TABLE 6.2 Anaesthetic Dose Rates in the Rat.

Drug	Dose rate	Effect	Duration of anaesthesia (minutes)	Sleep time (minutes)
Alphaxalone/alphadolone	10–12 mg/kg iv	Surgical anaesthesia	5	10
Chloral hydrate	400 mg/kg ip	Light/surgical anaesthesia	60–120	120–180
Alpha-chloralose	55–65 mg/kg ip	Light anaesthesia	480–600	Non-recovery only
Etorphine/methotrimeprazine (Immobilon) + midazolam	0.5 ml/kg sc*	Surgical anaesthesia	60–70	120–240
Fentanyl/fluanisone + diazepam	0.6 ml/kg ip + 2.5 mg/kg ip	Surgical anaesthesia	20–40	120–240
Fentanyl/fluanisone/ midazolam	2.7 ml/kg ip†	Surgical anaesthesia	30–40	120–240
Fentanyl/medetomidine	300 μg/kg + 200 μg/kg ip	Surgical anaesthesia	60–70	240–360
Inactin (thiobutobarbital)	80 mg/kg ip	Surgical anaesthesia	60–240	120–300
Ketamine/acepromazine	75 mg/kg + 2.5 mg/kg ip	Light anaesthesia	20–30	120
Ketamine/diazepam	75 mg/kg + 5 mg/kg ip	Light anaesthesia	20–30	120

Ketamine/medetomidine	75 mg/kg + 0.5 mg/kg ip	Surgical anaesthesia	20–30	120–240
Ketamine/midazolam	75 mg/kg + 5 mg/kg ip	Light anaesthesia	20–30	120
Ketamine/xylazine	75–100 mg/kg + 10 mg/kg ip	Surgical anaesthesia	20–30	120–240
Ketamine/xylazine/ acepromazine	40–50 mg/kg + 2.5 mg/kg + 0.75 mg/kg im			
Methohexital	10–15 mg/kg iv	Surgical anaesthesia	5	10
Pentobarbital	40–50 mg/kg ip	Light anaesthesia	15–60	120–240
Propofol	10 mg/kg iv	Surgical anaesthesia	5	10
Thiopental	30 mg/kg iv	Surgical anaesthesia	10	15
Tiletamine/zolezepam	40 mg/kg ip	Light anaesthesia	15–25	60–120
Urethane	1000 mg/kg ip	Surgical anaesthesia	360–480	Non-recovery only

Duration of anaesthesia and sleep time (loss of righting reflex) are provided only as a general guide, since considerable between-animal variation occurs. For recommended techniques, see text.
**Dose in millilitres per kilogram of a mixture of one part 'Immobilon', one part midazolam (5 mg/ml initial concentration) and two parts water for injection.*
†Dose in millilitres per kilogram of a mixture of one part 'Hypnorm' plus two parts water for injection, and one part midazolam (5 mg/ml initial concentration).

TABLE 6.5 Anaesthetic Dose Rates in the Mouse.

Drug	Dose rate	Effect	Duration of anaesthesia (minutes)	Sleep time (minutes)
Alphachoralose	100–120 mg/kg ip	Light anaesthesia	300–420	Non-recovery only
Alphaxalone/alphadolone	10–15 mg/kg iv	Surgical anaesthesia	5	10
Chloral hydrate	400 mg/kg ip	Light anaesthesia	30	60–90
Fentanyl/fluanisone (Hypnorm) + diazepam	0.4 ml/kg ip + 5 mg/kg ip	Surgical anaesthesia	30–40	120–240
Fentanyl/fluanisone (Hypnorm)/midazolam	10.0 ml/kg ip*	Surgical anaesthesia	30–40	120–240
Ketamine/acepromazine	100 mg/kg + 5 mg/kg ip	Immobilization/anaesthesia	20–30	40–120
Ketamine/diazepam	100 mg/kg + 5 mg/kg ip	Immobilization/anaesthesia	20–30	60–120
Ketamine/medetomidine	75 mg/kg + 1.0 mg/kg ip	Surgical anaesthesia	20–30	60–120
Ketamine/midazolam	100 mg/kg + 5 mg/kg ip	Immobilization/anaesthesia	20–30	60–120
Ketamine/xylazine	80–100 mg/kg + 10 mg/kg ip	Surgical anaesthesia	20–30	60–120
Ketamine/xylazine/ acepromazine	80–100 mg/kg + 10 mg/kg ip + 3 mg/kg ip	Surgical anaesthesia	30–40	60–120
Methohexital	10 mg/kg iv	Surgical anaesthesia	5	10
Metomidate/fentanyl	60 mg/kg + 0.06 mg/kg sc	Surgical anaesthesia	40–60	90–120
Pentobarbital	40–50 mg/kg ip	Immobilization/anaesthesia	20–40	120–180
Propofol	26 mg/kg iv	Surgical anaesthesia	5–10	10–15
Thiopental	30–40 mg/kg iv	Surgical anaesthesia	5–10	10–15
Tiletamine/zolezepam	80 mg/kg ip	Immobilization		60–120
Tribromoethanol	240 mg/kg ip	Surgical anaesthesia	15–45	60–120

Duration of anaesthesia and sleep time (loss of righting reflex) are provided only as a general guide, since considerable between-animal variation occurs. For recommended techniques, see text.

**Dose in millilitres per kilogram of a mixture of one part 'Hypnorm' plus two parts water for injection, and one part midazolam (5 mg/ml initial concentration).*

TABLE 6.13 Anaesthetic Dose Rates in the Rabbit.

Drug	Dose rate	Effect	Duration of anaesthesia (minutes)	Sleep time (minutes)
Alphaxalone/alphadolone	6–9 mg/kg iv	Light anaesthesia	5–10	10–20
Alpha-chloralose	80–100 mg/kg iv	Light to surgical anaesthesia	360–600	Non-recovery only
Etorphine/methotrimeprazine (Immobilon SA)	0.025–0.05 ml/kg im	Immobilization, analgesia	60 (analgesia)	120–240
Etorphine/methotrimeprazine (Immobilon SA) + midazolam	0.05 ml/kg im + 1 mg/kg iv	Surgical anaesthesia (severe respiratory depression, see text)	50–100	180–240
Fentanyl/fluanisone (Hypnorm) + diazepam	0.3 ml/kg im + 1–2 mg/kg iv, im or ip	Surgical anaesthesia	20–40	60–120
Fentanyl/fluanisone (Hypnorm) + midazolam	0.3 ml/kg im + 1–2 mg/kg iv or ip	Surgical anaesthesia	20–40	60–120
Fentanyl + medetomidine	8 μg/kg iv + 330 μg/kg iv		30–40	60–120
Ketamine/acepromazine	50 mg/kg im + 1 mg/kg im	Surgical anaesthesia	20–30	60–90
Ketamine/diazepam	25 mg/kg im + 5 mg/kg im	Surgical anaesthesia	20–30	60–90
Ketamine/medetomidine	15 mg/kg im + 0.25 mg/kg sc, im	Surgical anaesthesia	20–30	60–90

(*Continued*)

TABLE 6.13 (Continued)

Drug	Dose rate	Effect	Duration of anaesthesia (minutes)	Sleep time (minutes)
Ketamine/xylazine	35 mg/kg im + 5 mg/kg im	Surgical anaesthesia	25–40	60–120
	10 mg/kg iv + 3 mg/kg iv	Surgical anaesthesia	20–30	60–90
Ketamine/xylazine/ acepromazine	35 mg/kg im + 5 mg/kg im + 1.0 mg/kg im, sc	Surgical anaesthesia	45–75	100–150
Ketamine/xylazine/ butorphanol	35 mg/kg im + 5 mg/kg im + 0.1 mg/kg im	Surgical anaesthesia	60–90	120–180
Methohexital	10–15 mg/kg iv	Surgical anaesthesia	4–5	5–10
Pentobarbital	30–45 mg/kg iv	Light to medium anaesthesia	20–30	60–120
Propofol	10 mg/kg iv	Light anaesthesia	5–10	10–15
Thiopental	30 mg/kg iv	Surgical anaesthesia	5–10	10–15
Urethane	1000–2000 mg/kg iv	Surgical anaesthesia	360–480	Non-recovery only

Duration of anaesthesia and sleep time (loss of righting reflex) are provided only as a general guide, since considerable between-animal variation occurs. For recommended techniques, see text.