

# Predictors of Delayed Mobilization After Major Abdominal Surgery

## Authors:

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## Abstract

### Background

Delayed mobilization following abdominal surgery is associated with adverse postoperative outcomes. Early mobilization interventions may improve patient outcomes, but perioperative risk factors for delayed mobilization remain poorly understood.

### Methods

This study used data from a prospective cohort study to explore the perioperative risk factors for delayed mobilization after major abdominal surgery. Patients enrolled in the study were adults who underwent open laparotomy requiring hospital admission between August 2021 and February 2022 at a tertiary care hospital in Colorado. We analyzed perioperative factors, including patient demographics, comorbidities, and baseline self-reported fatigue, sleep, and dyspnea, using multiple regression analyses. A research-grade accelerometer, ActivPAL, was used to measure 24-hour postoperative mobilization during the first three postoperative days, summarized into three mobility metrics: cumulative standing time, frequency of sit-to-stand transitions, and total steps.

### Results

We analyzed the data from 80 patients. [Include a sentence or two describing the patient characteristics, age, most common surgery, anesthesia duration, etc.] Our analysis showed that increased foley catheter duration was associated with a decrease in all three-mobility metrics during the first three postoperative days (minutes standing -.18 (p-value .012), sit-to-stand transitions .84 (p-value <.001), and total step count .83 (p-value .050)). Increasing anesthesia duration was associated with two of our mobility metrics (total step count 1.00 (p-value .020) and sit-to-stand transitions 1.00 (p-value .003). There was also no relationship noted between age, functional status, and opioid usage and early postoperative mobilization.

### Conclusion

We found that increased foley catheter use and anesthesia duration were predictive of delayed mobilization after major abdominal surgery.