



## Aspirin is Effective and Safe Venous Thromboembolism Prevention Following Total Joint Arthroplasty, Including Higher Risk Patients

While aspirin has become the most common agent used for venous thromboembolism (VTE) prophylaxis in primary total joint arthroplasty (TJA) patients considered standard risk for VTE, more potent anticoagulants are still used in patients considered higher risk for VTE.

Findings of this study are concordant with recommendations endorsing aspirin as the primary method of VTE prophylaxis in all patients undergoing TJA, including moderate to high-risk patients.

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### Study Details

In a study published in *The Journal of Arthroplasty*, Kaiser Permanente Orthopedic Surgeons and MDSA Researchers identified 72,288 TKA and 35,142 THA from the Kaiser Permanente Total Joint Replacement Registry (2009 to 2019).

Identified medications were aspirin, factor Xa inhibitors, low-molecular-weight heparin (LMWH), and warfarin. A validated VTE risk score was assigned to each patient. 90-day VTEs were evaluated with propensity score-weighted logistic regression and noninferiority testing.

#### Aspirin compared to LMWH

- Noninferiority demonstrated for both TKA and THA
- TKA had lower likelihood of readmissions and bleeding events
- THA had lower likelihood of VTE, and no differences observed for other outcomes
- In patients with higher risk for VTE, no evidence of non-inferiority for TKA (THA event rate too rare to evaluate)

#### Aspirin compared to Warfarin

- Noninferiority demonstrated for both TKA and THA
- TKA had lower likelihood of readmissions and bleeding events
- THA had lower likelihood of deep infections, readmissions and bleeding events
- In patients with higher risk for VTE, evidence of noninferiority for TKA and no evidence of non-inferiority for THA

#### Aspirin compared to Factor Xa Inhibitors

- No evidence of noninferiority for TKA (THA event rate too rare to evaluate)
- In patients with higher risk for VTE, no evidence of non-inferiority for TKA (THA event rate too rare to evaluate)
- No differences in any other outcomes observed following TKA and THA

### Practice Considerations

Aspirin is effective and safe for VTE prevention primary TJA patients, including those considered higher risk for VTE, given lower or similar risk of bleeding-related events and either better or comparable protection against VTE compared to potent anticoagulation.

### [Link to Full Publication](#)

Singh G, Prentice HA, Winston BA, Kroger EW (2023). **Comparison of 90-Day Adverse Events Associated With Aspirin and Potent Anticoagulation Use for Venous Thromboembolism Prophylaxis: A Cohort Study of 72,288 Total Knee and 35,142 Total Hip Arthroplasty Patients** *J Arthroplasty*, 38 (8): 1602-1612.