



Is aspirin effective and safe for venous thromboembolism prophylaxis after total hip and knee replacement?

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With the advances in surgical techniques, improved patient safety and strict reliable selection criteria, the number of total joint arthroplasty (TJA) surgeries has markedly increased in recent years.^[1-5]

The effectiveness and safety of aspirin do not appear to be statistically significantly different from other anticoagulants used for venous thromboembolism (VTE) prophylaxis after total hip arthroplasty (THA) and total knee arthroplasty (TKA); hence, it remains an option for use.^[6]

In the literature, there are a number of data that demonstrate the efficacy of aspirin in the prevention of VTE following TJA. Aspirin is inexpensive, easy to administer, and reasonably well tolerated; requires no blood monitoring; has an excellent safety profile; and continues to increase in popularity for VTE prevention after THA and TKA.^[7]

Although aspirin is established as an effective prophylaxis for VTE after TJA, there is no consensus as to whether low- or regular-dose aspirin is more effective in preventing VTE. In a retrospective study including 7,488 patients, no significant difference was observed in the incidence of symptomatic VTE after THA with low-dose versus standard-dose aspirin. In the absence of compelling evidence to the contrary, low-dose aspirin appears to be a reasonable option for VTE prophylaxis in otherwise healthy patients undergoing elective THA.^[8]

In conclusion, low-dose aspirin in patients with limited comorbidities undergoing primary THA and TKA is associated with significant lower rates of bleeding and suture reactions than high dose aspirin. Low-dose aspirin is not inferior to higher-dose aspirin for the prevention of VTE, wound complications, and infection on postoperative Day 90.^[9]

REFERENCES

1. Dasci MF, Kose O, Maza BF, Gozacan B, Sandiford NA, Gehrke T, et al. A secure blood-saving protocol for Jehovah's Witnesses in primary total hip replacement. *Jt Dis Relat Surg* 2024;35:12-9. doi: 10.52312/jdrs.2024.1272.
2. Özer H, Abdulaliyev F, Cavdar Yilmaz NP, Ahmadov A, Gungor Y, Tosun SN, et al. Gerdy's tubercle as a novel anatomical landmark for the proximal tibial cut in total knee arthroplasty. *Jt Dis Relat Surg* 2024;35:305-14. doi: 10.52312/jdrs.2024.1531.
3. Wu L, Yang XC, Wu J, Zhao X, Lu ZD, Li P. Short-term outcome of artificial intelligence-assisted preoperative three-dimensional planning of total hip arthroplasty for developmental dysplasia of the hip compared to traditional surgery. *Jt Dis Relat Surg* 2023;34:571-82. doi: 10.52312/jdrs.2023.1076.
4. Atik OŞ, Hangody LR, Sarıkaya B, Ayanoğlu T, Kaptan AY. Should we replace the patella during total knee replacement? *Jt Dis Relat Surg* 2023;34:224-5. doi: 10.52312/jdrs.2023.57910.

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5. Li X, Liu J, Wang H, Ding Y. Controlled hypotension technology can improve patient recovery in the early postoperative period after total knee arthroplasty: A prospective, randomized controlled clinical study. *Jt Dis Relat Surg* 2024;35:36-44. doi: 10.52312/jdrs.2023.1379.
6. Matharu GS, Kunutsor SK, Judge A, Blom AW, Whitehouse MR. Clinical effectiveness and safety of aspirin for venous thromboembolism prophylaxis after total hip and knee replacement: A systematic review and meta-analysis of randomized clinical trials. *JAMA Intern Med* 2020;180:376-84. doi: 10.1001/jamainternmed.2019.6108.
7. Parvizi J, Ceylan HH, Kucukdurmaz F, Merli G, Tuncay I, Beverland D. Venous thromboembolism following hip and knee arthroplasty: The role of aspirin. *J Bone Joint Surg [Am]* 2017;99:961-72. doi: 10.2106/JBJS.16.01253.
8. Faour M, Piuzzi NS, Brigati DP, Klika AK, Mont MA, Barsoum WK, et al. No difference between low- and regular-dose aspirin for venous thromboembolism prophylaxis after THA. *Clin Orthop Relat Res* 2019;477:396-402. doi: 10.1097/CORR.0000000000000613.
9. Duke AJ, Bowen S, Baig S, Cohen D, Komatsu DE, Nicholson J. Thirty day low-dose versus regular-dose aspirin for venous thromboembolism prophylaxis in primary total joint arthroplasty. *J Orthop Surg (Hong Kong)* 2023;31:10225536231173329. doi: 10.1177/10225536231173329.