

# Low-Dose Aspirin Once Daily is Sufficient for VTE Prophylaxis After Primary Total Joint Arthroplasty: An Analysis of 8,088 Cases Over 10 Years

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## INTRODUCTION:

Aspirin has grown in popularity for venous thromboembolism (VTE) prophylaxis given its efficacy and favorable side effect profile. However, there is no consensus on the dosing or frequency for aspirin needed to safely prevent VTE. Given the long-term effect of aspirin on platelet function, twice daily frequency or higher doses of aspirin may be unnecessary.

The purpose of this study was to investigate the incidence of VTE in patients receiving 81mg aspirin once daily for prophylaxis after primary total joint arthroplasty (TJA), which has been our institution's protocol for the past decade.

**METHODS:** 8,088 primary TJAs performed at a single tertiary care institution from 2014-2023 were reviewed. Patients were grouped according to postoperative VTE chemoprophylaxis. 5,189 TJA received 81mg of aspirin once daily, and 2,899 high-risk cases received either higher aspirin dosing/frequency or more potent chemoprophylaxis as deemed necessary per our institution's protocol. Ninety-day postoperative symptomatic VTE rates were compared between groups

**RESULTS:** Out of 8,088 cases, 26 symptomatic VTE events were identified (0.32%). 14 of the cases in the aspirin 81mg daily group had a VTE event (0.26%) compared to 12 cases in the other group (0.41%;  $p=0.27$ ).

**DISCUSSION AND CONCLUSION:** Our institutional protocol of using 81mg aspirin once daily has an acceptable incidence rate of VTE after TJA, comparable to prior literature with twice daily frequency or higher aspirin doses. Using a low-dose once daily regimen of aspirin may allow for better compliance, lower costs, and more favorable side effect profile.

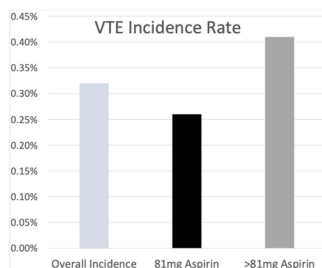


Figure 1: Incidence of VTE, separated by chemoprophylaxis grouping. 81mg aspirin group included once daily dosing. >81mg aspirin grouping included 81mg BID dosing, 325mg daily, Eliquis, Xarelto, Lovenox, and Warfarin. 81mg aspirin incidence = 0.26%, >81mg aspirin = 0.41% ( $p=0.27$ )