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**1 - Concerning VTE risk, which surgeries can be considered major, and which surgeries can be considered non-major in shoulder and elbow surgery?**

**Appendix**

*Search Terms*

SHOULDER (when major or nonmajor term were used)

((((((major risk[Text Word]) OR (major surgery[Text Word])) OR (major risk surgery[Text Word])) OR ("non-major surgery"[Text Word])) OR ("non-major risk surgery"[Text Word])) AND ("Venous Thromboembolism"[Mesh] OR "Venous Thrombosis"[Mesh] OR "pulmonary embolism" OR "deep vein thrombosis")) AND ((((((((((shoulder joint[MeSH Terms]) OR (shoulder joints[MeSH Terms])) OR (shoulder prosthesis[MeSH Subheading])) OR (shoulder arthtroplasty[MeSH Subheading])) OR (shoulder arthroplasty replacement[MeSH Subheading])) OR (shoulder[Text Word])) OR (shoulder joint[Text Word])) OR (shoulder joint\*[Text Word])) OR (shoulder arthroplasty replacement[Text Word])) OR (shoulder replacement[Text Word]))

SHOULDER (general VTE risk)
("Venous Thromboembolism"[Mesh] OR "Venous Thrombosis"[Mesh] OR "pulmonary embolism" OR "deep vein thrombosis")) AND ((((((((((shoulder joint[MeSH Terms]) OR (shoulder joints[MeSH Terms])) OR (shoulder prosthesis[MeSH Subheading])) OR (shoulder arthtroplasty[MeSH Subheading])) OR (shoulder arthroplasty replacement[MeSH Subheading])) OR (shoulder[Text Word])) OR (shoulder joint[Text Word])) OR (shoulder joint\*[Text Word])) OR (shoulder arthroplasty replacement[Text Word])) OR (shoulder replacement[Text Word])) AND ((risk [mesh]) OR ("risk stratification") OR ("risk score") OR ("risk calculator"))

ELBOW (when major or nonmajor term were used)

(("Venous Thromboembolism"[Mesh] OR "Venous Thrombosis"[Mesh] OR "pulmonary embolism" OR "deep vein thrombosis") AND ((((((elbow[MeSH Terms]) OR (elbow joint[MeSH Terms])) OR (elbow[Text Word])) OR (elbow joint[Text Word])) OR (elbow procedure[Text Word])) OR (elbow procedure\*[Text Word]))) AND (((((major risk[Text Word]) OR (major surgery[Text Word])) OR (major risk surgery[Text Word])) OR ("non-major surgery"[Text Word])) OR ("non-major risk surgery"[Text Word]))

ELBOW (general VTE risk)

(("Venous Thromboembolism"[Mesh] OR "Venous Thrombosis"[Mesh] OR "pulmonary embolism" OR "deep vein thrombosis") AND ((((((elbow[MeSH Terms]) OR (elbow joint[MeSH Terms])) OR (elbow[Text Word])) OR (elbow joint[Text Word])) OR (elbow procedure[Text Word])) OR (elbow procedure\*[Text Word]))) AND ((risk [mesh]) OR ("risk stratification") OR ("risk score") OR ("risk calculator"))

Total: 66

*Inclusion*

* At least one chemoprophyalactic agent described
* Venous thromboembolism rates reported
* Primary research
* English articles

*Exclusion*

* Narrative review articles
* Meta-analysis
* Not in English

**2 - Does immobilization of the upper extremity influence the VTE prophylaxis protocol?**

**Appendix**

**Search Terms**:

|  |
| --- |
| (((exp IMMOBILIZATION/ OR (immobili\* OR restrain\* OR orthotic\* OR orthos\* OR splint\* OR sling\* OR brace\* OR cast\*).ti,ab OR exp "RESTRAINT, PHYSICAL"/ OR exp "ORTHOTIC DEVICES"/ OR exp SPLINTS/ OR exp "CASTS, SURGICAL"/) AND (exp "UPPER EXTREMITY"/ OR exp ARM/ OR exp AXILLA/ OR exp ELBOW/ OR exp FOREARM/ OR exp HAND/ OR exp SHOULDER/ OR exp WRIST/ OR exp "BONES OF UPPER EXTREMITY"/ OR exp "ARM BONES"/ OR exp "BONES OF UPPER EXTREMITY"/ OR exp HUMERUS/ OR exp RADIUS/ OR exp ULNA/ OR exp CLAVICLE/ OR exp "ACROMIOCLAVICULAR JOINT"/ OR exp "ELBOW JOINT"/ OR exp "HAND JOINTS"/ OR exp "SHOULDER JOINT"/ OR exp "SHOULDER INJURIES"/ OR exp "ARTHROPLASTY, REPLACEMENT, SHOULDER"/ OR exp "SHOULDER PROSTHESIS"/ OR exp "ARTHROPLASTY, REPLACEMENT, ELBOW"/ OR exp "ARM INJURIES"/ OR exp "HUMERAL FRACTURES"/ OR exp "RADIUS FRACTURES"/ OR exp "SHOULDER FRACTURES"/ OR exp "ULNA FRACTURES"/ OR exp "HAND JOINTS"/ OR exp "HAND INJURIES"/ OR exp "CARPAL BONES"/ OR (extremit\* OR limb\* OR shoulder\* OR axilla\* OR arm\* OR elbow\* OR forearm\* OR wrist\* OR hand\* OR finger\* OR digit\* OR clavicle\* OR humer\* OR olecranon OR radius OR ulna OR scaphoid OR metacarpal\* OR phalan\*).ti,ab)) AND ((VTE).ti,ab OR (DVT).ti,ab OR (PE).ti,ab OR exp "PULMONARY EMBOLISM"/ OR (pulmonary emboli\*).ti,ab OR (deep-vein thrombosis).ti,ab OR (deep vein thrombosis).ti,ab OR exp THROMBOSIS/ OR exp "EMBOLISM AND THROMBOSIS"/ OR (blood clot\*).ti,ab)) [DT FROM 1990] [Humans] |

**Search Results**:

Combined total = 2590

Once duplicates removed = 2200

Other sources = 7

After screening titles/abstracts = 51

After full-text evaluation = 10

**3 - Is there a risk stratification method for VTE of the upper extremity?**

**Appendix**

Search Terms

((venous thromboembolism) OR (deep vein thrombosis) OR (DVT) OR (VTE) OR (pulmonary embolism)) AND (orthopaedic OR orthopedic OR orthopaedics OR orthopedics OR plastic OR surgery OR upper limb) AND (humerus OR forearm OR hand OR elbow OR shoulder OR wrist) AND (guideline OR guidelines OR risk stratification OR risk assessment)

Total: 152 results

Inclusion

Venous thromboembolism, deep vein thrombosis and pulmonary embolism

Orthopaedic and plastic upper limb surgery

Anatomical regions of shoulder, humerus, elbow, forearm, wrist and hand

Risk stratification and risk assessment

Guidelines

English articles

Exclusion

Lower limb

Not in English

**4 - Should routine VTE prophylaxis be administered to patients undergoing upper extremity immobilization, such as casting?**

**Appendix**

*Search Terms*

(("cast"[All Fields] OR ("splinted"[All Fields] OR "splinting"[All Fields] OR "splints"[MeSH Terms] OR "splints"[All Fields] OR "splint"[All Fields]) OR ("early"[All Fields] AND ("immobile"[All Fields] OR "immobilisation"[All Fields] OR "immobilization"[MeSH Terms] OR "immobilization"[All Fields] OR "immobilise"[All Fields] OR "immobilised"[All Fields] OR "immobiliser"[All Fields] OR "immobilises"[All Fields] OR "immobilising"[All Fields] OR "immobilisations"[All Fields] OR "immobilize"[All Fields] OR "immobilizations"[All Fields] OR "immobilized"[All Fields] OR "immobilizer"[All Fields] OR "immobilizers"[All Fields] OR "immobilizes"[All Fields] OR "immobilizing"[All Fields]))) AND ("VTE"[All Fields] OR ("venous thrombosis"[MeSH Terms] OR ("venous"[All Fields] AND "thrombosis"[All Fields]) OR "venous thrombosis"[All Fields]) OR ("venous thrombosis"[MeSH Terms] OR ("venous"[All Fields] AND "thrombosis"[All Fields]) OR "venous thrombosis"[All Fields] OR ("deep"[All Fields] AND "venous"[All Fields] AND "thromboses"[All Fields]) OR "deep venous thromboses"[All Fields])) AND (("VTE"[All Fields] AND ("prevention and control"[MeSH Subheading] OR ("prevention"[All Fields] AND "control"[All Fields]) OR "prevention and control"[All Fields] OR "prophylaxis"[All Fields] OR "prophylaxies"[All Fields] OR "prophylaxy"[All Fields])) OR (("venous thrombosis"[MeSH Terms] OR ("venous"[All Fields] AND "thrombosis"[All Fields]) OR "venous thrombosis"[All Fields]) AND ("prevention and control"[MeSH Subheading] OR ("prevention"[All Fields] AND "control"[All Fields]) OR "prevention and control"[All Fields] OR "prophylaxis"[All Fields] OR "prophylaxies"[All Fields] OR "prophylaxy"[All Fields])) OR ("anticoagulants"[Pharmacological Action] OR "anticoagulants"[MeSH Terms] OR "anticoagulants"[All Fields] OR "anticoagulant"[All Fields] OR "anticoagulate"[All Fields] OR "anticoagulated"[All Fields] OR "anticoagulating"[All Fields] OR "anticoagulation"[All Fields] OR "anticoagulations"[All Fields] OR "anticoagulative"[All Fields]) OR ("heparin"[MeSH Terms] OR "heparin"[All Fields] OR "heparine"[All Fields] OR "heparins"[All Fields] OR "heparin s"[All Fields] OR "heparinate"[All Fields] OR "heparinated"[All Fields] OR "heparines"[All Fields] OR "heparinic"[All Fields] OR "heparinisation"[All Fields] OR "heparinised"[All Fields] OR "heparinization"[All Fields] OR "heparinize"[All Fields] OR "heparinized"[All Fields] OR "heparinizing"[All Fields]) OR ("warfarin"[MeSH Terms] OR "warfarin"[All Fields] OR "warfarin s"[All Fields] OR "warfarinization"[All Fields] OR "warfarinized"[All Fields] OR "warfarins"[All Fields]) OR "aspirin"[MeSH Terms]))

Total: 140 results

*Inclusion (114 results)*

* English articles
* Current strategies for VTE prophylaxis
* Research from books, clinical studies/trials, comparative studies, RCTs, meta-analyses, and systemic reviews

*Exclusion (26 results)*

* Not in English
* Articles not related to orthopedics or surgery

**5 - Is there a role for administration of aspirin as a VTE prophylaxis in patients undergoing upper limb surgery?**

**Appendix**

*Search Terms*

((((Upper limb OR upper extremity OR arm OR shoulder OR clavicle OR humerus OR scapula OR glenoid OR elbow OR radius OR ulna OR forearm OR wrist OR hand OR finger OR thumb)) AND ((Surgery OR surgeries OR surgical procedure OR orthopaedic surgery OR orthopedic surgery OR amputation OR disarticulation OR arthrodesis OR arthroplasty OR hemiarthroplasty OR arthroscopy OR joint capsule release OR fracture OR trauma OR fracture fixation OR closed reduction OR open reduction OR internal fixation OR limb salvage OR osteotomy OR synovectomy OR tendon transfer OR tenodesis OR tenotomy OR ligament reconstruction OR rotator cuff repair OR labral repair OR latarjet))) AND ((Aspirin OR acetylsalicylic acid acylpyrin OR easprin OR ecotrin OR zoprin))) AND ((prophylaxis OR prophylactically OR embolism and thrombosis OR venous thromboembolism OR venous thrombosis OR pulmonary embolism OR embolus OR embolism OR thrombosis OR thromboses OR thrombus OR thromboembolisms OR deep vein thrombosis OR pe OR vte OR dvt OR blood clot OR blood clots OR anti-clotting OR antithrombotic OR anti-thrombotic OR anticoagulation OR anti-coagulation)) AND ((english[Filter]) AND (1990:2021[pdat])

Total: 273

*Inclusion*

* Patients undergoing upper extremity orthopaedic surgery with aspirin used as postoperative VTE prophylaxis
* Rates of VTE reported
* Studies written in English
* Publication between 1990 - 2021

*Exclusion*

* Patients undergoing upper extremity orthopaedic surgery with any other postoperative VTE prophylaxis
* Patients with polytrauma patients that had upper and lower extremity injuries
* No rates of VTE reported
* Conference papers; proceedings; editorials; commentaries; technical papers; image quality; phantom studies; unavailable full text manuscripts
* Articles not written in English

**6 - Should routine VTE prophylaxis be administered to patients undergoing upper extremity osteosynthesis?**

**Appendix**

*Search Terms*

Medline

("upper extremity" OR arm[mesh] OR shoulder OR elbow OR wrist OR hand) AND ((orthopedic procedure[MeSH Terms]) OR (orthopedic procedures[MeSH Terms]) OR (orthopedic procedure) OR (orthopedic procedures) OR (orthopaedic procedures) OR (orthopaedic procedure)) AND ("Venous Thromboembolism"[Mesh] OR "Venous Thrombosis"[Mesh] OR "pulmonary embolism" OR "deep vein thrombosis") AND (((Prevention and Control[MeSH Subheading]) OR (prevention[Title/Abstract])) OR (prevent\*[Title/Abstract]) OR (prophylaxis[tw])) NOT (spine[mesh] OR (spine surgery))

Total number of results: 67

Cochrane

("upper extremity" OR (mh "arm") OR shoulder OR elbow OR wrist OR hand) AND ((mh"orthopedic procedure") OR (mh "orthopedic procedures") OR (orthopedic procedure) OR (orthopedic procedures) OR (orthopaedic procedures) OR (orthopaedic procedure)) AND ((mh "Venous Thromboembolism") OR (mh "Venous Thrombosis") OR "pulmonary embolism" OR "deep vein thrombosis") AND ((mh "Prevention and Control") OR (prevention) OR (prevent) OR (prophylaxis)) NOT ((mh "spine") OR (spine surgery))

Total number of results: 161

*Inclusion Criteria*

* Osteosynthesis of the upper extremity
* Confirmation of deep vein thrombosis or pulmonary embolism

*Exclusion Criteria*

* Orthopedic operations on the upper extremity other than osteosynthesis (elbow-, shoulder arthroplasty, arthroscopic shoulder operations)
* Conference papers; proceedings; editorials; commentaries; technical papers; image quality-, and phantom studies; and unavailable full-text manuscripts.

**7 - Should routine chemical VTE prophylaxis be administered to patients undergoing shoulder arthroplasty?**

**Appendix**

Search Terms

(("venous thromboembolism"[MeSH Terms] OR ("venous"[All Fields] AND "thromboembolism"[All Fields]) OR "venous thromboembolism"[All Fields]) AND ("prevention and control"[MeSH Subheading] OR ("prevention"[All Fields] AND "control"[All Fields]) OR "prevention and control"[All Fields] OR "prophylaxis"[All Fields] OR "prophylaxies"[All Fields] OR "prophylaxy"[All Fields]) AND ("shoulder"[MeSH Terms] OR "shoulder"[All Fields] OR "shoulders"[All Fields] OR "shoulder s"[All Fields]) AND ("arthroplasty"[MeSH Terms] OR "arthroplasty"[All Fields] OR "arthroplasties"[All Fields])) AND (english[Filter]) AND "Total shoulder replacement" OR "total shoulder arthroplasty" OR "total shoulder prosthesis" OR "shoulder prosthesis" OR "Arthroplasty, Replacement, Shoulder"[Mesh])

Total: 23 results, 15 after the criteria below applied

Inclusion

Shoulder arthroplasty

VTE prophylaxis

Frequency of adverse events

Primary research

Meta-analyses

English articles

Exclusion

Non-arthroplasty shoulder surgery

Not related to VTE prevention

Not in English

**8 - Should routine VTE prophylaxis be administered to patients undergoing rotator cuff repair?**

**Appendix**

*Search Terms*

(("Rotator Cuff"[Mesh]) AND ("repair" OR "arthroscopy" OR "surgery")) AND ("Venous Thromboembolism"[Mesh] OR "Venous Thrombosis"[Mesh] OR "pulmonary embolism" OR "deep vein thrombosis") AND (((Prevention and Control[MeSH Subheading]) OR (prevention[Title/Abstract])) OR (prevent\*[Title/Abstract]) OR (prophylaxis[tw]))

Total: 1 result

*Inclusion*

* Venous thromboembolism rates reported
* Primary research
* English articles

*Exclusion*

* Narrative review articles
* Not in English

**9 - Should routine VTE prophylaxis be administered to patients undergoing arthroscopic stabilization procedures of the shoulder?**

**Appendix**



Figure A-1. PRISMA flow diagram illustrating the collection of included studies.

|  |
| --- |
| **Table A-1.** Scoring of the JBI critical appraisal tools for each included study |
| **Study** | **#1** | **#2** | **#3** | **#4** | **#5** | **#6** | **#7** | **#8** | **#9** | **#10** | **#11** | **JBI Quality Score** |
| Bokshan et al.129, 2017. | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.5 | N/A | 0 | 8.5 |
| Goodloe et al.130, 2021. | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.5 | N/A | 1 | 8.5 |
| Shields et al.131, 2014. | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.5 | N/A | 1 | 8.5 |
| Takahashi et al.134, 2014. | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | N/A | 1 | 9 |
| Randelli et al.135, et al., 2010. | 0.5 | 1 | 0.5 | 1 | 0.5 | 0.5 | 0 | 1 | 1 | 1 |   | 7 |
| Kuremsky et al.137, 2011. | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | N/A |   | 9 |
| Hariri et al.138, 2009. | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 |   |   |   | 5 |
| Burkhart139, 1990. | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 |   |   |   | 7 |
| Watanabe et al.140, 2019. | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |   |   |   | 8 |
| JBI Quality Scores range from 0-11 for cohort studies, 0-10 for case series, and 0-8 for case reports. JBI= Joanna-Briggs Institute;1=yes; 0.5=unclear; 0=no; N/A=Not applicable.All reference numbers pertain to references in the main document. |

**Keyword search**: ("Joint Instability"[Mesh] OR Shoulder instability OR Shoulder stabilization OR Shoulder dislocation OR Capsular shift OR Labral repair OR Bankart repair OR Latarjet procedure OR rotator interval closure OR capsular plication OR capsulorrhaphy OR bankart repair OR posterior instability repair OR glenoid labrum OR shoulder labrum OR glenohumeral labrum OR anterior labrum repair OR posterior labrum repair OR GLAD lesion OR ALPSA lesion) **AND** (prophylaxis OR prophylaxed OR prophylactically OR "Embolism and Thrombosis"[Mesh] OR venous thromboembolism OR venous thrombosis OR pulmonary embolism OR embolus OR embolism OR thrombosis OR thromboses OR thrombus OR thromboembolisms OR deep vein thrombosis OR pe OR vte OR dvt OR blood clot OR blood clots OR anti-clotting OR antithrombotic OR anti-thrombotic OR anticoagulation OR anti-coagulation OR heparin OR lwwh OR low molecular weight heparin OR low-molecular-weight heparin OR "Heparin"[Mesh] OR "Heparin, Low-Molecular-Weight"[Mesh] OR "Dalteparin"[Mesh] OR Dalteparin OR fragmin OR "Enoxaparin"[Mesh] OR enoxaparin OR lovenox OR “Nadroparin"[Mesh] OR nadroparin OR fraxiparin OR "Tinzaparin"[Mesh] OR tinzaparin OR innohep OR low dose unfractionated heparin OR low-dose unfractionated heparin OR lduh OR "Factor Xa Inhibitors"[Mesh] OR direct factor xa inhibitor OR apixaban OR Eliquis OR betrixaban OR bevyxxa OR edoxaban OR savaysa OR rivaroxaban OR "Rivaroxaban"[Mesh] OR Xarelto OR Indirect factor xa inhibitors OR fondaparinux OR "Fondaparinux"[Mesh] OR fondaparin OR arixtra OR direct thrombin inhibitors OR "Antithrombins"[Mesh] OR dabigatran OR Pradaxa OR ximelagatran OR exanta OR vitamin k antagonists OR vka OR warfarin OR "Warfarin"[Mesh] OR coumadin OR aspirin OR "Aspirin"[Mesh] OR salicylate OR "Salycylates"[Mesh])

Exclusion reasons during full-text screening (n=78):

* 65 – not DVT
* 11 – not stabilization
* 1 – non-op management
* 1 – labrum repair not due to instability

**Author contributions:**

* Keyword planning: RP and FT
* Title/abstract, and full-text, and bias screening – RP and AH
	+ Disagreements – FT
* Data collection – RP and AH
* Data interpretation – RP, AH, FT, and PC
* Manuscript writing – RP
* Manuscript editing – RP, AH, FT, PC, and JK
* Manuscript approval – RP, AH, FT, PC, JK

**10 - Should routine VTE prophylaxis be administered to patients undergoing elbow arthroplasty?**

**Appendix**

*Search Terms (Pubmed and Google Scholar)*

Distal humeral replacement thromboembolism

Elbow arthroplasty thromboembolic

Elbow replacement thromboembolic

Distal humeral replacement thromboembolic

Elbow arthroplasty embolism

Elbow replacement embolism

Distal humeral replacement embolism

Total: 184 results

*Inclusion*

* Elbow arthroplasty
* Primary research
* English articles

*Exclusion*

* Case Reports
* Narrative review articles
* Not in English

**11 - Should routine VTE prophylaxis be administered to patients undergoing ligament reconstruction around the elbow?**

**Appendix**

Search Terms

Medline

(((((((((((ulnar collateral ligament reconstruction) OR (ulnar collateral ligament)) OR (medial collateral ligament reconstruction)) OR (lateral collateral ligament reconstruction)) OR (lateral collateral ligament)) OR (anular ligament reconstruction)) OR (anular ligament)) OR (elbow ligament reconstruction)) OR (elbow)) OR (posterolateral rotatory instability)) OR (posterolateral instability)) AND (((Prevention and Control[MeSH Subheading]) OR (prevention)) OR (prevent\*) OR (prophylaxis)) AND ("Venous Thromboembolism"[Mesh] OR "Venous Thrombosis"[Mesh] OR "pulmonary embolism" OR "deep vein thrombosis" OR "PE" OR "VTE" OR "DVT" OR "thrombosis")

Cochrane

#1 (ulnar collateral ligament reconstruction) OR (ulnar collateral ligament) OR (medial collateral ligament reconstruction) OR (lateral collateral ligament reconstruction) OR (lateral collateral ligament)

#2 (anular ligament reconstruction) OR (anular ligament) OR (elbow ligament reconstruction) OR (elbow) OR (posterolateral rotatory instability)

#3 (posterolateral instability)

#4 #1 OR #2 OR #3

#5 (prevention) OR (prevent\*) OR (prophylaxis)

#6 MeSH descriptor: [] explode all trees and with qualifier(s): [prevention & control - PC]

#7 #5 OR #6

#8 (pulmonary embolism) OR (deep vein thrombosis) OR (PE) OR (DVT) OR (VTE)

#9 (thrombosis)

#10 MeSH descriptor: [Venous Thromboembolism] explode all trees

#11 MeSH descriptor: [Venous Thrombosis] explode all trees

#12 #8 OR #9 OR #10 OR #11

#13 #4 AND #7 AND #12

Scopus

TITLE-ABS-KEY ( ulnar AND collateral AND ligament AND reconstruction ) OR TITLE-ABS-KEY ( ulnar AND collateral AND ligament ) OR TITLE-ABS-KEY ( medial AND collateral AND ligament AND reconstruction ) OR TITLE-ABS-KEY ( lateral AND collateral AND ligament AND reconstruction ) OR TITLE-ABS-KEY ( lateral AND collateral AND ligament ) OR TITLE-ABS-KEY ( anular AND ligament AND reconstruction ) OR TITLE-ABS-KEY ( anular AND ligament ) OR TITLE-ABS-KEY ( elbow AND ligament AND reconstruction ) OR TITLE-ABS-KEY ( elbow ) OR TITLE-ABS-KEY ( posterolateral AND rotatory AND instability ) OR TITLE-ABS-KEY ( posterolateral AND instability ) AND INDEXTERMS ( prevention AND control ) OR TITLE-ABS-KEY ( prevention ) OR TITLE-ABS-KEY ( prevent\* ) OR TITLE-ABS-KEY ( prophylaxis ) AND INDEXTERMS ( venous AND thromboembolism ) OR INDEXTERMS ( venous AND thrombosis ) OR ALL ( pulmonary AND embolism ) OR ALL ( deep AND vein AND thrombosis ) OR ALL ( pe ) OR ALL ( dvt ) OR ALL ( vte ) AND ( LIMIT-TO ( LANGUAGE , "English" ) ) AND ( LIMIT-TO ( SUBJAREA , "MEDI" ) OR LIMIT-TO ( SUBJAREA , "HEAL" ) OR LIMIT-TO ( SUBJAREA , "PHAR" ) OR LIMIT-TO ( SUBJAREA , "NURS" ) )

Total: 145 results

Inclusion:

* English articles
* Venous thromboembolism reported
* Elbow surgery
* Ligament repair and reconstruction surgery

Exclusion:

* Not in English
* Arthroplasty studies

After an initial title and abstract screening 14 studies were selected and after a meticulous article review 12 studies were selected for the final reference.

**12 - What are the classical signs, if any, of upper extremity DVT?**

**Appendix**

*Search Terms*

Total: 572

*Inclusion*

* Description of signs or symptoms of upper extremity deep vein thrombosis
* Studies written in English
* Publication between 2000 - 2021

*Exclusion*

* No description of the signs or symptoms of upper extremity deep vein thrombosis
* Case reports; conference papers; proceedings; editorials; commentaries; guidelines and book chapters; technical papers; image quality; phantom studies; unavailable full text manuscripts
* Articles not written in English

**13 - What is the optimal management of DVT of the upper extremity?**

**Appendix**

*Search Terms*

Non-ortho

(((idiopathic upper extremity deep vein thrombosis[MeSH Terms]) OR ((upper extremity[Title/Abstract]) AND ("Venous Thrombosis"[Mesh] OR "deep vein thrombosis") OR (venous thrombosis[Title/Abstract]) OR (deep vein thrombosis[Title/Abstract])))) AND ((care management, patient[MeSH Terms]) OR (care management[Title/Abstract]) OR (treatment[mesh]))

Total: 12,425 results

With filters (clinical trials, RCTs, English language): 1526 results

Ortho-only

((((idiopathic upper extremity deep vein thrombosis[MeSH Terms]) OR ((upper extremity[Title/Abstract]) AND ("Venous Thrombosis"[Mesh] OR "deep vein thrombosis") OR (venous thrombosis[Title/Abstract]) OR (deep vein thrombosis[Title/Abstract])))) AND ((care management, patient[MeSH Terms]) OR (care management[Title/Abstract]) OR (treatment[mesh]))) AND ((orthopedic procedure[MeSH Terms]) OR (orthopedic procedures[MeSH Terms]) OR (orthopedic procedure) OR (orthopedic procedures) OR (orthopaedic procedures) OR (orthopaedic procedure))

Total: 1,462 results

With filters (clinical trials, RCTs, English language): 228 results

*Inclusion*

* Idiopathic or secondary upper extremity deep vein thrombosis
* At least one prophylactic agent described
* Venous thromboembolism rates reported
* Primary research
* English articles

*Exclusion*

* Deep vein thrombosis not located in the upper extremity
* Case series with less than 10 cases
* Narrative review articles
* Not in English