

# Epinephrine Versus Phenylephrine Use Before Intubation in Hypotensive Patient at Emergency Department

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## ABSTRACT

This research aims to evaluate and compare the efficacy and safety of epinephrine and phenylephrine in the management of hypotension prior to intubation in the emergency department (ED). Epinephrine, a drug that mimics the sympathetic nervous system, and phenylephrine, which mainly affects alpha-1 receptors, have different pharmacological characteristics and may have different effects on blood flow. We performed an extensive review of the literature to find relevant research and examined available data to get a better understanding of the relative effectiveness, safety characteristics, and impact on blood flow of these two substances. Furthermore, we analyzed the frequencies of successful intubation and the resulting results in both groups. Bolus-dose phenylephrine (BDPE) has shown potential in increasing blood pressure in the emergency department (ED) without notable negative effects, indicating its viability as a substitute for epinephrine. Nevertheless, more prospective studies are necessary to validate its safety and efficacy. The use of push-dose vasopressors (PDP) must be carefully considered because of the risk of dosage mistakes and negative consequences. Improving results requires optimizing intubation safety by doing a thorough patient assessment and effectively managing comorbidities, such as metabolic acidosis. This research highlights the need of using evidence-based methods and personalized treatments to manage low blood pressure prior to intubation in the emergency department.

**Keywords:** *epinephrine, phenylephrine, hypotension, intubation, emergency department, bolus-dose phenylephrine, push-dose vasopressors, hemodynamic effects, patient outcomes.*

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