported.	No specific information Reason: -	No specific information Reason: -	High Reason: no randomisation, no allocation concealment and no blinding.

Ghane (2014)	Probably yes Reason: *"The patients were divided into TCT (50 cases) and MSM (47 cases) groups with simple randomization."*	No specific information Reason: -	Definitely no Reason: blinding was not possible	Probably yes Reason: no lost to follow-up reported.	Probably yes Reason: all predefined outcomes were reported.	No specific information Reason: -	Some concerns Reason: no blinding and unclear allocation concealment.
Maity (2012)	Probably yes Reason: *"Randomisation was done after we had taken written informed consent from the study participants and obtained baseline information. The random assignment scheme was created from a table of random numbers."*	No specific information Reason: -	Definitely no Reason: blinding was not possible	Definitely yes. Reason: no lost to follow-up reported.	Probably yes Reason: all predefined outcomes were reported.	Probably yes Reason: biggest limitation is blinding.	Some concerns Reason: no blinding and unclear allocation concealment.
Rezende (2015)	Definitely yes Reason: *"Patients were therefore randomized into two groups arbitrarily by means of previously numbered charts, being pair chart number corresponding to group A and even chart number to group B (zero was considered as even)."*	No specific information Reason: -	Definitely no Reason: blinding was not possible	Definitely yes. Reason: no lost to follow-up reported.	Probably yes Reason: all predefined outcomes were reported.	Probably no Reason: *"It is worth noticing that our sample, although calculated by Lehr formula,6 was based on data previously published. Thus, it is not possible to rule out any bias in the number of participants."*	Some concerns Reason: no blinding and unclear allocation concealment.
Sahin (2011)	Definitely yes Reason: *"Following diagnosis, all patients were randomized to undergo reduction of the dislocation with one of the two methods used in the study."*	Definitely yes. Reason: *"The randomization was done with random permuted blocks of a predefined size. The random numbers were blocked in groups of four to ensure study groups of approximately the same size. The actual randomization was performed by drawing envelopes. An orthopaedic resident carried out the allocation process."*	Definitely no Reason: blinding was not possible	Definitely yes. Reason: no lost to follow-up reported.	Probably yes Reason: all predefined outcomes were reported.	Probably no Reason: *"the validity of some of the patients' responses may be open to doubt."*	Low Reason: no blinding.
Sapkota (2015)	Probably yes Reason: *"There were a total of 52 cases of dislocation distributed randomly into 2 groups."*	No specific information Reason: -	Definitely no Reason: blinding was not possible	Definitely yes. Reason: no lost to follow-up reported.	Probably yes Reason: all predefined outcomes were reported.	No specific information Reason: -	Some concerns Reason: no blinding and unclear allocation concealment.
Sayegh (2009)	Probably yes Reason: *"all patients who met the inclusion criteria were randomized to undergo reduction of the dislocation with one of the three methods used in the study."*	No specific information Reason: -	Definitely no Reason: blinding was not possible	Definitely yes. Reason: no lost to follow-up reported.	Probably yes Reason: all predefined outcomes were reported.	Probably yes Reason: biggest limitation is blinding.	Some concerns Reason: no blinding and unclear allocation concealment.

Exclusie tabel

Author and year	Reason for exclusion
Alkaduhimi (2017)	Includes the same studies as the SR of Dong (2021).
Fennelly (2020)	Wrong study design; systematic review of observational studies.
Ghane (2014)	Included in the systematic review of Dong (2021).
Maity (2012)	Included in the systematic review of Dong (2021).
Sahin (2011)	Included in the systematic review of Dong (2021).
Sapkota (2015)	Included in the systematic review of Dong (2021).
Sayegh (2009)	Included in the systematic review of Dong (2021).
Marcano-Fernandez (2018)	Wrong comparison.
Akcimen (2020)	Wrong comparison.
Puha (2016)	Wrong study population.

Zoekverantwoording

Algemene informatie

Richtlijn: Schouderluxaties	
Uitgangsvraag: Wat is de meest effectieve manier van reponeren een anterieure schouderluxatie?	
Database(s): Ovid/Medline, Embase	Datum: 15-02-2022
Periode: geen restrictie	Talen: Engels, Nederlands
Literatuurspecialist: Miriam van der Maten	
BMI-zoekblokken: voor verschillende opdrachten wordt (deels) gebruik gemaakt van de zoekblokken van BMI-Online https://blocks.bmi-online.nl/ Bij gebruikmaking van een volledig zoekblok zal naar de betreffende link op de website worden verwezen.	
Toelichting: Voor deze vraag is gezocht op de elementen: • Anterieure schouderluxatie • Repositie technieken algemeen (eventuele overkoepelende SRs) • Tractie versus biomechanisch • Tractie versus hefboom • Biomechanisch versus hefboom De sleutelartikelen van Dong en Alkaduhimi worden gevonden met de zoekopdracht. Het sleutelartikel van Cunningham wordt niet gevonden omdat het niet voldoet aan een van de studiedesigns (qua terminologie wordt hij wel gevonden).	
Te gebruiken voor richtlijnen tekst: In de databases Embase en Ovid/Medline is op 15 februari met relevante zoektermen gezocht naar systematische reviews, RCT en observationele studies over de meest effectieve manier van reponeren van een anterieure schouderluxatie. De literatuurzoekactie leverde 207 unieke treffers op.	

Zoekopbrengst

	EMBASE	OVID/MEDLINE	Ontdubbeld
SRs	26	20	26
RCT	37	34	39
Observationele studies	100	107	142
Totaal	163	161	**207**

Zoekstrategie

Embase.com

No.	Query	Results
#17	#14 OR #15 OR #16	163
#16	#10 AND #13 NOT (#14 OR #15)	100
#15	#10 AND #12 NOT #14	37
#14	#10 AND #11	26
#13	'comparative study'/exp OR 'control group'/de OR 'controlled study'/de OR 'controlled clinical trial'/de OR 'crossover procedure'/de OR 'double blind procedure'/de OR 'phase 2 clinical trial'/de OR 'phase 3 clinical trial'/de OR 'phase 4 clinical trial'/de OR 'pretest posttest design'/de OR 'pretest posttest control group design'/de OR 'quasi experimental study'/de OR 'single blind procedure'/de OR 'triple blind procedure'/de OR (((control OR controlled) NEAR/6 trial):ti,ab,kw) OR (((control OR controlled) NEAR/6 (study OR studies)):ti,ab,kw) OR (((control OR controlled) NEAR/1 active):ti,ab,kw) OR 'open label*':ti,ab,kw OR (((double OR two OR three OR multi OR trial) NEAR/1 (arm OR arms)):ti,ab,kw) OR ((allocat* NEAR/10 (arm OR arms)):ti,ab,kw) OR placebo*:ti,ab,kw OR 'sham-control*':ti,ab,kw OR (((single OR double OR triple OR assessor) NEAR/1 (blind* OR masked)):ti,ab,kw) OR nonrandom*:ti,ab,kw OR 'non-random*':ti,ab,kw OR 'quasi-experiment*':ti,ab,kw OR crossover:ti,ab,kw OR 'cross over':ti,ab,kw OR 'parallel group*':ti,ab,kw OR 'factorial trial':ti,ab,kw OR ((phase NEAR/5 (study OR trial)):ti,ab,kw) OR ((case* NEAR/6 (matched OR control*)):ti,ab,kw) OR ((match* NEAR/6 (pair OR pairs OR cohort* OR control* OR group* OR healthy OR age OR sex OR gender OR patient* OR subject* OR participant*)):ti,ab,kw) OR ((propensity NEAR/6 (scor* OR match*)):ti,ab,kw) OR versus:ti OR vs:ti OR compar*:ti OR ((compar* NEAR/1 study):ti,ab,kw) OR (('major clinical study'/de OR 'clinical study'/de OR 'cohort analysis'/de OR 'observational study'/de OR 'cross-sectional study'/de OR 'multicenter study'/de OR 'correlational study'/de OR 'follow up'/de OR cohort*:ti,ab,kw OR 'follow up':ti,ab,kw OR followup:ti,ab,kw OR longitudinal*:ti,ab,kw OR prospective*:ti,ab,kw OR retrospective*:ti,ab,kw OR observational*:ti,ab,kw OR 'cross sectional*':ti,ab,kw OR cross?ectional*:ti,ab,kw OR multicent*:ti,ab,kw OR 'multi-cent*':ti,ab,kw OR consecutive*:ti,ab,kw) AND (group:ti,ab,kw OR groups:ti,ab,kw OR subgroup*:ti,ab,kw OR versus:ti,ab,kw OR vs:ti,ab,kw OR compar*:ti,ab,kw OR 'odds ratio*':ab OR 'relative odds':ab OR 'risk ratio*':ab OR 'relative risk*':ab OR 'rate ratio':ab OR aor:ab OR arr:ab OR rrr:ab OR ((('or' OR 'rr') NEAR/6 ci):ab))) OR 'major clinical study'/de OR 'clinical study'/de OR 'case control study'/de OR 'family study'/de OR 'longitudinal study'/de OR 'retrospective study'/de OR 'prospective study'/de OR 'comparative study'/de OR 'cohort analysis'/de OR ((cohort NEAR/1 (study OR studies)):ab,ti) OR (('case control' NEAR/1 (study OR studies)):ab,ti) OR (('follow up' NEAR/1 (study OR studies)):ab,ti) OR (observational NEAR/1 (study OR studies)) OR ((epidemiologic NEAR/1 (study OR studies)):ab,ti) OR (('cross sectional' NEAR/1 (study OR studies)):ab,ti)	14595627
#12	'randomized controlled trial'/exp OR random*:ti,ab OR (((pragmatic OR practical) NEAR/1 'clinical trial*'):ti,ab) OR ((('non inferiority' OR noninferiority OR superiority OR equivalence) NEAR/3 trial*):ti,ab) OR rct:ti,ab,kw	1839814
#11	'meta analysis'/exp OR 'meta analysis (topic)'/exp OR metaanaly*:ti,ab OR 'meta analy*':ti,ab OR metanaly*:ti,ab OR 'systematic review'/de OR 'cochrane database of systematic reviews'/jt OR prisma:ti,ab OR prospero:ti,ab OR (((systemati* OR scoping OR umbrella OR 'structured literature') NEAR/3 (review* OR overview*)):ti,ab) OR ((systemic* NEAR/1 review*):ti,ab) OR (((systemati* OR literature OR database* OR 'data base*') NEAR/10 search*):ti,ab) OR (((structured OR comprehensive* OR systemic*) NEAR/3 search*):ti,ab) OR (((literature NEAR/3 review*):ti,ab) AND (search*:ti,ab OR database*:ti,ab OR 'data base*':ti,ab)) OR (('data extraction':ti,ab OR 'data source*':ti,ab) AND 'study selection':ti,ab) OR ('search strategy':ti,ab AND 'selection criteria':ti,ab) OR ('data source*':ti,ab AND 'data synthesis':ti,ab) OR medline:ab OR pubmed:ab OR embase:ab OR cochrane:ab OR (((critical OR rapid) NEAR/2 (review* OR overview* OR synthes*)):ti) OR ((((critical* OR rapid*) NEAR/3 (review* OR overview* OR synthes*)):ab) AND (search*:ab OR database*:ab OR 'data base*':ab)) OR metasynthes*:ti,ab OR 'meta synthes*':ti,ab	733409

#10	(#6 OR #7 OR #8 OR #9) AND ([english]/lim OR [dutch]/lim) NOT ('conference abstract'/it OR 'editorial'/it OR 'letter'/it OR 'note'/it) NOT (('animal experiment'/exp OR 'animal model'/exp OR 'nonhuman'/exp) NOT 'human'/exp)	283
#9	#1 AND #4 AND #5	25
#8	#1 AND #3 AND #5	207
#7	#1 AND #3 AND #4	56
#6	#1 AND #2	199
#5	kocher*:ti,ab,kw OR eachempati*:ti,ab,kw OR leverage*:ti,ab,kw OR ((external* NEAR/5 rotat*):ti,ab,kw)	41389
#4	((biomechanical NEAR/5 (reposition OR reduction OR technique*)):ti,ab,kw) OR 'scapular manipulation*':ti,ab,kw OR cunningham*:ti,ab,kw OR milch*:ti,ab,kw OR fares*:ti,ab,kw	5538
#3	'closed reduction (procedure)'/exp OR reduction*:ti,ab,kw OR reposition*:ti,ab,kw OR relocat*:ti,ab,kw OR 'traction therapy'/exp OR traction:ti,ab,kw OR countertraction:ti,ab,kw OR hippocratic:ti,ab,kw OR snowbird*:ti,ab,kw OR eskimo*:ti,ab,kw OR stimson*:ti,ab,kw OR spaso*:ti,ab,kw OR 'boss holzach matter*':ti,ab,kw OR matsen*:ti,ab,kw OR manes:ti,ab,kw OR chair:ti,ab,kw OR doshi*:ti,ab,kw OR noordeen*:ti,ab,kw OR arlt*:ti,ab,kw OR surfer*:ti,ab,kw OR 'bokor-billmann*':ti,ab,kw OR 'best of both':ti,ab,kw OR 'legg maneuver*':ti,ab,kw OR 'apple picker':ti,ab,kw OR davos:ti,ab,kw	1759006
#2	((reduction OR reduce OR reposition OR relocate*) NEAR/5 (technique* OR method* OR maneuver*)):ti,ab,kw	65870
#1	('shoulder dislocation'/exp/mj OR (((shoulder* OR glenohumeral) NEAR/5 (dislocat* OR luxat* OR instab*)):ti,ab,kw)) AND (anterior:ti,ab,kw OR antero*:ti,ab,kw)	4886

Ovid/Medline

#	Searches	Results
21	18 or 19 or 20	161
20	(14 and 17) not (18 or 19)	107
19	(14 and 16) not 18	34
18	14 and 15	20
17	Case-control Studies/ or clinical trial, phase ii/ or clinical trial, phase iii/ or clinical trial, phase iv/ or comparative study/ or control groups/ or controlled before-after studies/ or controlled clinical trial/ or double-blind method/ or historically controlled study/ or matched-pair analysis/ or single-blind method/ or (((control or controlled) adj6 (study or studies or trial)) or (compar* adj (study or studies)) or ((control or controlled) adj1 active) or "open label*" or ((double or two or three or multi or trial) adj (arm or arms)) or (allocat* adj10 (arm or arms)) or placebo* or "sham-control*" or ((single or double or triple or assessor) adj1 (blind* or masked)) or nonrandom* or "non-random*" or "quasi-experiment*" or "parallel group*" or "factorial trial" or "pretest posttest" or (phase adj5 (study or trial)) or (case* adj6 (matched or control*)) or (match* adj6 (pair or pairs or cohort* or control* or group* or healthy or age or sex or gender or patient* or subject* or participant*)) or (propensity adj6 (scor* or match*))).ti,ab,kf. or (confounding adj6 adjust*).ti,ab. or (versus or vs or compar*).ti. or ((exp cohort studies/ or epidemiologic studies/ or multicenter study/ or observational study/ or seroepidemiologic studies/ or (cohort* or 'follow up' or followup or longitudinal* or prospective* or retrospective* or observational* or multicent* or 'multi-cent*' or consecutive*).ti,ab,kf.) and ((group or groups or subgroup* or versus or vs or compar*).ti,ab,kf. or ('odds ratio*' or 'relative odds' or 'risk ratio*' or 'relative risk*' or aor or arr or rrr).ab. or (("OR" or "RR") adj6 CI).ab.)) or Epidemiologic studies/ or case control studies/ or exp cohort studies/ or Controlled Before-After Studies/ or Case control.tw. or cohort.tw. or Cohort analy$.tw. or (Follow up adj (study or studies)).tw. or (observational adj (study or studies)).tw. or Longitudinal.tw. or Retrospective*.tw. or prospective*.tw. or consecutive*.tw. or Cross sectional.tw. or Cross-sectional studies/ or historically controlled study/ or interrupted time series analysis/	6739783
16	(exp randomized controlled trial/ or randomized controlled trials as topic/ or random*.ti,ab. or rct?.ti,ab. or ((pragmatic or practical) adj "clinical trial*").ti,ab,kf. or	1352557

	((non-inferiority or noninferiority or superiority or equivalence) adj3 trial*).ti,ab,kf.) not (animals/ not humans/)	
15	(meta-analysis/ or meta-analysis as topic/ or (metaanaly* or meta-analy* or metanaly*).ti,ab,kf. or systematic review/ or cochrane.jw. or (prisma or prospero).ti,ab,kf. or ((systemati* or scoping or umbrella or "structured literature") adj3 (review* or overview*)).ti,ab,kf. or (systemic* adj1 review*).ti,ab,kf. or ((systemati* or literature or database* or data-base*) adj10 search*).ti,ab,kf. or ((structured or comprehensive* or systemic*) adj3 search*).ti,ab,kf. or ((literature adj3 review*) and (search* or database* or data-base*)).ti,ab,kf. or (("data extraction" or "data source*") and "study selection").ti,ab,kf. or ("search strategy" and "selection criteria").ti,ab,kf. or ("data source*" and "data synthesis").ti,ab,kf. or (medline or pubmed or embase or cochrane).ab. or ((critical or rapid) adj2 (review* or overview* or synthes*)).ti. or (((critical* or rapid*) adj3 (review* or overview* or synthes*)) and (search* or database* or data-base*)).ab. or (metasynthes* or meta-synthes*).ti,ab,kf.) not (comment/ or editorial/ or letter/ or ((exp animals/ or exp models, animal/) not humans/))	547875
14	10 or 11 or 12 or 13	291
13	5 and 8 and 9	23
12	5 and 7 and 9	167
11	5 and 7 and 8	49
10	5 and 6	163
9	(Kocher* or Eachempati* or leverage* or (external* adj5 rotat*)).ti,ab,kf.	34034
8	((biomechanical adj5 (reposition or reduction or technique*)) or 'scapular manipulation*' or (Cunningham* or Milch* or Fares*)).ti,ab,kf.	4312
7	exp Traction/ or reduction*.ti,ab,kf. or reposition*.ti,ab,kf. or relocat*.ti,ab,kf. or traction.ti,ab,kf. or countertraction.ti,ab,kf. or hippocratic.ti,ab,kf. or snowbird*.ti,ab,kf. or eskimo*.ti,ab,kf. or stimson*.ti,ab,kf. or spaso*.ti,ab,kf. or 'boss holzach matter*'.ti,ab,kf. or matsen*.ti,ab,kf. or manes.ti,ab,kf. or chair.ti,ab,kf. or doshi*.ti,ab,kf. or noordeen*.ti,ab,kf. or arlt*.ti,ab,kf. or surfer*.ti,ab,kf. or 'bokor-billmann*'.ti,ab,kf. or 'best of both'.ti,ab,kf. or 'legg maneuver*'.ti,ab,kf. or 'apple picker'.ti,ab,kf. or davos.ti,ab,kf.	1320698
6	((reduction or reduce or reposition or relocate*) adj5 (technique* or method*)).ti,ab,kf.	41169
5	(exp Shoulder Dislocation/ or ((shoulder* or glenohumeral) adj5 (dislocat* or luxat* or instab*)).ti,ab,kf.) and (anterior or antero*).ti,ab,kf.	4397

Module 4: Pijnstilling bij repositie

Evidence tabel

Niet van toepassing.

Risk of bias tabel

Niet van toepassing.

Exclusie tabel

Author and year	Reason for exclusion
Blaivas (2011)	Does not match PICO: wrong comparison of interventions.
Cheok (2011)	Does not match PICO: wrong comparison of interventions.
Fitch (2008)	Includes the same studies as Wakai (2011).
Gleeson (1999)	Does not match PICO: wrong comparison of interventions.
Jiang (2014)	Includes the same studies as Wakai (2011).
Kashani (2016)	Does not match PICO: wrong comparison of interventions.
Kosnik (1999)	Does not match PICO: wrong comparison of interventions.
Matthews (1995)	Does not match PICO: wrong comparison of interventions.
Miller (2002)	Does not match PICO: wrong comparison of interventions.
Moharari (2008)	Does not match PICO: wrong comparison of interventions.
Orlinsky (2002)	Does not match PICO: wrong comparison of interventions.
Raeyet Doost (2017)	Does not match PICO: wrong comparison of interventions.
Suder (1995)	Unclear outcome measures.
Wakai (2011)	Included studies did not match PICO: wrong comparison of interventions.

Zoekverantwoording

Algemene informatie

Richtlijn: Schouderluxaties	
Uitgangsvraag/modules: Wat is de plaats van pijnstilling bij repositie?	
Database(s): Ovid/Medline, Embase.com	Datum: 20-06-2022
Periode: Geen restrictie	Talen: Geen restrictie
Literatuurspecialist: Miriam van der Maten	
BMI-zoekblokken: voor verschillende opdrachten wordt (deels) gebruik gemaakt van de zoekblokken van BMI-Online https://blocks.bmi-online.nl/ Bij gebruikmaking van een volledig zoekblok zal naar de betreffende link op de website worden verwezen.	
Toelichting: Voor deze vraag is gezocht op de elementen: • Schouderluxatie • Lidocaine Het sleutelartikel van Wakai wordt gevonden met de zoekopdracht.	
Te gebruiken voor richtlijnen tekst: In de databases Embase.com en Ovid/Medline is op 20 juni 2022 met relevante zoektermen gezocht naar systematische reviews, RCT en overige studies over de effectiviteit van pijnstilling d.m.v. lidocaine bij repositie bij patiënten met een anterieure schouderluxatie? De literatuurzoekactie leverde 156 unieke treffers op.	

Zoekopbrengst

	EMBASE	OVID/MEDLINE	Ontdubbeld
SRs	15	6	15
RCT	15	17	18
Overige studies	96	70	123
Totaal	126	93	**156**

Zoekstrategie

Embase.com

No.	Query	Results
#9	#6 OR #7 OR #8	126
#8	#3 NOT (#6 OR #7) **= overig**	96
#7	#3 AND #5 NOT #6 **= RCT**	15
#6	#3 AND #4 **= SR**	15
#5	'randomized controlled trial'/exp OR random*:ti,ab OR (((pragmatic OR practical) NEAR/1 'clinical trial*'):ti,ab) OR ((('non inferiority' OR noninferiority OR superiority OR equivalence) NEAR/3 trial*):ti,ab) OR rct:ti,ab,kw	1922717
#4	'meta analysis'/exp OR 'meta analysis (topic)'/exp OR metaanaly*:ti,ab OR 'meta analy*':ti,ab OR metanaly*:ti,ab OR 'systematic review'/de OR 'cochrane database of systematic reviews'/jt OR prisma:ti,ab OR prospero:ti,ab OR (((systemati* OR scoping OR umbrella OR 'structured literature') NEAR/3 (review* OR overview*)):ti,ab) OR ((systemic* NEAR/1 review*):ti,ab) OR (((systemati* OR literature OR database* OR 'data base*') NEAR/10 search*):ti,ab) OR (((structured OR comprehensive* OR systemic*) NEAR/3 search*):ti,ab) OR (((literature NEAR/3 review*):ti,ab) AND (search*:ti,ab OR database*:ti,ab OR 'data base*':ti,ab)) OR (('data extraction':ti,ab OR 'data source*':ti,ab) AND 'study selection':ti,ab) OR ('search strategy':ti,ab AND 'selection criteria':ti,ab) OR ('data source*':ti,ab AND 'data synthesis':ti,ab) OR medline:ab OR pubmed:ab OR embase:ab OR cochrane:ab OR (((critical OR rapid) NEAR/2 (review* OR overview* OR synthes*)):ti) OR ((((critical* OR rapid*) NEAR/3 (review* OR overview* OR synthes*)):ab) AND (search*:ab OR database*:ab OR 'data base*':ab)) OR metasynthes*:ti,ab OR 'meta synthes*':ti,ab	733409
#3	#1 AND #2 NOT ('conference abstract'/it OR 'editorial'/it OR 'letter'/it OR 'note'/it) NOT (('animal experiment'/exp OR 'animal model'/exp OR 'nonhuman'/exp) NOT 'human'/exp)	126
#2	'lidocaine'/exp OR lidocain*:ti,ab,kw OR lignocaine:ti,ab,kw OR 'intraarticular drug administration'/exp OR (((intraarticular OR 'intra articular') NEAR/3 (inject* OR drug*)):ti,ab,kw)	102890
#1	'shoulder dislocation'/exp OR (((shoulder* OR glenohumeral) NEAR/5 (dislocat* OR luxat* OR instab*)):ti,ab,kw)	12399

Ovid/Medline

#	Searches	Results
9	6 or 7 or 8	93
8	3 not (6 or 7) **= overig**	70
7	(3 and 5) not 6 **= RCT**	17
6	3 and 4 **= SR**	6
5	(exp randomized controlled trial/ or randomized controlled trials as topic/ or random*.ti,ab. or rct?.ti,ab. or ((pragmatic or practical) adj "clinical trial*").ti,ab,kf. or ((non-inferiority or noninferiority or superiority or equivalence) adj3 trial*).ti,ab,kf.) not (animals/ not humans/)	1384513
4	(meta-analysis/ or meta-analysis as topic/ or (metaanaly* or meta-analy* or metanaly*).ti,ab,kf. or systematic review/ or cochrane.jw. or (prisma or prospero).ti,ab,kf. or ((systemati* or scoping or umbrella or "structured literature") adj3 (review* or overview*)).ti,ab,kf. or (systemic* adj1 review*).ti,ab,kf. or ((systemati* or literature or database* or data-base*) adj10 search*).ti,ab,kf. or ((structured or comprehensive* or	571569

	systemic*) adj3 search*).ti,ab,kf. or ((literature adj3 review*) and (search* or database* or data-base*)).ti,ab,kf. or (("data extraction" or "data source*") and "study selection").ti,ab,kf. or ("search strategy" and "selection criteria").ti,ab,kf. or ("data source*" and "data synthesis").ti,ab,kf. or (medline or pubmed or embase or cochrane).ab. or ((critical or rapid) adj2 (review* or overview* or synthes*)).ti. or (((critical* or rapid*) adj3 (review* or overview* or synthes*)) and (search* or database* or data-base*)).ab. or (metasynthes* or meta-synthes*).ti,ab,kf.) not (comment/ or editorial/ or letter/ or ((exp animals/ or exp models, animal/) not humans/))	
3	1 and 2	93
2	exp Lidocaine/ or lidocain*.ti,ab,kf. or lignocaine.ti,ab,kf. or exp Injections, Intra-Articular/ or ((intraarticular or 'intra articular') adj3 (inject* or drug*)).ti,ab,kf.	47531
1	exp Shoulder Dislocation/ or ((shoulder* or glenohumeral) adj5 (dislocat* or luxat* or instab*)).ti,ab,kf.	10427

Module 5: Operatieve behandeling

Evidence tabel

Systematic review(s)

Study reference	Study characteristics	Patient characteristics	Intervention (I)	Comparison / control (C)	Follow-up	Outcome measures and effect size
van Spanning (2021)	SR and meta-analysis of RCTs and prospective or retrospective cohort studies. For the purpose of this guideline, only the RCTs of the SR of van Spanning were included. *Literature search from 1990 up to April 15, 2020.* A. Bottoni (2002) B. Jakobsen (2007) C. Kirkley (2005) D. Yapp (2020) Study design: RCT parallel Setting and Country: A. Orthopaedic clinic in Hawaii B. Emergency departments of 13 participating hospitals. C. Emergency departments and orthopaedic surgery colleagues in two university centers.	Inclusion criteria SR: • RCTs and cohort studies with a prospective design comparing recurrence rates following OTFD and NTFD with a minimum mean follow-up of two years; • Prospective and retrospective cohort studies comparing recurrence rates following OTFD to those following OTRD with a mini- mum mean follow-up of 2 years were included as well; • Articles written in the English, Dutch or German language. Exclusion criteria SR: • Studies that did not report original data; • Abstracts; • Animal, cadaveric, and biomechanical studies; • Studies reporting outcomes of revision surgery after any previous anterior shoulder stabilization procedure; • Studies in which patients received arthroplasty. *15 studies included. For the purpose of this guideline, 11 studies were excluded and 4 studies were included.*	Describe intervention: A. Labral repair B. Labral repair C. Labral repair D. Labral repair	Describe control: A. Non-operative treatment B. Non-operative treatment C. Non-operative treatment D. Lavage	End-point of follow-up (intervention vs control): A. 2.9 vs 3.1 years B. 10 vs 10 years C. 6.6 vs 6.6 years D. 14.2 vs 14.2 years	Outcome measure 1: Recurrence *A (Bottoni, 2002)* I: 1/9 (11.1%) C: 9/12 (75%) RR 0.15 (95% CI 0.02 to 0.97) *B (Jakobsen, 2007)* I: 3/36 (8.3%) C: 24/39 (61.5%) RR 0.14 (95% CI 0.04 to 0.41) *C (Kirkley, 2005)* I: 3/16 (18.98%) C: 9/15 (60%) RR 0.31 (95% CI 0.10 to 0.94) *D (Yapp, 2020)* I: 4/33 C: 15/32 RR 0.26 (95% CI 0.10 to 0.70) Outcome measure 2: Return to sport *D (Yapp, 2020)* I: 28/32 (87.5%) C: 19/33 (57.6%) Outcome measure 3: Return to sport at pre-injury level *D (Yapp, 2020)* I: 28/32 (87.5%)

	Source of funding There was no funding for this project. Conflicts of interest: See original publication	Important patient characteristics at baseline: N (intervention vs control) A. N=9 vs n=12 B. N=36 vs n=39 C. N=16 vs n=15 D. N=33 vs n=32 mean age (intervention vs control) A. 21.6 vs 23 years B. 23 vs 20 years C. 23.3 vs 22.7 years D. 24.7 vs 23.8 Sex: A. 100% males (n=21) B. 82% males (n=61) C. 87% males (n=27) D. 92% males (n=60) Mean follow-up (intervention vs control) A. 2.9 vs 3.1 years B. 10 vs 10 years C. 6.6 vs 6.6 years D. 14.2 vs 14.2 years Groups comparable at baseline? Yes.				C: 19/33 (57.6%) Outcome measure 4: Need for (secondary) surgery *A (Bottoni, 2002)* I: 1/9 (11.1%) C: 6/12 (50%) RR 0.22 (95% CI 0.03 to 1.53) *B (Jakobsen, 2007)* I: 1/36 (2.8%) C: 19/39 (48.7%)

Randomized controlled trials

Study reference	Study characteristics	Patient characteristics [2]	Intervention (I)	Comparison / control (C) [3]	Follow-up	Outcome measures and effect size [4]	Comments
Minkus (2021)	Type of study: Multicenter prospective randomized controlled trial. Setting and country: Seven departments specializing in shoulder and elbow surgery throughout Germany. Funding: Financial support was provided by the Wilhelm Julius Teufel Company, which assisted this study. M.S., D.M., F.M., T.S., and S.G. received consultant payments from Arthrex that were not related to this work. Conflicts of interest: AOSSM checks author disclosures against the Open Payments Database (OPD). AOSSM has not conducted an independent investigation on the OPD and disclaims any liability or responsibility relating thereto.	Inclusion criteria: • First-time traumatic anterior shoulder dislocations; • Inclusion and randomization three days or less after dislocation; • Type B2 (unidirectional without hyperlaxity) of B3 (unidirectional with hyperlaxity) instability according to Gerber and Nyffeler; • Age between 18 and 40 years. Exclusion criteria: • Recurrent shoulder instability; • Posterior and multidirectional shoulder instability; • Any concomitant shoulder pathology (eg, cuff tear, bony Bankart lesion, dislocation fracture including greater tuberosity fracture, engaging Hill-Sachs lesion, nerve lesion); • Noncompliance especially in wearing the brace for immobilization in external rotation and abduction; • Unwillingness to participate in the study.	Describe intervention (treatment/procedure/test): **Short description:** operative treatment with arthroscopic shoulder stabilization. **Detailed description:** Patients underwent surgery within 3 weeks after trauma. Surgeries were performed with patients in the lateral decubitus position, and 3 portals were used. A standardized arthroscopic shoulder stabilization procedure was performed with labral repair and capsular shift using a knotless technique. For refixation of the labrum, at least 3 PEEK anchors with an FiberWire loop (Arthrex) were used. Postoperatively, the patients were immobilized in internal rotation in a sling for 3 weeks, and a standardized rehabilitation protocol was performed.	Describe control (treatment/procedure/test): **Short description:** Nonoperative treatment. **Detailed description:** Immobilization in 60 degrees of external rotation and 30 degrees of abduction. For immobilization in the external rotation plus abduction position, a Bledsoe ARC XR orthosis was used. The immobilization treatment began at least 3 days after trauma. Patients were instructed to wear the brace 24 hours a day, for 3 weeks in total.	Length of follow-up: Two years. Loss-to-follow-up: Intervention: N = 8 (15.4%) Reasons: all 8 patients were lost to follow-up because contact information changed without notice. *Baseline characteristics of the patients lost to follow-up or excluded due to non-compliance did not differ from the characteristics of the other patients. N = 13 (21.7%) Reasons: 4 patients dropped out of the study because of non-compliance (ie, they interrupted the immobilization treatment) and 9 patients were lost to follow-up because contact information changed without notice. Control: N = 13 (21.7%) Reasons: 4 patients dropped out of the study because of non-compliance (ie, they interrupted the immobilization treatment) and 9 patients were lost to follow-up because contact information changed without notice.	Outcome 1: overall recurrence rate of instability, n/N (%) I: 1/44 (2.3%) C: 9/47 (19.1%) *recurrent instability was further divided in traumatic and atraumatic events. *Traumatic* I: 1/1 (100%) C: 5/9 (55.6%) *Atraumatic* I: 0/1 (0%) C: 4/9 (44.4%) Traumatic and atraumatic events were further divided in subluxations and dislocations. *Traumatic subluxation* I: 1/1 (100%) C: 1/5 (20.0%) *Traumatic dislocation* I: 0/1 (0%) C: 4/5 (80.0%) *Atraumatic subluxation* I: 0/1 (0%) C: 2/4 (50.0%) *Atraumatic dislocation* I: 0/1 (0%) C: 2/4 (50.0%)	Author's conclusion: Immobilization in ER1ABD versus primary arthroscopic shoulder stabilization for the treatment of FSD showed no differences in clinical shoulder scores. However, recur- rent instability was significantly higher after nonoperative treatment. Traumatic as well as atraumatic recurrent instability events can be observed, which mainly affect patients younger than 30 years who are active in sports. Primary operative stabilization might be preferred for this group if the patient desires the lowest risk for recurrent dislocation.

		N total at baseline: Intervention: N=52 Control: N=60 Important prognostic factors[2]: *Age, mean (SD) / median (IQR)* *I: 25.7 (6.2) years* *C: 26.7 (5.8) years* *Sex* *I: 48/52 (92.3%) M* *C: 55/60 (91.6%) M* Groups comparable at baseline? Yes. The groups showed no significant differences regarding baseline characteristics as shown in Table 1.			*Baseline characteristics of the patients lost to follow-up or excluded due to non-compliance did not differ from the characteristics of the other patients.	Outcome 2: need for (secondary) surgery, n/N (%) I: 0/44 (0%) C: 5/47 (10.6%) *additional surgery was secondary arthroscopic shoulder stabilization due to recurrent shoulder instability at a mean of 12.2 months (range 5 to 21 months) after initial dislocation. Outcome 3: complications, n/N (%) I: 0/44 (0%) C: 0/47 (0%) Outcome 4: shoulder instability symptoms among patients who did not have a recurrent instability event *Positive apprehension test, n/N (%)* I: 2/44 (4.7%) C: 3/47 (7.9%) Outcome 5: range of motion *External rotation at 90 degrees of abduction, mean (SD)* I: 80 (12.0) degrees C: 86 (9.0) degrees Outcome 6: patients reported outcomes *WOSI-score, mean (SD)* I: 92.7% (8.1) C: 91.5% (7.9) *Rowe-score, mean (SD)* I: 88.5 (11.2) points C: 89.1 (7.1) points	

						Constant-Murley score, mean (SD) I: 93.9 (10.1) points C: 96.9 (4.7) points *Subjective Shoulder Value, mean (SD)* I: 93.1% (6.5) C: 93.6% (4.4)	

Pougès (2021)	Type of study: Controlled, prospective, randomized trial. Setting and country: Emergency department of a hospital. France. Funding: Not reported. Conflicts of interest: The authors declared that they have no conflicts of interest in the authorship and publication of this contribution.	Inclusion criteria: • Patients between the ages of 18 and 25; • Radiologically confirmed anterior shoulder dislocation. • Informed written consent. Exclusion criteria: • Nontraumatic anterior shoulder dislocations with joint hyperlaxity, defined as a Beighton score ≥ 4/9; • A delay between anterior shoulder dislocations and surgery >15 days; • Associated humeral head fracture; • A contraindication to general anesthesia; • Pregnancy or breast feeding; • Protected adults not able to give consent; • Patient refusal of the follow-up protocol; • A bone defect exceeding 25% of the glenoid surface on computed tomography (CT) scan; • A humeral avulsion of the glenohumeral ligament (HAGL lesion) found during the arthroscopy. N total at baseline: Intervention: N=20 Control: N=20 Important prognostic factors[2]: *Age, mean (SD) / median (IQR)* *I: 22 (20.5 to 22.5)* *C: 21.5 (20 to 22.5)*	Describe intervention (treatment/procedure/test): **Short description:** operative treatment. **Detailed description:** Patients under- went arthroscopic Bankart repair surgery. Surgery was to be performed in the 15 days after the first episode of ASD. Internal rotation immobilization was to be followed for the first 3 weeks after the surgery. * Physical therapy began at 3 weeks postoperatively and consisted of passive and active mobilization while limiting external rotation to 30° and abduction to 90°. Unlimited range of motion was allowed after 6 weeks.	Describe control (treatment/procedure/test): **Short description:** Nonoperative treatment. **Detailed description:** Patients were immobilized for 3 weeks after ASD. *Physical therapy began at 3 weeks and consisted of passive and active mobilization while limiting external rotation to 30° and abduction to 90°. Unlimited range of motion was allowed after 6 weeks.	Length of follow-up: Two years. Loss-to-follow-up: Intervention: N = 0 Control: N = 0	Outcome 1: overall recurrence rate of shoulder instability, n/N (%) I: 2/20 (10.0%) C: 14/20 (70.0%) Of the 14 patients in the nonoperative treatment group, 13 described subluxations and 6 had complete dislocations requiring reduction by a third person. The last patient had a positive apprehension test. Fewer patients in the operative treatment group versus the nonoperative group had another episode of dislocation (0 vs 6), subluxation (2 vs 13), or a positive apprehension test (1 vs 11). Outcome 2: need for (secondary) surgery, n/N (%) I: 1/20 (5.0%) C: 4/20 (20.0%) Outcome 3: patient reported outcomes *WOSI-score, mean (SD)* I: 11.5 (18.6) C: 17.7 (18.4) *Walch-Duplay score, mean (SD)* I: 88.4 (19.3) C: 70.3 (30.7) *QuickDASH score, mean (SD)* I: 6.5 (10.6) C: 11.2 (13.0) Outcome 4: range of motion	Author's conclusion: This study showed that arthroscopic Bankart repair after the first episode of ASD offers better results than nonoperative treatment in terms of risk of recurrence and functional results while preserving range of motion. In light of these results, arthroscopic Bankart repair could be offered as a primary treatment after the first episode of ASD in patients younger than 25 years. A longer follow-up will be necessary to confirm the durability of these findings.

		P=0.63 *Sex* *I: 15/20 (75%) M* *C: 18/20 (90%) M* *P=0.41* <u>Groups comparable at baseline?</u> Yes.				*Anterior elevation, mean difference with opposite side after two years* I: -0.5 (2.3) degrees C: 2.1 (7.1) degrees *Abduction, mean difference with opposite side after two years* I: 0.5 (2.3) degrees C: 5.8 (11.7) degrees *Extension, mean difference with opposite side after two years* I: 3.2 (8.2) degrees C: 2.1 (7.9) degrees *External rotation at 0 degrees of abduction, mean difference with opposite side after two years* I: -1.5 (6.7) degrees C: 3.7 (7.0) degrees *External rotation at 90 degrees of abduction, mean difference with opposite side after two years* I: 0.5 (5.2) degrees C: 3.1 (8.2) degrees *Internal rotation, mean difference with opposite side after two years* I: 19.0 (NR) degrees C: 19.0 (NR) degrees <u>Outcome 5: return to sport</u> I: 95% (19/20) C: 68% <u>Outcome 6: Patient satisfaction</u> *Patients were asked, ''After this first dislocation, would you*	

						agree to have (another) surgery now that you know the outcome?'', n/N who answered 'yes' I: 17/20 (85.0%) C: 7/20 (35%) *8 patients in the nonoperative treatment group had no opinion, 4 patients would not have operative treatment, and 1 patient was lost to follow-up and did not respond.	

Risk of bias tabel

Systematic review(s)

Study First author, year	Appropriate and clearly focused question?[1] Yes/no/unclear	Comprehensive and systematic literature search?[2] Yes/no/unclear	Description of included and excluded studies?[3] Yes/no/unclear	Description of relevant characteristics of included studies?[4] Yes/no/unclear	Appropriate adjustment for potential confounders in observational studies?[5] Yes/no/unclear/not applicable	Assessment of scientific quality of included studies?[6] Yes/no/unclear	Enough similarities between studies to make combining them reasonable?[7] Yes/no/unclear	Potential risk of publication bias taken into account?[8] Yes/no/unclear	Potential conflicts of interest reported?[9] Yes/no/unclear
Lu (2019)	Yes	Yes	Yes	Yes	Not applicable	Yes	Yes	Yes	Yes

Randomized controlled trials

Study reference (first author, publication year)	Was the allocation sequence adequately generated? Definitely yes Probably yes Probably no Definitely no	Was the allocation adequately concealed? Definitely yes Probably yes Probably no Definitely no	Blinding: Was knowledge of the allocated interventions adequately prevented? Definitely yes Probably yes Probably no Definitely no	Was loss to follow-up (missing outcome data) infrequent? Definitely yes Probably yes Probably no Definitely no	Are reports of the study free of selective outcome reporting? Definitely yes Probably yes Probably no Definitely no	Was the study apparently free of other problems that could put it at a risk of bias? Definitely yes Probably yes Probably no Definitely no	Overall risk of bias If applicable/necessary, per outcome measure **LOW** **Some concerns** **HIGH**
Bottoni (2002)	Definitely yes Reason: Patients who voluntarily entered the study were randomized to one of two groups by using the last digit of their social security numbers	Probably no Reason: randomized by using the last digit of their social security numbers; that is, patients with odd numbers were assigned to the operative group.	Definitely no. Reason: blinding of patients and study personnel was not possible.	Probably no. Reason: three out of twelve (25%) patients were lost to follow-up but all in the operative treatment group	Probably yes. Reason: all predefined outcome measures were reported.	No information. Reason: study does not describe any other problems.	Some concerns/high Reason: no blinding possible and high percentage lost to follow-up in the operative treatment group.
Jakobsen (2007)	Definitely yes. Reason: the patients were randomized via a sealed-	No information. Reason: -	Probably no. Reason: Blinding of patients was not possible. Blinding	Probably yes.	Probably yes.	Probably yes. Reason: One of the weaknesses of the study is	Some concerns

	envelope technique to either open Bankart repair or non-operative treatment.		of study personnel not mentioned.	Reason: only one patient (in the operative group) could not be tracked.	Reason: all predefined outcome measures were reported.	that it was performed as a multicenter study with several surgeons. We tried to reduce the disadvantages by gathering all experienced surgeons before the study was begun and teaching everyone the arthroscopic evaluation system, the Constant score measures, and the operative technique in a cadaver laboratory. The 10-year evaluation was performed as a telephone inter- view, which did not give us the opportunity to examine range of motion or any signs of osteoarthritis.	Reason: unclear allocation concealment and no blinding.
Kirkley (2005)	Definitely yes. Reason: it was decided to stratify the randomization based on age: (1) 22 years or younger and (2) 23 to 30 years of age. The randomization was also stratified for the surgeon to eliminate the bias that may be introduced by small differences in surgical technique. Each surgeon was provided with a set of opaque envelopes, each of which contained group assignment as generated by a computer program using variable block sizes of 2 and 4.	No information. Reason: -	Definitely no. Reason: no blinding of participants possible.	Probably yes. Reason: Thirty-three of the 40 original subjects were found and contacted by telephone; 31 agreed to be evaluated and returned questionnaire data, 16 from the operative treatment group and 15 from the traditional treatment group.	Probably yes. Reason: all predefined outcome measures were reported.	No information. Reason: -	Some concerns. Reason: no blinding and unclear allocation concealment.

Minkus (2021)	Definitely yes. Reason: Patients were assigned to the nonoperative treatment with immobilization or the operative treatment with shoulder sta- bilization within 3 days after trauma and dislocation at a 1:1 allocation ratio	Definitely yes. Reason: allocation ratio based on an allocation sequence that was generated on a computer and internet-based randomization tool.	Definitely no. Reason: blinding of the patients was not possible and blinding of the outcome examiners was not feasible. This lack of blinding also creates a risk of bias.	Probably no Reason: The number of patients who were lost because they refused to participate, sought treatment .3 days after dislocation, or had concomitant lesions listed under the exclusion criteria is unclear, leading to a potential selection bias. Unfortunately, we were not able to conduct follow-up exami- nations of the patients who experienced a recurrent insta- bility and had to be excluded because of noncompliance. This compromises the analysis of clinical outcomes between the 2 groups because only patients who were successfully treated are considered in the 24-month follow-up results. An intention-to-treat analysis for patients who underwent operative stabilization secondarily was not performed.	Probably yes. Reason: all predefined outcome measures were reported.	Apart from the limitations named earlier, probably yes. Reason: see previous sections.	Some concerns/high Reason: loss to follow-up was frequent, no blinding of study personnel (patient blinding was not possible).
Pougès (2021)	Definitely yes. Reason: After providing con- sent, the patients were randomized to 1 of the 2 groups by opening envelopes prepared by the clinical research department, which were opened in a predetermined order.	Probably yes. Reason: The investigators discovered the treatment group only when the patient was included in the study.	Definitely no Reason: blinding of participants was not possible. Study personnel was also not blinded.	Definitely yes. Reason: 2 patients were lost to follow-up, but equally distributed over both groups.	Probably yes. Reason: all predefined outcome measures were reported.	No information. Reason: -	Some concerns Reason: no blinding of participants or personnel.

Yapp (2020)	Definitely yes. Reason: Subjects were randomized to receive either an arthroscopic washout (AWO) or ABR	Probably yes. Reason: Treatment allocation was concealed unless the patient experienced recurrent insta- bility requiring further investigation and treatment.	Probably yes. Reason: Patients and data reviewers were blinded to the treatment allocation during the course of this study.	Probably yes. Reason: high percentages of lost to follow-up in both groups but almost equal in both groups (30% in non-operative group and 25% in operative group).	Probably yes. Reason: all predefined outcome measures were reported.	Probably yes. Reason: In the present trial, 3 patients died and another 20 patients (23%) were considered lost to follow-up following initial ran-domization. Although the loss to follow-up could lead to reporting bias, no differences were noted with respect to the age, sex, or number of high-risk patients in each cohort of patients who did not complete follow-up. No differences were found in the rate of recurrent dislocation or PROM scores measured at 2 years between those included in this long-term study and those who were excluded after 2 years.	Low/some concerns. Reason:

Exclusie tabel

Systematic reviews	
Author and year	**Reason for exclusion**
Adam (2018)	Includes the same studies as a more recent systematic review of van Spanning (2021).
Brophy (2009)	Includes the same studies as a more recent systematic review of van Spanning (2021).
Chahal (2012)	Includes the same studies as a more recent systematic review of van Spanning (2021).
Godin (2010)	Includes the same studies as a more recent systematic review of van Spanning (2021).
Handoll (2004)	Includes the same studies as a more recent systematic review of van Spanning (2021).
Hurley (2020)	Includes the same studies as a more recent systematic review of van Spanning (2021).
Kavaja (2018)	Includes the same studies as a more recent systematic review of van Spanning (2021).
Longo (2014)	Includes the same studies as a more recent systematic review of van Spanning (2021).
Kraeutler (2020)	Includes the same studies as a more recent systematic review of van Spanning (2021).
Zaremski (2016)	Includes the same studies as a more recent systematic review of van Spanning (2021).
Randomized controlled trials	
Multanen (2020)	Wrong comparison.
2019 SFA Annual Meeting Abstracts	Wrong study design.

Zoekverantwoording

Algemene informatie

Richtlijn: Schouderluxaties	
Uitgangsvraag: Wat is de waarde van chirurgische interventie bij een primaire anterieure schouderluxatie?	
Database(s): Ovid/Medline, Embase	Datum: 10-02-2022 (update 17-03-2022)
Periode: 1990 - heden	Talen: Engels, Nederlands
Literatuurspecialist: Miriam van der Maten	
BMI zoekblokken: voor verschillende opdrachten wordt (deels) gebruik gemaakt van de zoekblokken van BMI-Online https://blocks.bmi-online.nl/ Bij gebruikmaking van een volledig zoekblok zal naar de betreffende link op de website worden verwezen.	
Toelichting: → Voor deze vraag is gezocht op de elementen: • Shoulder dislocation • Surgical treatment • Conservative treatment → De sleutelartikelen van De Carli, Bottoni, Kirkley en Jakobsen worden gevonden met de zoekopdracht. → De sleutel artikelen van Larrain, Arciero, Gigis, en Shih, worden wel gevonden met de zoekterminologie, maar vallen uit de zoekopdracht op basis van studiedesign (geen SR of RCT). → Er werd eerste gezocht naar SR. Op basis daarvan werd de review van Spanning (2021) als basis genomen voor de module. Vanaf de zoekdatum van die search, is nog aanvullend naar RCT gezocht (17 maart 2022)	

Te gebruiken voor richtlijnen tekst: In de databases Embase en Ovid/Medline is op 10 februari 2022 (update RCT 17 maart 2022) met relevante zoektermen gezocht naar systematische reviews en RCT over de waarde van chirurgische interventie bij een primaire anterieure schouderluxatie.De zoekopdracht leverde 98 resultaten op.

Zoekopbrengst

	EMBASE	OVID/MEDLINE	Ontdubbeld
SRs	79	67	88
RCT vanaf 2020	12	8	10
Totaal			98

Zoekstrategie

Embase

No.	Query	Results
#18	#14 AND #16 NOT #17 AND [01-04-2020]/sd = RCT vanaf April 2020	12
#17	#14 AND #15 = SR	79
#16	'randomized controlled trial'/exp OR random*:ti,ab OR (((pragmatic OR practical) NEAR/1 'clinical trial*'):ti,ab) OR ((('non inferiority' OR noninferiority OR superiority OR equivalence) NEAR/3 trial*):ti,ab) OR rct:ti,ab,kw	1873986
#15	'meta analysis'/exp OR 'meta analysis (topic)'/exp OR metaanaly*:ti,ab OR 'meta analy*':ti,ab OR metanaly*:ti,ab OR 'systematic review'/de OR 'cochrane database of systematic reviews'/jt OR prisma:ti,ab OR prospero:ti,ab OR (((systemati* OR scoping OR umbrella OR 'structured literature') NEAR/3 (review* OR overview*)):ti,ab) OR ((systemic* NEAR/1 review*):ti,ab) OR (((systemati* OR literature OR database* OR 'data base*') NEAR/10 search*):ti,ab) OR (((structured OR comprehensive* OR systemic*) NEAR/3 search*):ti,ab) OR (((literature NEAR/3 review*):ti,ab) AND (search*:ti,ab OR database*:ti,ab OR 'data base*':ti,ab)) OR (('data extraction':ti,ab OR 'data source*':ti,ab) AND 'study selection':ti,ab) OR ('search strategy':ti,ab AND 'selection criteria':ti,ab) OR ('data source*':ti,ab AND 'data synthesis':ti,ab) OR medline:ab OR pubmed:ab OR embase:ab OR cochrane:ab OR (((critical OR rapid) NEAR/2 (review* OR overview* OR synthes*)):ti) OR ((((critical* OR rapid*) NEAR/3 (review* OR overview* OR synthes*)):ab) AND (search*:ab OR database*:ab OR 'data base*':ab)) OR metasynthes*:ti,ab OR 'meta synthes*':ti,ab	733409
#14	#11 AND #12 AND #13 AND ([english]/lim OR [dutch]/lim) AND [1990-2022]/py NOT ('conference abstract'/it OR 'editorial'/it OR 'letter'/it OR 'note'/it) NOT (('animal experiment'/exp OR 'animal model'/exp OR 'nonhuman'/exp) NOT 'human'/exp)	1104
#13	'conservative treatment'/exp/mj OR conservative:ti,ab,kw OR noninvasive:ti,ab,kw OR 'non invasive':ti,ab,kw OR nonsurg*:ti,ab,kw OR 'non surg*':ti,ab,kw OR nonoperati*:ti,ab,kw OR 'non operati*':ti,ab,kw OR expectative*:ti,ab,kw OR 'watchful waiting':ti,ab,kw OR 'immobilization'/exp OR immobili*:ti,ab,kw OR 'physiotherapy'/exp OR physiotherap*:ti,ab,kw OR 'physio therap*':ti,ab,kw OR 'physical therap*':ti,ab,kw OR 'kinesiotherapy'/exp OR kinesiotherap*:ti,ab,kw OR kinesitherapeutic*:ti,ab,kw OR 'occupational therapy'/exp OR 'occupation* therap*':ti,ab,kw OR ergotherapy*:ti,ab,kw	1085871
#12	'surgery'/exp/mj OR 'surgery'/lnk OR surgic*:ti,ab,kw OR surger*:ti,ab,kw OR surgeon*:ti,ab,kw OR operation*:ti,ab,kw OR operative:ti,ab,kw OR invasive:ti,ab,kw OR restorati:ti,ab,kw OR 'bankart repair'/exp OR bankart*:ti,ab,kw OR (('rotator cuff' NEAR/3 repair*):ti,ab,kw) OR 'arthroscopic stabili*ation':ti,ab,kw	6174595
#11	'shoulder dislocation'/exp/mj OR (((shoulder* OR glenohumeral) NEAR/5 (dislocat* OR luxat* OR instab*)):ti,ab,kw)	10684

Ovid/Medline

#	Searches	Results
9	(5 and 7) not 8 andt dt=20200401-20220401 =RCT vanaf April 2020	8
8	5 and 6 = SR	67

7	(exp randomized controlled trial/ or randomized controlled trials as topic/ or random*.ti,ab. or rct?.ti,ab. or ((pragmatic or practical) adj "clinical trial*").ti,ab,kf. or ((non-inferiority or noninferiority or superiority or equivalence) adj3 trial*).ti,ab,kf.) not (animals/ not humans/)	1351271
6	(meta-analysis/ or meta-analysis as topic/ or (metaanaly* or meta-analy* or metanaly*).ti,ab,kf. or systematic review/ or cochrane.jw. or (prisma or prospero).ti,ab,kf. or ((systemati* or scoping or umbrella or "structured literature") adj3 (review* or overview*)).ti,ab,kf. or (systemic* adj1 review*).ti,ab,kf. or ((systemati* or literature or database* or data-base*) adj10 search*).ti,ab,kf. or ((structured or comprehensive* or systemic*) adj3 search*).ti,ab,kf. or ((literature adj3 review*) and (search* or database* or data-base*)).ti,ab,kf. or (("data extraction" or "data source*") and "study selection").ti,ab,kf. or ("search strategy" and "selection criteria").ti,ab,kf. or ("data source*" and "data synthesis").ti,ab,kf. or (medline or pubmed or embase or cochrane).ab. or ((critical or rapid) adj2 (review* or overview* or synthes*)).ti. or (((critical* or rapid*) adj3 (review* or overview* or synthes*)) and (search* or database* or data-base*)).ab. or (metasynthes* or meta-synthes*).ti,ab,kf.) not (comment/ or editorial/ or letter/ or ((exp animals/ or exp models, animal/) not humans/))	546853
5	limit 4 to ((english language or dutch) and yr="1990 -Current")	834
4	1 and 2 and 3	1126
3	exp Conservative Treatment/ or exp Immobilization/ or immobili*ation.ti,ab,kf. or immobili*e.ti,ab,kf. or conservative.ti,ab,kf. or noninvasive.ti,ab,kf. or 'non invasive'.ti,ab,kf. or nonsurg*.ti,ab,kf. or 'non surg*'.ti,ab,kf. or nonoperati*.ti,ab,kf. or 'non operati*'.ti,ab,kf. or expectative*.ti,ab,kf. or 'watchful waiting'.ti,ab,kf. or exp Physical Therapy Modalities/ or exp Occupational Therapy/ or physiotherap*.ti,ab,kf. or 'physio therap*'.ti,ab,kf. or 'physical therap*'.ti,ab,kf. or kinesiotherap*.ti,ab,kf. or kinesitherapeutic*.ti,ab,kf. or 'occupation* therap*'.ti,ab,kf. or ergotherapy*.ti,ab,kf.	651279
2	exp Specialties, Surgical/ or su.fs. or surgic*.ti,ab,kf. or surger*.ti,ab,kf. or surgeon*.ti,ab,kf. or operation*.ti,ab,kf. or operative.ti,ab,kf. or invasive.ti,ab,kf. or restorati.ti,ab,kf. or Bankart*.ti,ab,kf. or ('rotator cuff' adj3 repair*).ti,ab,kf. or 'arthroscopic stabili*ation'.ti,ab,kf.	3979903
1	exp Shoulder Dislocation/ or ((shoulder* or glenohumeral) adj5 (dislocat* or luxat* or instab*)).ti,ab,kf.	10209

Module 6: Immobilisatie

Evidence tabel

Study reference	Study characteristics	Patient characteristics	Intervention (I)	Comparison / control (C)	Follow-up	Outcome measures and effect size
Paterson (2010)	SR and meta-analysis *Literature search up to December 2009.* A: Hovelius (1983) Study design: A: RCT Setting and Country: A: Not reported. Source of funding No external funding support was received for this study. Conflicts of interest: Not reported.	Inclusion criteria SR: Prospective Level-I and Level-II studies dealing with shoulder immobilization for first-time anterior dislocations. Exclusion criteria SR: Retrospective trials, case series, review articles, and case reports. Important patient characteristics at baseline: N A: N = 216 mean age A: <40 years *Sex:* A: 80% Males. Groups comparable at baseline? Yes.	Describe intervention: A: shoulders immobilized with the arm tied to the torso for a minimum of twenty-one days to four weeks (group 1).	Describe control: A: shoulders were just placed in a sling until the patient was comfortable.	End-point of follow-up: A: 2 years.	Outcome measure: Recurrent shoulder dislocation, n/N (%) I: 33/112 C: 32/104 Outcome measure: subjective shoulder instability, n/N (%) I: 18/112 C: 11/104

Risk of bias tabel

Study reference (first author, publication year)	**Was the allocation sequence adequately generated?** Definitely yes Probably yes Probably no Definitely no	**Was the allocation adequately concealed?** Definitely yes Probably yes Probably no Definitely no	**Blinding: Was knowledge of the allocated interventions adequately prevented?** Definitely yes Probably yes Probably no Definitely no	**Was loss to follow-up (missing outcome data) infrequent?** Definitely yes Probably yes Probably no Definitely no	**Are reports of the study free of selective outcome reporting?** Definitely yes Probably yes Probably no Definitely no	**Was the study apparently free of other problems that could put it at a risk of bias?** Definitely yes Probably yes Probably no Definitely no	**Overall risk of bias** **If applicable/necessary, per outcome measure** **LOW** **Some concerns** **HIGH**
Hovelius (1983)	Probably yes. Reason:	No information. Reason: -	No information. Reason: -	No information. Reason:	No information. Reason:	Not reported. Reason: -	High

Exclusie tabel

Reference	Reason for exclusion
Gibson (2004)	Wrong comparison of interventions: immobilization in external vs. internal
Gutkowska (2017)	Wrong study design.
Hanchard (2014)	Wrong study design.
Handoll (2006)	Wrong comparison of interventions: immobilization in external vs. internal
Kavaja (2018)	Wrong comparison of interventions: immobilization in external vs. internal
Hovelius (1996)	Included in SR of Paterson (2010).
Itoi (2013)	Included in SR of Paterson (2010).
Itoi (2022)	Included in SR of Paterson (2010).
Itoi (2007)	Included in SR of Paterson (2010).
Liavaag (2011)	Wrong comparison of interventions: immobilization in external vs. internal
Liavaag (2009)	Wrong comparison of interventions: immobilization in external vs. internal
Murray (2020)	Wrong comparison of interventions: immobilization in external vs. internal
Whelan (2014)	Wrong comparison of interventions: immobilization in external vs. internal
Hurley (2021)	Wrong comparison of interventions: immobilization in external vs. internal
Liu (2014)	Wrong comparison of interventions: immobilization in external vs. internal
Shinagawa (2020)	Wrong comparison of interventions: immobilization in external vs. internal
Smith (2015)	Wrong study design.

Zoekverantwoording

Algemene informatie

Cluster/richtlijn: Schouderluxaties	
Uitgangsvraag/modules: Wat is de waarde van vroegtijdige mobilisatie van de schouder na een primaire anterieure schouderluxatie?	
Database(s): Ovid/Medline, Embase.com	Datum: 28 november 2022
Periode: 1990 - heden	Talen: Engels, Nederlands
Literatuurspecialist: Miriam van der Maten	
BMI-zoekblokken: voor verschillende opdrachten wordt (deels) gebruik gemaakt van de zoekblokken van BMI-Online https://blocks.bmi-online.nl/ Bij gebruikmaking van een volledig zoekblok zal naar de betreffende link op de website worden verwezen.	
Toelichting: Voor deze vraag is gezocht op de elementen: • Schouderluxaties • Immobilisatie (inclusief sling en brace als methode voor immobilisatie) Er is niet verder gezocht op het tijdselement (vroegtijdig) omdat het aantal hits al redelijk beperkt was en hierdoor mogelijk relevant hits gemist zouden kunnen worden.	

Te gebruiken voor richtlijnen tekst:
Nederlands
In de databases Embase.com en Ovid/Medline is op 28 november 2022 met relevante zoektermen gezocht naar systematische reviews en RCT over de waarde van (vroegtijdige) mobilisatie van de schouder na een primaire anterieure schouderluxatie. De literatuur zoekactie leverde 113 unieke treffers op.

Engels
On the 28th of November 2022, relevant search terms were used to search for systematic reviews and RCT about the value of (early) immobilization of the shoulder after a primary anterior shoulder dislocation in the databases Embase.com and Ovid/Medline. The search resulted in 113 unique hits.

Zoekopbrengst

	EMBASE	**OVID/MEDLINE**	**Ontdubbeld**
SRs	52	42	57
RCT	43	43	56
Observationele studies			
Totaal	95	85	**113**

Zoekstrategie

Embase.com

No.	**Query**	**Results**
#8	#6 OR #7	95
#7	#3 AND #5 NOT #6 = **RCT**	43
#6	#3 AND #4 = **SR**	52
#5	'randomized controlled trial'/exp OR random*:ti,ab OR (((pragmatic OR practical) NEAR/1 'clinical trial*'):ti,ab) OR ((('non inferiority' OR noninferiority OR superiority OR equivalence) NEAR/3 trial*):ti,ab) OR rct:ti,ab,kw	1986591
#4	'meta analysis'/exp OR 'meta analysis (topic)'/exp OR metaanaly*:ti,ab OR 'meta analy*':ti,ab OR metanaly*:ti,ab OR 'systematic review'/de OR 'cochrane database of systematic reviews'/jt OR prisma:ti,ab OR prospero:ti,ab OR (((systemati* OR scoping OR umbrella OR 'structured literature') NEAR/3 (review* OR overview*)):ti,ab) OR ((systemic* NEAR/1 review*):ti,ab) OR (((systemati* OR literature OR database* OR 'data base*') NEAR/10 search*):ti,ab) OR (((structured OR comprehensive* OR systemic*) NEAR/3 search*):ti,ab) OR (((literature NEAR/3 review*):ti,ab) AND (search*:ti,ab OR database*:ti,ab OR 'data base*':ti,ab)) OR (('data extraction':ti,ab OR 'data source*':ti,ab) AND 'study selection':ti,ab) OR ('search strategy':ti,ab AND 'selection criteria':ti,ab) OR ('data source*':ti,ab AND 'data synthesis':ti,ab) OR medline:ab OR pubmed:ab OR embase:ab OR cochrane:ab OR (((critical OR rapid) NEAR/2 (review* OR overview* OR synthes*)):ti) OR ((((critical* OR rapid*) NEAR/3 (review* OR overview* OR synthes*)):ab) AND (search*:ab OR database*:ab OR 'data base*':ab)) OR metasynthes*:ti,ab OR 'meta synthes*':ti,ab	733409
#3	#1 AND #2 AND ([english]/lim OR [dutch]/lim) AND [1990-2022]/py NOT ('conference abstract'/it OR 'editorial'/it OR 'letter'/it OR 'note'/it) NOT (('animal experiment'/exp OR 'animal model'/exp OR 'nonhuman'/exp) NOT 'human'/exp)	607
#2	'immobilization'/exp OR mobili*ation:ti,ab,kw OR immobili*ation:ti,ab,kw OR mobili*e:ti,ab,kw OR immobili*e:ti,ab,kw OR 'shoulder sling'/exp OR 'brace'/exp OR 'shoulder brace'/exp OR sling*:ti,ab,kw OR brace*:ti,ab,kw	247833
#1	'shoulder dislocation'/exp/mj OR (((shoulder* OR glenohumeral) NEAR/5 (dislocat* OR luxat* OR instab*)):ti,ab,kw) OR 'recurrent shoulder dislocation'/exp	12098

Ovid/Medline

#	**Searches**	**Results**

9	7 or 8	85
8	(4 and 6) not 7 **= RCT**	43
7	4 and 5 **= SR**	42
6	exp randomized controlled trial/ or randomized controlled trials as topic/ or random*.ti,ab. or rct?.ti,ab. or ((pragmatic or practical) adj "clinical trial*").ti,ab,kf. or ((non-inferiority or noninferiority or superiority or equivalence) adj3 trial*).ti,ab,kf.	1563641
5	meta-analysis/ or meta-analysis as topic/ or (metaanaly* or meta-analy* or metanaly*).ti,ab,kf. or systematic review/ or cochrane.jw. or (prisma or prospero).ti,ab,kf. or ((systemati* or scoping or umbrella or "structured literature") adj3 (review* or overview*)).ti,ab,kf. or (systemic* adj1 review*).ti,ab,kf. or ((systemati* or literature or database* or data-base*) adj10 search*).ti,ab,kf. or ((structured or comprehensive* or systemic*) adj3 search*).ti,ab,kf. or ((literature adj3 review*) and (search* or database* or data-base*)).ti,ab,kf. or (("data extraction" or "data source*") and "study selection").ti,ab,kf. or ("search strategy" and "selection criteria").ti,ab,kf. or ("data source*" and "data synthesis").ti,ab,kf. or (medline or pubmed or embase or cochrane).ab. or ((critical or rapid) adj2 (review* or overview* or synthes*)).ti. or (((critical* or rapid*) adj3 (review* or overview* or synthes*)) and (search* or database* or data-base*)).ab. or (metasynthes* or meta-synthes*).ti,ab,kf.	631346
4	limit 3 to ((english language or dutch) and yr="1990 -Current")	436
3	1 and 2	620
2	Immobilization/ or mobili*ation.ti,ab,kf. or immobili*ation.ti,ab,kf. or mobili*e.ti,ab,kf. or immobili*e.ti,ab,kf. or exp Braces/ or sling*.ti,ab,kf. or brace*.ti,ab,kf.	160388
1	exp Shoulder Dislocation/ or ((shoulder* or glenohumeral) adj5 (dislocat* or luxat* or instab*)).ti,ab,kf.	10678

Module 7: Fysiotherapeutische behandeling

Evidence tabel

Niet van toepassing.

Risk of bias tabel

Niet van toepassing.

Exclusie tabel

Author and year	Reason for exclusion
Eshoj (2020)	Wrong comparison.

Zoekverantwoording

Algemene informatie

Richtlijn: Schouderluxaties	
Uitgangsvraag: Wat is de waarde van fysiotherapeutische behandeling bij patiënten met een gereponeerde anterieure schouderluxatie?	
Database(s): Ovid/Medline, Embase, CINAHL, PEDro	Datum: 15-02-2022
Periode: geen restrictie	Talen: Engels, Nederlands
Literatuurspecialist: Miriam van der Maten	
BMI zoekblokken: voor verschillende opdrachten wordt (deels) gebruik gemaakt van de zoekblokken van BMI-Online https://blocks.bmi-online.nl/ Bij gebruikmaking van een volledig zoekblok zal naar de betreffende link op de website worden verwezen.	
Toelichting: Er is voor deze vraag gezocht op de elementen: ● Schouderluxaties ● Fysiotherapie	
Te gebruiken voor richtlijnen tekst: In de databases Embase.com, Ovid/Medline, CINAHL (EBSCO) en PEDro is op 15 februari 2022 met relevante zoektermen gezocht naar systematische reviews en RCT over de waarde van fysiotherapeutische behandeling bij patiënten met een schouderluxatie De literatuurzoekactie leverde **439** unieke treffers op.	

Zoekopbrengst

	EMBASE	OVID/MEDLINE	CINAHL	PEDro	Ontdubbeld
SRs	120	120	73	-	166
RCT	102	126	157	-	268
Overig	-	-	-	23	5
Totaal	222	246	230		**439**

Zoekstrategie

Embase

No.	Query	Results
#8	#6 OR #7	222

#7	#3 AND #5 NOT #6	102
#6	#3 AND #4	120
#5	'randomized controlled trial'/exp OR random*:ti,ab OR (((pragmatic OR practical) NEAR/1 'clinical trial*'):ti,ab) OR ((('non inferiority' OR noninferiority OR superiority OR equivalence) NEAR/3 trial*):ti,ab) OR rct:ti,ab,kw	1875495
#4	'meta analysis'/exp OR 'meta analysis (topic)'/exp OR metaanaly*:ti,ab OR 'meta analy*':ti,ab OR metanaly*:ti,ab OR 'systematic review'/de OR 'cochrane database of systematic reviews'/jt OR prisma:ti,ab OR prospero:ti,ab OR (((systemati* OR scoping OR umbrella OR 'structured literature') NEAR/3 (review* OR overview*)):ti,ab) OR ((systemic* NEAR/1 review*):ti,ab) OR (((systemati* OR literature OR database* OR 'data base*') NEAR/10 search*):ti,ab) OR (((structured OR comprehensive* OR systemic*) NEAR/3 search*):ti,ab) OR (((literature NEAR/3 review*):ti,ab) AND (search*:ti,ab OR database*:ti,ab OR 'data base*':ti,ab)) OR (('data extraction':ti,ab OR 'data source*':ti,ab) AND 'study selection':ti,ab) OR ('search strategy':ti,ab AND 'selection criteria':ti,ab) OR ('data source*':ti,ab AND 'data synthesis':ti,ab) OR medline:ab OR pubmed:ab OR embase:ab OR cochrane:ab OR (((critical OR rapid) NEAR/2 (review* OR overview* OR synthes*)):ti) OR ((((critical* OR rapid*) NEAR/3 (review* OR overview* OR synthes*)):ab) AND (search*:ab OR database*:ab OR 'data base*':ab)) OR metasynthes*:ti,ab OR 'meta synthes*':ti,ab	733409
#3	#1 AND #2 AND ([english]/lim OR [dutch]/lim) AND [2000-2022]/py NOT ('conference abstract'/it OR 'editorial'/it OR 'letter'/it OR 'note'/it) NOT (('animal experiment'/exp OR 'animal model'/exp OR 'nonhuman'/exp) NOT 'human'/exp)	1511
#2	'conservative treatment'/exp OR conservative:ti,ab,kw OR noninvasive:ti,ab,kw OR 'non invasive':ti,ab,kw OR nonsurg*:ti,ab,kw OR 'non surg*':ti,ab,kw OR nonoperati*:ti,ab,kw OR 'non operati*':ti,ab,kw OR 'physiotherapy'/exp OR physiotherap*:ti,ab,kw OR 'physio therap*':ti,ab,kw OR 'physical therap*':ti,ab,kw OR 'kinesiotherapy'/exp OR kinesiotherap*:ti,ab,kw OR kinesitherapeutic*:ti,ab,kw OR 'occupational therapy'/exp OR 'occupation* therap*':ti,ab,kw OR ergotherapy*:ti,ab,kw OR 'exercise'/exp OR exercise*:ti,ab,kw OR training*:ti,ab,kw OR 'rehabilitation'/exp OR rehabilit*:ti,ab,kw OR revalidate*:ti,ab,kw OR 'proprioception'/exp OR 'proprioception':ti,ab,kw OR neuromuscular:ti,ab,kw OR 'kinetic chain':ti,ab,kw OR 'mobilization'/exp OR 'early mobili*ation':ti,ab,kw	2830791
#1	'shoulder dislocation'/exp/mj OR (((shoulder* OR glenohumeral) NEAR/5 (dislocat* OR luxat* OR instab*)):ti,ab,kw)	10692

Ovid/Medline

#	Searches	Results
8	6 or 7	246
7	(3 and 5) not 6	126
6	3 and 4	120
5	(exp randomized controlled trial/ or randomized controlled trials as topic/ or random*.ti,ab. or rct?.ti,ab. or ((pragmatic or practical) adj "clinical trial*").ti,ab,kf. or ((non-inferiority or noninferiority or superiority or equivalence) adj3 trial*).ti,ab,kf.) not (animals/ not humans/)	1352557
4	(meta-analysis/ or meta-analysis as topic/ or (metaanaly* or meta-analy* or metanaly*).ti,ab,kf. or systematic review/ or cochrane.jw. or (prisma or prospero).ti,ab,kf. or ((systemati* or scoping or umbrella or "structured literature") adj3 (review* or overview*)).ti,ab,kf. or (systemic* adj1 review*).ti,ab,kf. or ((systemati* or literature or database* or data-base*) adj10 search*).ti,ab,kf. or ((structured or comprehensive* or systemic*) adj3 search*).ti,ab,kf. or ((literature adj3 review*) and (search* or database* or data-base*)).ti,ab,kf. or (("data extraction" or "data source*") and "study selection").ti,ab,kf. or ("search strategy" and "selection criteria").ti,ab,kf. or ("data source*" and "data synthesis").ti,ab,kf. or	547875

	(medline or pubmed or embase or cochrane).ab. or ((critical or rapid) adj2 (review* or overview* or synthes*)).ti. or (((critical* or rapid*) adj3 (review* or overview* or synthes*)) and (search* or database* or data-base*)).ab. or (metasynthes* or meta-synthes*).ti,ab,kf.) not (comment/ or editorial/ or letter/ or ((exp animals/ or exp models, animal/) not humans/))	
3	1 and 2	1999
2	exp Conservative Treatment/ or conservative.ti,ab,kf. or noninvasive.ti,ab,kf. or 'non invasive'.ti,ab,kf. or nonsurg*.ti,ab,kf. or 'non surg*'.ti,ab,kf. or nonoperati*.ti,ab,kf. or 'non operati*'.ti,ab,kf. or exp Physical Therapy Modalities/ or exp Occupational Therapy/ or physiotherap*.ti,ab,kf. or 'physio therap*'.ti,ab,kf. or 'physical therap*'.ti,ab,kf. or kinesiotherap*.ti,ab,kf. or kinesitherapeutic*.ti,ab,kf. or 'occupation* therap*'.ti,ab,kf. or ergotherapy*.ti,ab,kf. or exp Exercise/ or exp Exercise Therapy/ or exercise*.ti,ab,kf. or training*.ti,ab,kf. or exp Rehabilitation/ or rehabilit*.ti,ab,kf. or revalidate*.ti,ab,kf. or exp Proprioception/ or 'proprioception'.ti,ab,kf. or neuromuscular.ti,ab,kf. or 'kinetic chain'.ti,ab,kf. or 'early mobili*ation'.ti,ab,kf.	1663432
1	exp *Shoulder Dislocation/ or ((shoulder* or glenohumeral) adj5 (dislocat* or luxat* or instab*)).ti,ab,kf.	9631

CINAHL

#	Query	Results
S7	S3 AND S5 NOT S6	157
S6	S3 AND S4	73
S5	(MH "Clinical Trials+") OR (PT (Clinical trial)) OR (MH "Random Assignment") OR (MH "Quantitative Studies") OR (TX ((clini* N1 trial*) OR (singl* N1 blind*) OR (singl* N1 mask*) OR (doubl* N1 blind*) OR (doubl* N1 mask*) OR (tripl* N1 blind*) OR (tripl* N1 mask*) OR (random* N1 allocat*) OR placebo* OR ((waitlist* OR (wait* and list*)) and (control* OR group)) OR "treatment as usual" OR tau OR (control* N3 (trial* OR study OR studies OR group*)) OR randomized OR randomised))	1,862,557
S4	(MH "Meta Analysis") or TX (meta-analy* or metanaly* or metaanaly* or meta analy*) or TX (systematic* N5 review*) or (evidence* N5 review*) or (methodol* N5 review*) or (quantitativ* N5 review*) or TX (systematic* N5 overview*) or (evidence* N5 overview*) or (methodol* N5 overview*) or (quantitativ* N5 overview*) or TX (systematic* N5 survey*) or (evidence* N5 survey*) or (methodol* N5 survey*) or (quantitativ* N5 survey*) or TX (systematic* N5 overview*) or (evidence* N5 overview*) or (methodol* N5 overview*) or (quantitativ* N5 overview*) or TX (pool* N2 data) or (combined N2 data) or (combining N2 data) or (pool* N2 trials) or (combined N2 trials) or (combining N2 trials) or (pool* N2 studies) or (combined N2 studies) or (combining N2 studies) or (pool* N2 results) or (combined N2 results) or (combining N2 results)	271,525
S3	S1 AND S2	760

S2	(MH "Rehabilitation+") OR (MH "Occupational Therapy+") OR (MH "Physical Therapy+") OR (MH "Proprioception+") OR (MH "Joint Mobilization") OR (MH "Physical Mobility") OR (MH "Exercise+") OR (MH "Therapeutic Exercise+") OR (MH "Recovery, Exercise") OR (TI (conservative OR noninvasive OR 'non invasive' OR nonsurg* OR 'non surg*' OR nonoperati* OR 'non operati*' OR physiotherap* OR 'physio therap*' OR 'physical therap*' OR kinesiotherap* OR kinesitherapeutic* OR 'occupation* therap*' OR ergotherapy* OR exercise* OR training* OR rehabilit* OR revalidate* OR 'proprioception' OR neuromuscular OR 'kinetic chain' OR 'early mobili*ation')) OR (AB (conservative OR noninvasive OR 'non invasive' OR nonsurg* OR 'non surg*' OR nonoperati* OR 'non operati*' OR physiotherap* OR 'physio therap*' OR 'physical therap*' OR kinesiotherap* OR kinesitherapeutic* OR 'occupation* therap*' OR ergotherapy* OR exercise* OR training* OR rehabilit* OR revalidate* OR 'proprioception' OR neuromuscular OR 'kinetic chain' OR 'early mobili*ation'))	779,761
S1	(MM "Shoulder Dislocation") OR (TI ((shoulder* OR glenohumeral) N5 (dislocat* OR luxat* OR instab*))) OR (AB ((shoulder* OR glenohumeral) N5 (dislocat* OR luxat* OR instab*)))	3,484

PEDro

- Shoulder dislocation

Module 8: Organisatie van zorg

Evidence tabel
Niet van toepassing.

Risk of bias tabel
Niet van toepassing.

Exclusie tabel
Niet van toepassing.

Zoekverantwoording
Niet van toepassing.