

Volume needed = dose/concentration  
 Infusion rate= (60min/mins want) x volume

Infusion rate (ml/hr) = (dose (mcg/kg/min) \* weight (kg) \* 60 (min/hr)) / concentration (mcg/ml)  
 (dose (mg/kg/hr) \* weight (kg) / conc (mg/ml))

## Drugs & Doses

Drug	Vial	Paeds		Adult		Notes
		Bolus	Infusion	Bolus	Infusion	
Sux	100mg/2ml (50mg/ml)	1-2mg/kg IM emerg: 5mg/kg		1-1.5mg/kg		Brady with 2 <sup>nd</sup> dose
Atracurium	50mg/5mls (10mg/ml)	Same adult	0.5mg/kg/hr	0.3-0.6mg/kg	0.5mg/kg/hr	10-35 mins
Rocuronium	50mg/5ml	Same adult	As atrac	0.6 mg/kg	As atrac	Mild tachy
Vecuronium	10mg powder – 5mls	same adult		0.1mg/kg	0.8-1.4mcg/kg/min	30-40min
Sugammadex	200mg/2ml (100mcg/ml)			Routine: 2-4mg/kg Emergency: 16mg/kg		
Propofol	200mg/20mls	2-5mg/kg	4-15mg/kg/hr	1-3mg/kg	6-10mg/kg/hr	↓dose in elderly TCI: induction RSI: 6-7; induc 4-6mcg/ml; Main: 3-6mcg/ml
Thiopentone	500mg & water 20mls-25mg/ml	5-6mg/kg		3-5mg/kg		
Midazolam	5mg/5mls	0.1-0.2mg/kg		0.5-5mg		20-60min
Ketamine		IV: same adult [IM 5-10mg/kg]	Same adult	induction: 1-2mg/kg analgesia: 0.25mg/kg	1-3mg/kg/hr Analgesia = 0.25mg/kg/hr	
Atropine	600mcg/ml (6mls = 100mcg/ml)	10-20mcg/kg (with neostigmine 10-20mcg/kg) [IM/SC: 10-30mcg/kg]		300-600mcg (with neostigmine 600-1200mcg)		Paeds Reversal: 1.2 atropine & 2.5 neo & 2ml NSL = 5mls give 1ml/10kg (240mcg & 500mcg/10kg)
Glycopyrrolate	400mcg/2ml	4-10mcg/kg		200-400mcg (with neostigmine 200mcg / 1mg neostigmine)		
Neostigmine	2.5mg/ml	50mcg/kg with: atropine 20mcg/kg glyco 10mcg/kg		50-70mcg/kg (max 5mg) with: atropine 10-20mcg/kg glycol 10-15mcg/kg		60mins (premix: 2.5mg neo & 1.2mg glycol)
Adrenaline	1:1000 = 1mg/ml 1:10000 = 0.1mg/ml	10mcg/kg = 0.1ml of 1:10,000		100mcg aliquots (1ml 1:10,000)	0.04-0.4mcg/kg/min)	Anaphylaxis – 10-50mcg bolus
Ephedrine	30mg/10ml (3mg/1ml)			3-6mg boluses		10-60min
Phenylephrine	10mg in 100ml NSL (100mcg/ml)	2-10mcg/kg bolus	1-5mcg/kg/min	50-100mcg boluses (0.5-1ml)	0.4mcg/kg/min	
Metaraminol	10mg/10ml	10mcg/kg	0.1-1mcg/kg/min	0.5-2mg boluses		20-60min
Esmolol	100mg/10mls (10mg/ml)			SVT: 0.5mg/kg HTN: 25-100mg	SVT & HTN: 50-200mcg/kg/min	Lasts 10mins
Tramadol	100mg/2ml			Loading: 3mg/kg		
Alfentanyl	1mg/2mls			Intubation: 10-20mcg/kg = 1mg		
Morphine		50-100mcg/kg		2.5-10mg		
Fentanyl	100mcg/2ml (50mcg/ml)	Same as adult	2-4mcg/kg/hr	1-5mcg/kg		>2-3mcg/kg = ↓RR
Remifentanyl	- 2mg/40mls (50mcg/ml) [TCI] - 2mg/50mls (40mcg/ml) [CCDHB]			1mcg/kg slow bolus	0.1-0.5mcg/kg/min (8-42mls/hr) Intub: 10-20ml/hr Extub: 1-2ml/hr IPPV: 8ml/hr+ SV: 2-8ml/hr	0.25mcg/kg/min = 20ml/hr lasts 5-10min TCI: 3-8ng/ml
Lignocaine	1% = 50mg/5ml 2% = 100mg/5ml	Intubation = adult		Intubation = 1.5mg/kg Pain relief = bolus 1mg/kg then infusion 1mg/kg/hr for 1hr post op		Max 3mg/kg/4hrs or 6 c adren. Prolongs mm relaxants
Ropivocaine				RSC: 0.2% 20mls each/6hrs		Max 4mg/kg/4hrs
Bupivocaine	0.25% (2.5mg/ml)= 50mg/20mls 0.5% = 100mg/20mls	Max 2mg/kg		Max 60mls		Max 2mg/kg/4hrs lasts 3.5-7hrs
droperidol				Emesis: 25-50mcg/kg (max 2.5mg)		a-blocker lasts 4hrs
dexamethasone		150mcg/kg (max 5mg)		0.1mg/kg		PONV
parecoxib	powder	0.5mg/kg		40mg		
TXA		15mg/kg		15mg/kg ≈ 1g		Slow push
KCL				0.5mmol/kg over 60min		Neat or 0.3mmol/ml

## NON OBs Neuraxial Drugs

Drug	Vial	Paeds		Adult		Notes
		Bolus	Infusion	Bolus	Infusion	
Morphine	200mcg/0.4mls (50mcg/0.1ml)			50-200mcg		
Bupivocaine - hyperbaric				2-4mls		

### OBS Epidural

- standard epidural:
  - 18g tuohy
  - aim 3-5cm of catheter in epidural space
  - test dose ropivocaine 0.2% 4mls:
    - ?subarach wait 15mins
    - ?IV: rpt test with 3mls lignocaine & adrenaline > ↑HR 20-30 in 20sec
  - bolus dose: ropiv 0.2% 8ml with:
    - [early labour] 50mcg fentanyl
    - [>5-6cm dilated] 100mcg fentanyl
  - top up: wait 15min – add another 8mls ropiv; wait 15min – try 5mls ropiv 0.375
  - infusion – when dermatome @ T10:
    - ropiv 0.2% with fentanyl 2mcg/ml. Rate 6-14mls/hr. IAR 8ml/hr
- top up of established epidural:
  - ropiv 0.75 5-10mls
- C section spinal 25-27G pencil point (need T4 block): should last 60-120min
  - 2.5ml 0.5% bupivacaine heavy & 15-25mcg fentanyl & 150mcg morphine
- C section epidural (need T4):
  - test dose as above
  - top up: ropivocaine 0.75 5ml boluses up to 15mls + 50-100mcg fentanyl
- Rapid epidural block:
  - lignocaine 2% & adrenaline 1:200,000 +/-bicarb
    - 20mls 2% lignocaine (5ml solution will usually give you 2 dermatome levels ie 20mls = 8levels)
    - 0.1ml 1:1000 adren
    - 2mls 8.4% bicarb ⇒ make to 22mls
    - +/- 100mcg fentanyl
- CSE:
  - epidural post op analgesia dose: 3mg in 5mls N saline

### PCA Adjuncts

Clonidine – 100mcg in 100mls (1mcg/ml) pain & antiemesis  
 Ketamine – 50mg in 100mls (0.5mg/ml)  
 droperidol – 5mg in 100mls (0.05mg/ml) antiemesis

### AFOI – method 1

- nebulized 4% lignocaine 5mls – rpt if needed  
 - MAD 10mls of 4% lignocaine with EITHER  
 - 5mcg/ml adrenaline OR  
 - phenylephrine 5mg

### AFOI – method 2

- dexmetomidine:  
 - loading: 0.5mcg/kg loading over 5mins  
 - 1mcg/kg/hr infusion  
 - topicalise airway with MAD

### Paeds premed (give in pamol):

midaz 0.5mg oral (max 15) (0.3mg/kg intranasal)  
 ketamine 0.5mg/kg & atropine 10-20mcg/kg  
 clonidine 5mcg/kg (intranasal 2mcg/kg)

### Anaesthetic plan:

P – rep  
 - pre op Ax & consent  
 - post op – DVT, destination, pain, PONV

R – esus  
 I – V  
 M – onitoring  
 E – quipment  
 T – ransfer  
 I – nduction  
 M – aintenance  
 E – mergence

### Induction:

D – drugs  
 A – airway  
 M – machine  
 S – suction  
 I – IV  
 P – positioning

### Antacids

- norm labour: IV ranitidine 50mg at time of decision > sodium citrate 30mls 10mins before induction
- high risk: IV ranitidine 50mg IV tds > sodium citrate 30mls 10mins before induction
- elective: 150mg ranitidine night before & morning, then sodium citrate prior to induction

### Delivery

- syntocinon: 5units slowly then 5 units over 5mins
- synto infusion: 40units in 500mls N saline. 125mls/hr
- ergometrine 0.25mg IM or intramyometrial carboprost every 10-15mins
- GTN: 100-250mcg IV (1mg GTN in 10mls)

### Eclampsia

- load: 8ml 50% MgSo4 & 12ml NSL. Run 60ml/hr for 20mins
- inf: 20ml 50% MgSO4 & 30ml NSL. Run 5ml/hr for 24hrs
- rescue (seizure): 4ml MgSo4 & 6ml NSL & bolus over 5mins  
 ↳ (if lose reflexs then give 10ml calcium chloride slow push)
- phenytoin – 10mg/kg (pregnant weight) in 100ml NSL at max 25-50mg/min. In 2 hrs give another 5mg/kg

### Obs HTN

- labetalol 200mg oral
- labetalol IV:
  - load: 10ml over 2min. rpt every 5mins (max 4 doses)
  - main: neat infusion @ 4ml/hr. double every 30mins (max 32ml/hr)
- nifedipine
  - load: 10mg oral – can rpt in 30min
  - main: 10mg PO qds
- IV hydralazine 1mg/ml):
  - load: 5ml over 15min. rpt if DBP >100
  - main: neat infusion 5ml/hr. titrate to DBP 90-100. Aim 2-3ml/hr (max 18ml/hr)

### The Ultimate TIVA Recipe (Sapsford)

- IPPV = 1000mg propofol, 6mg alfentanil +/- 40mg ketamine  
 - Spont vent = 1000mg prop, 3mg alfentanil +/- 20mg ketamine  
 - effect site model: 1-4 ng (spont vent); 4-6ng (IPPV)

### - notes:

- elderly – titrate up effect site model slowly to maintain SV
- young – bolus straight prop or mixture
- morphine @ end titrate for post op analgesia (infusion analgesia should last at least 15min)
- alfentanil spont breath range = 20-40mcg/kg/hr
- ketamine analgesia range = 100-400mcg/kg/hr

## Paeds Emergency Calculations

W = (age+4) \* 2  
 Energy (J) = 4J/kg (>8 norm)  
 Tube = (age/4) + 4  
 F luid = 20mls/kg  
 Calcium chloride 0.1-0.2ml/kg 10%

A adrenaline 10mcg/kg (0.1ml of 1:10,000 or 0.01ml 1:1000)  
 A midarone 5mg/kg  
 Atropine 10-20mcg/kg  
 G 5ml/kg of 10% (or infant 2ml/kg)  
 Calcium dose 0.2mls/kg 10% Ca gluconate

Atropine = 20mcg/kg IV or IM  
 Sux = 2mg/kg IV; 5mg/kg IM  
 Prop = 3-5mg/kg  
 Fentanyl = 2mcg/kg IV