Half-life quick reference

Half-lives by class, and what that means for taper speed, missed doses, and switching. Reviewed against current guidelines as of June 8, 2026.

Half-life is one of the most useful facts about a psychiatric drug. It tells you how forgiving the drug is to a missed dose, how bad discontinuation will feel, how long it takes to reach steady state, and how long the drug lingers when you switch. Numbers are typical adult values; individual variation is real with age, hepatic function, and CYP status.

SSRIs

Drug	Parent t1/2	Active metabolite	Practical
Fluoxetine	1 to 3 d	Norfluoxetine 7 to 15 d	Effectively self-tapering. Missed doses barely matter. 5-week washout before MAOI.
Sertraline	24 to 26 h	Desmethylsertraline 62 to 104 h (weak)	Middle of the pack. Discontinuation real but manageable.
Citalopram	35 h	None relevant	Once daily. QT concern caps dose.
Escitalopram	27 to 32 h	None relevant	Same profile as citalopram.
Paroxetine	21 h (nonlinear)	None relevant	Notorious for discontinuation. Half-life shortens at lower doses.
Fluvoxamine	15 to 22 h	None relevant	Often BID. Strong 1A2 and 2C19 inhibitor.

SNRIs and atypical antidepressants

Drug	Parent t1/2	Active metabolite	Practical
Venlafaxine IR	5 h	ODV 11 h	Discontinuation nightmare. Never stop abruptly.
Venlafaxine XR	5 h (release-controlled)	ODV 11 h	Same short half-life, released more slowly.
Desvenlafaxine	11 h	None	Slightly gentler than venlafaxine.
Duloxetine	12 h	None relevant	Once daily works, but discontinuation is real.
Levomilnacipran	12 h	None	Once daily ER smooths this out.
Bupropion XL	21 h	Hydroxybupropion 20 to 27 h	Once daily. Metabolite dominates by AUC.
Mirtazapine	20 to 40 h	None relevant	Forgiving. Once daily at bedtime.
Trazodone	3 to 9 h	mCPP (short)	Short duration; used low-dose for sleep.
Vortioxetine	66 h	None	Long half-life. Slow to steady state, about 2 weeks.
Vilazodone	25 h	None relevant	Once daily with food.

Antipsychotics (oral)

Drug	Parent t1/2	Active metabolite	Practical

Aripiprazole	75 h	Dehydroaripiprazole 94 h	Steady state at 3 weeks. Missed doses forgiving.
Brexpiprazole	91 h	None relevant	Similar to aripiprazole in kinetics.
Cariprazine	2 to 4 d parent	DCAR and didesmethyl, 1 to 3 wk	Steady state weeks. Do not decide non-response at week 2.
Olanzapine	30 h	None relevant	Once daily. Smoking induces 1A2 and drops levels.
Risperidone	20 h	Paliperidone 20 h	Total active moiety is what matters.
Quetiapine	6 h	Norquetiapine 12 h	Short. Twice daily or XR. Sedation follows peak.
Ziprasidone	7 h	None relevant	BID with food (500 kcal).
Lurasidone	18 h	None relevant	Once daily with food (350 kcal).
Clozapine	12 h	Norclozapine 12 h (weak)	BID common. Target 350 to 600 ng/mL. Sensitive to 1A2 changes.
Haloperidol	20 h	None relevant	Once or twice daily.

Benzodiazepines and Z-drugs

Drug	Half-life	Practical
Alprazolam	6 to 12 h	Short. Interdose withdrawal common. Widely abused.
Clonazepam	20 to 50 h	Long, smooths interdose fluctuation. Popular for panic.
Diazepam	20 to 100 h	Effective half-life essentially days. Accumulates in elderly and liver disease. Useful for tapers.
Lorazepam	10 to 20 h	Glucuronidated, safer in liver disease and interactions.
Oxazepam	4 to 15 h	Glucuronidated. Safer choice in elderly.
Temazepam	8 to 15 h	Glucuronidated. Sleep dosing.
Chlordiazepoxide	5 to 30 h (metabolites 24 to 96 h)	Long effective duration. Standard for alcohol withdrawal.
Zolpidem	2.5 h	Onset agent. Higher morning residual in women.
Eszopiclone	6 h	Longer, useful for maintenance insomnia.
Zaleplon	1 h	Shortest. Useful for middle-of-night if 4 h remain.

Mood stabilizers and stimulants

Drug	Half-life	Practical
Lithium	18 to 36 h	Trough 12 h post-dose. Steady state 5 to 7 days.
Valproate	9 to 16 h	BID or ER once daily. Level 30 min before next dose.
Carbamazepine	25 to 65 h initially, 12 to 17 h after autoinduction	Levels drift down first month. Recheck at 2 to 4 weeks.

Lamotrigine	25 h baseline, 13 h with inducers, 60 h with valproate	Missing more than 5 days requires restart of titration.
Methylphenidate IR	2 to 3 h	Duration 3 to 4 h. TID.
Methylphenidate ER	2 to 3 h parent	Duration 8 to 12 h depending on formulation. Not interchangeable.
Mixed amphetamine salts XR	10 to 13 h	Duration 10 to 12 h. Double-peak.
Lisdexamfetamine	Prodrug 1 h, d-amphetamine 10 to 13 h	Duration 10 to 13 h. Prodrug design smooths onset.
Modafinil, armodafinil	15 h	Duration 12 to 15 h. Once daily morning.
Atomoxetine	5 h EMs, 22 h PMs	Continuous. Takes weeks to see full effect.

Taper implications

- Half-life under 12 hours: taper slow (10 to 25 percent per step), pause 2 to 4 weeks, use liquid or bead counting at the tail end.
- Half-life 12 to 48 hours: standard taper (25 percent per step every 2 to 4 weeks) works for most patients.
- Half-life over 48 hours: taper often unnecessary because the drug tapers itself.
- Fluoxetine and aripiprazole are the two most forgiving common drugs. Paroxetine and venlafaxine IR are the two least forgiving.
- Time to steady state is roughly five half-lives. Fluoxetine takes a month. Cariprazine takes 6 to 8 weeks. Do not conclude non-response too early with those two.

Not medical advice.