Author Year Country Research Design Total Sample Size AMSTAR Score	Methods	Outcome
Arnold et al., (2017) USA Review of published articles up to February 2015 N=9	**Method:** A comprehensive literature search was conducted to identify randomized controlled trials (RCT) evaluating the efficacy and safety of antithrombotic strategies. The strength of evidence was evaluated using the Grading of Recommendations Assessment, Development and Evaluation (GRADE) system. **Databases:** MEDLINE; Cochrane Collaboration Library. **Level of evidence:** High quality study designs such as RCTs and one prospective controlled trial, were the only studies included. **Questions/measures/hypothesis:** 1. What is the effectiveness and safety of anticoagulant thromboprophylaxis compared to no prophylaxis, placebo, or another anticoagulant strategy for preventing deep vein thrombosis (DVT) and pulmonary embolism (PE) after acute SCI? 2. What is the comparative effectiveness and safety of mechanical prophylaxis strategies alone or in combination with other prophylactic strategies for preventing DVT and PE after acute SCI? 3. What is the comparative effectiveness and safety of prophylactic inferior vena cava (IVC) filter insertion alone or in combination with other prophylactic strategies for preventing DVT and PE after acute SCI? 4. What is the optimal timing to initiate and/or discontinue anticoagulant, mechanical, and/or prophylactic IVC filter following acute SCI? What is the cost-effectiveness of the treatment options mentioned above?	Question one: 1. Seven RCTs reported on the efficacy and/or safety of anticoagulant drug interventions. 2. A single RCT reported the efficacy of LMWH versus no prophylaxis. Individuals treated with enoxaparin has a lower rate of DVT (5.4%) than those who received no LMWH prophylaxis (21.6%). 3. Two RCTs assessed the risk of DVT in individuals receiving unfractionated heparin versus no treatment or placebo and found no significant difference between groups. 4. A single RCT compared the efficacy and safety of two different LMWH drugs (enoxaparin or dalteparin). There was no significant difference in the rate of DVT or PE between groups. 5. One RCT evaluated the efficacy and safety of fixed, low-dose versus adjusted-dose UFH. DVT and PE were observed in 9/29 (31%) and 2/29 (6.9%). The risk of DVT in the fixed, low-dose group was three times greater than the adjusted-dose group (RD=13.8, 95% CI=-3.6-31.2, RR=3.0, 95% CI=0.66-13.7, p=0.25). 6. Two RCTs evaluated the efficacy and safety of LMWH versus UFH and found no statistically significant difference in the rate of DVT or PE between groups. Question two:

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		1. One RCT compared the efficacy and safety of mechanical prophylaxis versus mechanical prophylaxis plus antithrombotic drugs. No significant difference in safety or efficacy was observed between groups. 2. Two RCTs compared outcomes between anticoagulant thromboprophylaxis and anticoagulant plus mechanical prophylaxis. Both studies reported significantly higher risk of DVT in the group that received anticoagulant prophylaxis only (50% and 60.3% versus 6.7% and 44.9%). Question three: 1. No RCTs were identified that met inclusion criteria. Question four: 1. One prospective controlled trial examined the timing of initiation of anticoagulant thromboprophylaxis in individuals with acute SCI. Combined anticoagulant and mechanical prophylaxis initiated within 72 hr of SCI resulted in significantly lower risk of DVT than treatment commenced 72 hr after injury. Question five: 1. No RCTs were identified that met inclusion criteria.
Fehlings et al., (2017) Canada Clinical Practice Guideline	**Method:** A comprehensive literature search was conducted to address key questions relating to thromboprophylaxis in SCI. The strength of evidence was evaluated using the Grading of Recommendations	1. Three RCTs compared the risk of DVT in individuals treated with LMWH or UFH to those receiving no prophylaxis or placebo. Individuals treated with

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	Assessment, Development and Evaluation (GRADE) system. **Databases:** Not reported. **Level of evidence: …** **Questions/measures/hypothesis:** 1. Should anticoagulant thromboprophylaxis be employed to reduce the risk of thromboembolic events in the acute period after SCI? 2. What anticoagulant thromboprophylaxis should be employed to reduce the risk of thromboembolic events in the acute period after traumatic SCI? 3. Should enoxaparin versus dalteparin be used to reduce the risk of thromboembolic events in the acute period after traumatic SCI? 4. Should fixed, low-dose, versus adjusted-dose unfractionated heparin (UFH) be used to reduce the risk of thromboembolic events in the acute period after traumatic SCI? 5. Should low weight molecular heparin (LWMH) versus UFH be used to reduce the risk of thromboembolic events in the acute period after traumatic SCI? 6. Should thromboprophylaxis be initiated within 72 hr (vs after 72 hr) of SCI? Should mechanical or anticoagulant thromboprophylaxis be used in combination or alone?	enoxaparin have a lower rate of DVT (5.45%) than those who received no anticoagulant prophylaxis (21.6%) (p=0.09). 2. Rates of DVT did not significantly differ between the UFH and the placebo/no prophylaxis group (1.8% and 3% in one trial and 50% and 74% in another). 3. Anticoagulant thromboprophylaxis should be offered routinely to reduce the risk of thromboembolic events in the acute period after SCI. 4. There is little to no difference in the rate of DVT, PE, bleeding and mortality between individuals treated with enoxaparin versus dalteparin. 5. There is low quality evidence that the risk of DVT is three times higher in individuals who received fixed, low-dose UFH compared to adjusted-dose heparin (RD=13.8, 95% CI=-3.6-31.2; RR=3.0, 95% CI=0.66 to 13.7; p=0.25). 6. The rate of bleeding is significantly higher in individuals treated with adjusted-dose heparin (24.1%) than in those receiving low-dose (0%) (RD=24.1, 95% CI=8.6-39.7; p=0.01). 7. Anticoagulant thromboprophylaxis, consisting of either subcutaneous LMWH or fixed, low-dose UFH, should be offered to reduce the risk of thromboembolic events in the acute period after SCI.

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		8. The authors caution against use of adjusted-dose UFH, due to the potential pf increased bleeding events. 9. One prospective observational study evaluated the risks of DVT and PE in individuals who received prophylaxis initiated within or after 72 hr of injury. Based on low quality evidence, the rate of DVT was significantly lower in individuals treated early (n=2) compared with late (n=46). There was insufficient evidence to compare the groups. 10. Anticoagulant thromboprophylaxis should be commenced within the first 72 hr after injury, if possible, to minimize the risk of VTE complications during acute hospitalization. 11. Individuals who received a combination of UFH and electronic calf stimulation had a lower risk of DVT than individuals treated with UFH alone (RD=43.3, 95% CI=15.8-70.9; RR=7.5, 95% CI=1.06-53.03, p=0.02). 12. Individuals treated with LMWH alone have a lower risk of PE compared with individuals who receive UFH plus IPC (RD=13.2, 95% CI=0.9-25.4; RR=0.28, 95% CI=0.08-0.98; p=0.06). 13. A higher percentage of individuals experienced a DVT when treated with IPC alone (40%) compared with IPC plus aspirin and dipyridamole (25%); however, this difference was not statistically significant.

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Christie et al., (2011) Canada Date included in the review not stated N=5 AMSTAR=5	**Method:** Comprehensive literature search of English RCT, Cohort studies, case series, and review articles of relating to prophylaxis low molecular unfractionated heparin (LMWH) for deep venous thrombosis (DVT) in traumatic SCI in adult age group (+18yr). **Databases:** PubMed. **Questions/measures/hypothesis:** Examine the ideal time for initiation of deep venous thrombosis (DVT) prophylaxis with LMWH after SCI or after surgery.	1. DVT prophylaxis should be instituted within 72hr post injury. 2. LMWH should be held on the morning of surgery and resumed within 24hr following surgery.