

Drug	Daily dosage (mg)	Daily doses	Specific effect	Contraindications/side effects:	Indication	Note
Propranolol	30–320	2–3 standard 1–2 long-acting	Postural/action tremor Hand tremor +++ head tremor +	Bradycardia, congestive heart failure, AV block, gastrointestinal disturbances, hypotension, depression fatigue, bronchospasm, male impotence	ET (level of evidence: 1A) PD: db study Cerebellar tremor: single cases Neuropathic tremor: single cases	1st choice in ET patients
Primidone	62.5–500	1 in the evening	Postural/action tremor Hand tremor +++ head tremor +	Ataxia, vertigo, diplopia, sedation, megaloblastic anaemia, osteoporosis, fatigue, nausea, depression, confusion	ET (level of evidence: 1A) Neuropathic tremor: single cases	1st choice in ET, preferentially for patients with age >60 years
Combination: propranolol/primidone	Maximum dosage for each		Postural/action tremor Hand tremor +++ head tremor +		ET (level of evidence: IIB)	1st choice in ET, try before using 2nd and 3rd choice drugs
Gabapentin	1800–2400	3	Action tremor	Dizziness, somnolence, peripheral oedema	ET: conflicting results of three db-studies: one without, two with benefit (level of evidence: IIB) Neuropathic tremor: single cases Primary orthostatic tremor: db study	2nd choice in ET
Topiramate	<400	2–3	Action tremor	Paresthesia, weight decrease, somnolence, anorexia, dizziness, amnesia, depression, insomnia, acute or chronic metabolic acidosis, nephrolithiasis, elevated intraocular pressure	ET: conflicting results of three db-studies: one without, two with benefit (II) Cerebellar tremor: open study	2nd choice in ET
Clonazepam	0.75–6	2–3	For predominant kinetic tremor	Confusion, depression, amnesia, paradoxical reactions (agitation, nervousness), respiratory depression	ET (level of evidence: IIB) Cerebellar tremor (single cases) Dystonic tremor (single cases)	2nd choice in ET
Alcohol	Small amounts	Intermittent treatment	Postural/action tremor Hand tremor +++ head tremor +	CNS depression (interaction with sedating drugs)	ET (level of evidence: IIB)	2nd choice in ET Can be used judiciously
Alprazolam	0.75–4	Intermittent treatment	Postural/action tremor Hand tremor ++	Confusion, depression, amnesia, paradoxical reactions (agitation, nervousness), respiratory depression	ET (level of evidence: IIB)	2nd choice in ET (for mild cases)
Drug	Daily dosage (mg)	Daily doses	Specific effect	Contraindications/side effects:	Indication	Note
Botulinum toxin	OnabotulinumA* doses: vocal muscle: 1.25–3.75 U; cervical muscles: 40–400 U; forearm muscles: 50–100 U; tensor veli palatine: 4–10 U	Every 3rd month	Postural/action tremor Voice tremor +++ Head tremor ++ Ear click ++ Hand tremor +	Muscular weakness	ET (level of evidence: IIB) Dystonic tremor (db studies) EPaT: single cases	2nd choice in ET Injections are made under EMG guidance. Dysport U doses are 3–5 folds higher than Botox
Clozapine	12.5 (test) 25–100	1 in the evening (+1 to 2 additional doses during the morning)	Resting tremor	Agranulocytosis, seizures, myocarditis, orthostatic hypotension	ET (level of evidence: IIIC) PD: several small open and db studies Holmes tremor: single cases	3rd choice in ET Less well-documented effect than for PD (indicate if concomitant psychosis) The effectiveness of clozapine in a particular patient can be predicted after a single dose of 12.5 mg of clozapine
Flunarizine	10	1 in the evening	Postural/action tremor	Confusion, depression, parkinsonism	ET: one study for, one against a mild therapeutic effect (level of evidence: IID)	3rd choice in ET
L-5-OH-tryptophan	<1000	3	Intention tremor	Nausea	Cerebellar tremor: open studies	
Carbamazepine	400–600	3 standard 2 long-acting	For predominant kinetic tremor	Aplastic anaemia, agranulocytosis, ataxia, vertigo, diplopia, nystagmus	Cerebellar tremor: small controlled studies	
Levodopa	Up to 1200	4 standard 3 long-acting	Resting tremor	Orthostatic hypotension, psychosis, nausea and vomiting, somnolence	PD: ample documented evidence Holmes tremor: single cases	
Dopamine agonist	Medium to high	3 standard 1–2 long-acting 1 transdermal patch (rotigotine)	Resting tremor	Orthostatic hypotension, psychosis, nausea and vomiting, somnolence	PD: double-blind studies Holmes tremor: single cases	Daily doses: bromocriptine: 5–20 mg; lisuride: 0.1–1.2 mg; pergolide: 0.15–3.0 mg; pramipexole: 1.5–4.5 mg; ropinirole: 3–24 mg; cabergoline: 1–6 mg; rotigotine: 2–6 mg
Drug	Daily dosage (mg)	Daily doses	Specific effect	Contraindications/side effects:	Indication	Note
Anticholinergics	Bornaprine: 3–12 mg; trihexyphenidyl: 1–10 mg; biperiden: 1–12 mg; metixen: 7.5–60 mg.	3	Resting tremor Postural/action tremor	Especially in elderly subjects. Dryness of the mouth, blurred vision, dizziness, nausea, paralytic ileus, psychosis, amnesia, urinary hesitancy or retention, tachycardia, increased intraocular pressure	PD: Poorly documented Holmes tremor: single cases Bornaprine: two double-blind studies in PD Trihexyphenidyl: open and controlled studies in PD	Slow titration is strictly recommended. Sudden discontinuation may induce a severe rebound effect
Levetiracetam	1000–3000	2–3	For predominant kinetic tremor	Dizziness, somnolence, confusion	ET: 1 db study and open trials showing no effect Positive effect in 1 db acute study Cerebellar tremor: open study with benefit Holmes tremor: single case	
Pregabalin	150–600	2	Postural > Action tremor	Ataxia, confusion, asthenia	ET: single cases and 1 db study	3rd choice in ET

Abbreviation: db double-blinded
*Conversion ratio onabotulinumA/incobotulinumtoxinA = 1:1; conversion ratio onabotulinumA/abobotulinumtoxinA = 1:3–5