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## Patterns of NSAIDs Use and Their Association with Other Analgesic Use in CKD

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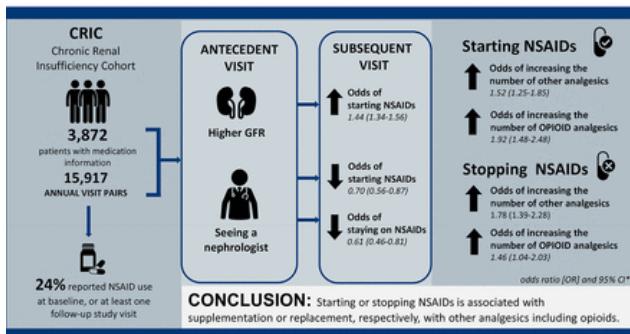
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### Visual Overview

#### Patterns of NSAIDs Use and Their Association with Other Analgesic Use in Chronic Kidney Disease



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### Abstract

**Background and objectives** Avoiding nonsteroidal anti-inflammatory drugs is important for safe CKD care. This study examined nonsteroidal anti-inflammatory drug use patterns and their association with other analgesic use in CKD.

**Design, setting, participants, & measurements** The Chronic Renal Insufficiency Cohort Study is an observational cohort study that enrolled 3939 adults ages 21–74 years old with CKD between 2003 and 2008 using age-based eGFR inclusion criteria. Annual visits between June of 2003 and December of 2011 were organized into 15,917 visit-pairs (with an antecedent and subsequent visit) for 3872 participants with medication information. Demographics, kidney function, and clinical factors were ascertained along with report of nonsteroidal anti-inflammatory drug or other analgesic use in the prior 30 days.

**Results** In our study, 24% of participants reported nonsteroidal anti-inflammatory drug use at baseline or at least one follow-up study visit. Having a 10 mL/min per 1.73 m<sup>2</sup> higher eGFR level at an antecedent visit was associated with higher odds of starting nonsteroidal anti-inflammatory drugs at a subsequent visit (odds ratio, 1.44; 95% confidence interval, 1.34 to 1.56). Seeing a nephrologist at the antecedent visit was associated with lower odds of starting or

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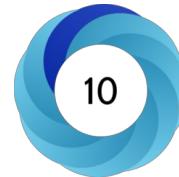
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staying on nonsteroidal anti-inflammatory drugs at a subsequent visit (odds ratio, 0.70; 95% confidence interval, 0.56 to 0.87 and odds ratio, 0.61; 95% confidence interval, 0.46 to 0.81, respectively). Starting and stopping nonsteroidal anti-inflammatory drugs were both associated with higher odds of increasing the number of other analgesics (odds ratio, 1.52; 95% confidence interval, 1.25 to 1.85 and odds ratio, 1.78; 95% confidence interval, 1.39 to 2.28, respectively) and higher odds of increasing the number of opioid analgesics specifically (odds ratio, 1.92; 95% confidence interval, 1.48 to 2.48 and odds ratio, 1.46; 95% confidence interval, 1.04 to 2.03, respectively).

**Conclusions** Nonsteroidal anti-inflammatory drug use is common among patients with CKD but less so among those with worse kidney function or those who see a nephrologist. Initiation or discontinuation of nonsteroidal anti-inflammatory drugs is often associated with supplementation with or replacement by, respectively, other analgesics, including opioids, which introduces possible drug-related problems when taking these alternative analgesics.

**chronic kidney disease**   **safety**   **non-steroidal anti-inflammatory drugs**  
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