Table 117. Strength of applicability for the body of evidence evaluating major bleeding leading to reoperation in patients who had major orthopedic surgery

| Comparison | Strength of applicability | Conclusion with description of applicability |
| --- | --- | --- |
| Incidence of major bleeding leading to reoperation in patients who had total hip replacement surgery | Moderate | Based on two trials the incidence of major bleeding leading to reoperation was 0 percent in patients who had total hip replacement surgery. Overall applicability is limited moderate because the majority of data is derived from a study conducted in the United States although this trial was published in 1992 while the second trial was published in 1997. |
| Incidence of major bleeding leading to reoperation in patients who had total knee replacement surgery | Low | Based on one trial, the incidence of major bleeding leading to reoperation was 0 percent. Overall applicability is limited because the trial was conducted in Japan. |
| Incidence of major bleeding leading to reoperation in patients who had hip fracture surgery | NA | No data |
| Pharmacologic prophylaxis versus no prophylaxis | Low | Compared to no prophylaxis, patients who had major orthopedic surgery and received pharmacologic prophylaxis had no difference in the risk of major bleeding leading to reoperation. Data is highly applicable to primary total knee and hip replacement and total knee replacement. Data is not applicable to hip fracture surgery. Applicability is limited because all trials were conducted outside of the United States.  |
| Mechanical prophylaxis versus no prophylaxis  | NA | No data |
| Oral antiplatelet agents versus oral vitamin K antagonists | NA | No data |
| Oral antiplatelet agents versus mechanical prophylaxis | NA | No data |
| Injectable low molecular weight heparin agents versus injectable unfractionated heparin | NA | No data |
| Injectable low molecular weight heparin agents versus injectable or oral factor Xa inhibitors | Low | Compared to injectable or oral factor Xa inhibitors, patients who had major orthopedic surgery and received injectable low molecular weight heparin agents did not have a difference in the odds of major bleeding leading to reoperation. Data has moderate applicability to primary or revision total hip replacement surgery. Data has a low level of applicability to primary hip fracture surgery and revision total knee replacement surgery. |
| Injectable low molecular weight heparin agents versus injectable or oral direct thrombin inhibitors | Low | Compared to injectable or oral direct thrombin inhibitors, patients who had major orthopedic surgery and received injectable low molecular weight heparin agents did not have a difference in the risk of major bleeding leading to reoperation. Data is moderately applicable to primary total knee replacement surgery. Data has a low level of applicability to primary total hip replacement surgery. Data is not applicable to primary or revision hip fracture surgery and is limited because the trials were conducted outside of the United States. |
| Injectable low molecular weight heparin agents versus oral vitamin K antagonists | Low | Compared to oral vitamin K antagonists patients who had major orthopedic surgery and received injectable low molecular weight heparin agents did not have a difference in the odds of major bleeding leading to reoperation. Data is moderately applicable to primary total knee replacement surgery and is not applicable to other major orthopedic surgeries. |
| Injectable low molecular weight heparin agents versus mechanical prophylaxis | NA | No data |
| Injectable unfractionated heparin versus injectable or oral direct thrombin inhibitors | Low | Compared to injectable or oral direct thrombin inhibitors, patients who had major orthopedic surgery and received injectable low molecular weight heparin agents did not have a difference in the odds of major bleeding leading to reoperation. Data is highly applicable to primary total hip replacement surgery. Data is not applicable to primary or revision total knee replacement or hip fracture surgery and has limited applicability because the trials were conducted outside of the United States. |
| Injectable unfractionated heparin versus injectable or oral factor Xa inhibitors | NA | No data |
| Injectable unfractionated heparin versus mechanical prophylaxis | NA | No data |
| Oral vitamin K antagonists versus mechanical prophylaxis | NA | No data |
| Enoxaparin versus other low molecular weight heparin agents  | NA | No data |
| Intermittent pneumatic compression device by Kendal versus the Venaflow intermittent pneumatic compression device | NA | No data |
| ActiveCare intermittent pneumatic compression device versus Flowtron intermittent pneumatic compression device | NA | No data |
| Intermittent pneumatic compression versus graduated compression  | NA | No data |
| Pharmacologic plus mechanical prophylaxis versus pharmacologic prophylaxis | NA | No data |
| Pharmacologic plus mechanical prophylaxis versus mechanical prophylaxis | NA | No data |
| Effect of prolonging prophylaxis for 28 days compared to prophylaxis for 7 to 10 days | Low | Compared to 7 to 10 days of prophylaxis, patients who had major orthopedic surgery and received 28 days or more of prophylaxis did not have a difference in the odds of major bleeding leading to reoperation. Data is highly applicable to the use of injectable factor Xa inhibitors and hip fracture surgery. Data is not applicable to injectable low molecular weight heparin agents or oral vitamin K antagonists or to primary or revision total hip replacement or total knee replacement surgery. Overall applicability is limited because the trial was conducted outside of the United States. |
| Inferior vena cava filter versus mechanical prophylaxis | NA | No data |

Abbreviations: NA=Not applicable