

COMPARISON OF AGENTS USED TO INDUCE ANESTHESIA

Drug	Induction of anesthesia		Maintenance of anesthesia		Comments
	ROA	Adult dose	ROA	Adult dose	
Ketamine	IV	1.2 m/kg (0.5 – 4.5 mg/kg)	IV	50 – 100 % induction dose PRN OR infusion 0.1 – 0.5 mg/min	<ul style="list-style-type: none"> - Analgesic effect, bronchodilation - Hypertension, tachycardia; rare hypotension, bradycardia - Respiratory depression esp. with high doses, rapid administration - As single agent, CV stimulation, emergence reactions (hallucinations, vivid dreams, or delirium). Can be prevented / treated with haloperidol, BZDs
	IM	5 – 10 mg/kg (4 – 13 mg/kg)	IM	50 – 100 % induction dose PRN	
Etomidate	IV	0.2 – 0.6 mg/kg over 30-60 seconds	IV	(5 – 20 mcg/kg/min) but continuous IV infusion not recommended due to risk of adrenal suppression	<ul style="list-style-type: none"> - Minimal CV, respiratory effects - Cortisol production decreased for 6-8 hours after induction - Transient mild to moderate myoclonus – can be minimized with IV fentanyl 0.1 mg immediately before etomidate administration - Burning at administration site - Higher incidence of nausea
Propofol	IV	40 mg every 10 seconds until induction onset (usual total 2 – 2.5 mg/kg) Elderly, debilitated, ASA III-IV: 20 mg every 10 seconds (total 1 – 1.5 mg/kg)	IV	0.1 – 0.2 mg/kg/min by infusion (6 – 12 mg/kg/hr) OR 25 – 50 mg PRN Elderly, debilitated, ASA III-IV: one-half of above dose.	<ul style="list-style-type: none"> - Short recovery time, 10 – 30 minutes - Lower incidence of nausea, vomiting - Hypotension (10 - 30 %) - Bradycardia (4 %) - Apnea esp. with doses > 2.5 mg/kg (12 – 24 %)

References:

1. Various monographs. Parenteral Drug Therapy Manual. Eds: Bedard M, Massicotte A, Prasad S. Thirtieth Edition. The Ottawa Hospital. 2009.
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3. Various monographs. DynaMed [Internet]. Ipswich (MA): EBSCO Publishing. 1995 – . Available from <http://www.ebscohost.com/DynaMed/>. Registration and login required. Accessed 06 June 2012.

**Prepared by Karen Jensen, Saskatchewan Drug Information Service. Reviewed by Carmen Bell, Saskatchewan Drug Information Service
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