

# Specific TJA subgroups gain greater benefit from peripheral nerve blocks

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Specific subgroups of patients undergoing total joint arthroplasty (TJA)

experience greater benefit from peripheral nerve blocks (PNBs) in terms of reduction in complications, according to a study presented at the Annual Regional Anesthesiology and Acute Pain Medicine Meeting 2023, held from April 20 to 22 in Hollywood, Florida.

Haoyan Zhong, from the Hospital for Special Surgery in New York City, and colleagues examined the extent to which the association between PNBs and improved perioperative outcomes and [pain control](#) after TJA is uniform across patient subgroups. Patients were categorized according to age as follows: younger than 65 years (young [Y]), 65 to 75 years (middle [M]), and older than 75 years (old [O]). They were also categorized according to comorbidity: no preexisting comorbidity (1), one or two comorbidities (2), and three or more comorbidities (3).

Data were included for 2,822,199 TJA cases performed in 887 hospitals; 15.5 percent received PNBs. The researchers found PNB use was associated with reduced odds for respiratory complications in the O(1) and Y(2) groups; for [acute renal failure](#) in the Y(1), O(1), and M(2) groups; and for delirium in the O(1) group.

In PNB groups across all ages with no comorbidity and the Y(2) and O(2) patients, the risk for intensive care unit admission was reduced compared with those not receiving PNBs. Comparing PNB use with no use, the odds ratios for prolonged length of stay were reduced among the Y(1), M(1), Y(2), M(2), and Y(3) groups.

"Older patients without major comorbidities might represent a subgroup in which the beneficial effects of peripheral nerve blocks are most likely to be expected," a coauthor said in a statement.

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