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## **Global prevalence of constipation among patients undergoing hemodialysis: a systematic review and meta-analysis**

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**Objectives :** Constipation significantly affects the quality of life and health outcomes of patients undergoing hemodialysis (HD). Despite its common occurrence in this population, there is a lack of systematic reviews and meta-analyses on the prevalence of constipation among patients receiving HD. In this study, we estimated the pooled prevalence of constipation among patients receiving HD through a systematic review and meta-analysis.

**Methods :** Studies reporting the prevalence of constipation among patients undergoing HD published in PubMed, Embase, CINAHL, Web of Science, and Medline were included. Data extraction was conducted by two independent investigators. A random-effects model was used for data analysis. Heterogeneity (Q and I<sup>2</sup> statistic), meta-regression, and publication bias were also analyzed. The methodological quality was assessed according to Hoy's guidelines.

**Results :** Twenty-two studies involving 4963 patients receiving HD (mean age 58.76±7.76 years, mean duration of dialysis 4.69±1.55 years, males 67.5%) were included. The pooled prevalence of constipation among patients with HD was 42.2% (95% confidence interval: 34.2%–50.7%). The Asian region reported a significantly higher proportion of constipation than other regions. No publication bias was identified using Egger's test.

**Conclusions :** Constipation is prevalent among patients with HD, affecting nearly half of this population and representing a significant burden, particularly in Asia. Healthcare professionals should prioritize constipation management in HD care and develop tailored interventions to improve patient outcomes.

Figure of PRISMA.jpg



Figure 1: PRISMA 2020 flow diagram for summarizing the study selection process.

