

Author Year Country Score Research Design Total Sample Size	Methods	Outcomes
Chiou-Tan et al. (2003) USA RCT PEDro=6 N=95	Population: Mean age=37 yr (Enoxaparin group), mean age=35 yr (Dalteparin group); Gender: males=72%, females=28% (Enoxaparin group), males=80%, females=20% (Dalteparin group); Level of injury: not specified; Severity of injury: complete=53, incomplete=42. Chronicity: All individuals had sustained acute SCI within 3 mo time; Individuals in the Enoxaparin group were enrolled 1-99 days after injury, and individuals in the Dalteparin group were enrolled 1-84 days after injury. The majority of participants were recruited within 4 weeks of injury, and more than ¾ of individuals were recruited within 6 weeks of injury. Intervention: Individuals were randomized to either receive 30 mg Enoxaparin subcutaneously every 12 hr (Enoxaparin group), or 5000 IU Dalteparin subcutaneously once daily (Dalteparin group). Outcome Measures: Incidence of deep vein thrombosis (DVT) or pulmonary embolism (PE) and bleeding. Method of Diagnosis: Duplex ultrasonography.	Timing of DVT onset: Not indicated. Incidence of DVT: 1. 6% of individuals (Enoxaparin group) and 4% of individuals (Dalteparin group) developed DVT (p=0.51). 2. No individuals developed PE overall. 3. 4% developed bleeding while receiving Dalteparin and 2% while receiving Enoxaparin (p=0.72). 4. Similar rates of DVT were found between Enoxaparin and Dalteparin.
DiGiorgio et al. (2017) USA Observational N=49	Population: Mean age=53.5 yr; Gender: males=65.3%, females=34.7%; Level of injury: not reported; Severity of injury: not reported. Chronicity: <24 hr post SCI. Intervention: A retrospective review of individuals with SCI at the UCSF Brain and Spinal Injury Center to determine if administration of enoxaparin (40 mg/day) low-molecular-weight heparin (LMWH) within 24 hr after injury is safe and effective in preventing the incidence of deep vein thrombosis (DVT) and pulmonary embolism (PE). Outcome Measures: Incidence of DVT and PE.	1. There were three DVTs (6.1%) and two PEs (4.1%), with no hemorrhagic complications. 2. No association was observed between DVT and/or PE and age, ASIA grade, sex, race, or having undergone a neurosurgical procedure.

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Marciniak et al. (2012) USA Case Control N=140	Population: Mean age=46.8 yr (Enoxaparin), mean age=48.4 yr (4500 Tinzaparin), mean age=32.9 yr (3500 Tinzaparin); Gender: males=64.7%, females=35.3% (Enoxaparin), males=74.1%, females=25.9% (4500 Tinzaparin), males=71.4%, females=28.6% (3500 Tinzaparin); Level of injury: not specified; Severity of injury: American Spinal Injury Association Impairment Scale (AIS) A-C, D. Chronicity: Individuals studied were within 3 mo of sustaining SCI; individuals were admitted at a median of 15 days after injury. Intervention: Individuals received either Enoxaparin (5000 IU), Tinzaparin (4500 IU), or Tinzaparin (3500 IU). The majority of individuals were on some form of pharmacological prophylaxis before admission. Outcome Measures: Incidence of deep vein thrombosis (DVT) and pulmonary embolism (PE) and bleeding. Method of Diagnosis: Clinical examination, venous duplex scans and computed tomography.	Timing of DVT onset: Individuals developed VTE symptoms at median of 12 days after admission. Incidence of DVT: 14 individuals developed a DVT and 4 developed a PE. - Individuals receiving Enoxaparin and 4500 IU Tinzaparin had significantly reduced odds of VTE compared with individuals receiving 3500 IU Tinzaparin (OR=0.12 and OR 0.18, respectively); uncontrolled factors may have affected this result. - Bleeding events were low and equivalent in all 3 treatment groups.
Slavik et al. , (2007) Canada Case Control N=135	Population: Mean age=40.6 yr (Enoxaparin), mean age=45.4 yr (Dalteparin); Gender: males=71.4% (Enoxaparin), males=80.6% (Dalteparin); Level of injury: cervical-thoracic (Enoxaparin), cervical-lumbar (Dalteparin); Severity of injury: American Spinal Injury Association Impairment Scale (AIS A-E) (Enoxaparin), AIS A-C, E (Dalteparin). Chronicity: Individuals were studied beginning within 72 hr after injury. Hospital length of stay was a median of 42.8 days (Enoxaparin group) and a median of 48.9 days (Dalteparin group). Intervention: Individuals received either Enoxaparin (30 mg subcutaneously twice daily, n=63, beginning at a median of 4 days after	Timing of DVT onset: Not indicated. Incidence of DVT: 1.6% of individuals (Enoxaparin) and 9.7% of individuals (Dalteparin) developed DVT/PE, p=NS. - No significant difference between the two groups in major or minor bleeding was found.

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	injury) or Dalteparin (5000 IU subcutaneously once daily, n=72, beginning at a median of 3.2 days after injury). Outcome Measures: Incidence of deep vein thrombosis (DVT) pulmonary embolism (PE) and bleeding. Method of Diagnosis: Contrast venography, duplex ultrasonography, ventilation-perfusion lung scanning, high-resolution chest tomography, and pulmonary angiography.	
Hebbeler et al. (2004) USA Case Control N=129	Population: No demographical information was provided. Chronicity: Individuals studied were within 2 mo after sustaining injury. Intervention: Individuals received either Enoxaparin 40 mg once daily or Enoxaparin 30 mg twice daily. Outcome Measures: Incidence of deep vein thrombosis (DVT) or pulmonary embolism (PE). Method of Diagnosis: Venous duplex scans and spiral computed tomography imaging.	Timing of DVT onset: Individuals were screened for clinical symptoms of DVT daily. No information was provided specifying when screening was performed. Incidence of DVT: 1. DVT occurred in 2.0% of individuals receiving twice daily Enoxaparin, and in 1.25% of individuals receiving once daily Enoxaparin (not significant). 2. PE only occurred in 2.0% of individuals receiving twice daily Enoxaparin, no individuals in the twice daily Enoxaparin group sustained PE (not significant). 3. No significant differences were found in bleeding complications between the two groups. 4. Efficacy of prophylaxis was deemed equivalent between groups. 5. Individuals who received twice daily Enoxaparin were more likely to have been given Enoxaparin or low dose unfractionated heparin prior to admission ($p<0.001$).

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Harris et al. (1996) USA Case Series N=105	Population: Mean age=42 yr; Gender: males=58, females=47; Level of injury: not specified; Severity of injury: complete/incomplete, tetraplegia=35, paraplegia=26. Chronicity: All individuals were hospitalized 6-104 days (mean=19) after injury. Intervention: All individuals received 30 mg of Enoxaparin subcutaneously every 12 hr from the time of admission. Outcome Measures: Incidence of deep vein thrombosis (DVT). Method of Diagnosis: Clinical examination and venous ultrasonography.	Timing of DVT onset: Not indicated. Incidence of DVT: 1. No clinical or ultrasound evidence of DVT.