



Induction agents for rapid sequence intubation in adults for emergency medicine and critical care

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Adrenocortical suppression — The major controversy surrounding [etomidate](#) stems from the reversible adrenocortical suppression associated with its use. The evidence surrounding this issue is reviewed separately. (See "[General anesthesia: Intravenous induction agents](#)", section on 'Etomidate'.)

[Etomidate](#) is a reversible inhibitor of 11-beta-hydroxylase, which converts 11-deoxycortisol to cortisol ([figure 1](#)). (See "[Adrenal steroid biosynthesis](#)".)

Evidence suggests that [etomidate](#) is an acceptable induction agent for patients with severe sepsis. A single dose of etomidate causes a transient but measurable decrease in the level of circulating cortisol that occurs in response to the administration of exogenous adrenocorticotrophic hormone (ACTH), although cortisol levels do not fall below the normal physiologic range. This effect does not persist beyond 12 to 24 hours.

We recognize the critical importance of maintaining adequate blood pressure early in the treatment of sepsis. Although controversy persists regarding the use of [etomidate](#) in septic patients, induction with etomidate versus [ketamine](#) has similar 28-day mortality in critically ill adults undergoing RSI in the emergency department (ED) or intensive care unit (ICU) [35] and no definitive studies have shown an increase in long-term mortality with etomidate use in this setting [36,37]. Etomidate has the advantages of hemodynamic stability when compared with most other sedative or induction agents, including a lower incidence of peri-intubation cardiovascular instability compared with ketamine [35]. When intubating the critically ill patient with possible adrenal insufficiency, the clinician must weigh the theoretical risk of cortisol suppression against the hemodynamic instability that may be caused by alternative induction agents.

35. Casey JD, Seitz KP, Driver BE, et al. Ketamine or Etomidate for Tracheal Intubation of Critically Ill Adults. N Engl J Med 2025.