

ADULT AED DOSING

Adult anti-seizure drug loading, dosing, target levels, and formulations. Target levels in µg/mL unless noted. Verify all doses before prescribing.

Drug	Loading	Adult dose	Target level	Adult formulations
First-generation				
Carbamazepine (Tegretol)	—	200–800 BID	4–12 µg/mL	Tab IR 200, XR 100/200/400 mg
Ethosuximide (Zarontin)	—	500–1500 QD	40–100 µg/mL	Cap 250 mg
Phenytoin	15–20 mg/kg*	100–200 TID	10–20 µg/mL (free 1–2)	Cap 100, 200, 300 mg
Valproate	40 mg/kg	250 BID – 60 mg/kg	50–100 µg/mL	Tab DR 125/250/500; ER 250/500; sprinkle 125
Phenobarbital	15–20 mg/kg	60–200 mg/day	10–40 µg/mL	Tab 15/30/60/100; elixir; injectable
Clonazepam	—	0.5–20 mg/day (÷)	20–70 ng/mL	Tab 0.5/1/2; ODT 0.125–2 mg
Second-generation				
Gabapentin (Neurontin)	—	300–2400/d	2–20 µg/mL	Cap 100/300/400; tab 600/800
Topiramate (Topamax)	—	25–200 BID	5–20 µg/mL	Tab 25/50/100/200; Trokendi XR 25/50/100/200
Lamotrigine	—	25/d – 200 BID (½ dose with valproate)	2.5–15 µg/mL	Tab 25/100/150/200; ODT
Levetiracetam (Keppra)	60 mg/kg	500–1500 BID	12–46 µg/mL	Tab 250/500/750/1000; IV
Oxcarbazepine (Trileptal)	—	300–1200 BID	3–35 µg/mL (MHD)	Tab 150/300/600; Oxtellar XR 150/300/600
Zonisamide (Zonegran)	—	100 QD, titrate to 400 (max 600)	10–40 µg/mL	Cap 25/50/100
Tiagabine (Gabitril)	—	4–56 mg/day (BID–QID)	20–200 ng/mL	Tab 2/4/12/16
Felbamate (Felbatol)	—	400–1200 TID	30–60 µg/mL	Tab 400/600
Third-generation				
Lacosamide (Vimpat)	200–400 mg	Mono 100–200 BID; adj 50–200 BID	10–20 µg/mL	Tab 50/100/150/200; IV
Brivaracetam (Briviact)	—	25–100 BID	0.2–2 µg/mL	Tab 10/25/50/75/100; IV
Clobazam (Onfi)	—	10–40 mg/day	30–300 ng/mL	Tab 10/20
Perampanel (Fycompa)	8–36 mg†	2–12 mg QHS	180–980 ng/mL	Tab 2/4/6/8/10/12
Vigabatrin (Sabril)	—	500–1500 BID	not routinely monitored	Tab 500 mg
Rufinamide (Banzel)	—	200–1600 BID	5–30 µg/mL	Tab 200/400
Eslicarbazepine (Aptiom)	—	400–1600 QD	3–35 µg/mL	Tab 200/400/600/800
Newest agents (2018+)				
Cannabidiol (Epidiolex)	—	2.5 → 10 mg/kg BID (weight-based)	not established	Oral soln 100 mg/mL
Cenobamate (Xcopri)	—	12.5 mg QD, slow titration q2wk to 200 (max 400)	not established	Tab 12.5/25/50/100/150/200
Fenfluramine (Fintepla)	—	0.1–0.35 mg/kg BID (weight-based)	not established	Oral soln 2.2 mg/mL

*Phenytoin oral load: 400 → 2h → 300 → 2h → 300 mg (1000 mg over 6 h). †Perampanel loaded orally off-label. Loading = IV loads for status epilepticus.

SEIZURE RESCUE MEDICATIONS FOR CLUSTERS — CAREGIVER / HOME USE

Give for a seizure lasting **≥5 minutes** or a cluster of seizures. **Call 911** if the seizure does not stop or clusters continue.

Intranasal: Midazolam nasal spray (Nayzilam) 5 mg, may repeat once after 10 min · Diazepam nasal spray (Valtoco) 10–20 mg.

Buccal (cheek): Midazolam 10 mg.

Rectal: Diazepam rectal gel (Diasat) 10–20 mg.

Dissolvable wafer (ODT): Clonazepam (Klonopin wafers) 0.5–1 mg · Lorazepam 1–2 mg.