ADJUNCTIVE MEDICATIONS USED FOR CHRONIC PAIN

(Partially adapted from Maizels, Morris, and Bill McCarberg; Antidepressants and Antiepileptic Drugs for Chronic Non-Cancer Pain; Am Fam Physician 2005;71:483-90.)

DRUG	DOSAGE	SIDE EFFECTS, CAUTIONS, & NOTES
Antidepressants		
Tricyclics		SE: Dry mouth, constipation, urinary retention, sedation, weight gain, possibility of at least initially increased suicidal ideation. CI: Cardiac conduction abnormalities, recent cardiac events, narrow-angle glaucoma. Notes: Good evidence of efficacy in chronic pain; most all generic.
Amitriptyline (ELAVIL) Imipramine (TOFRANIL)	10-25 mg QHS; increase by 10-25 mg every 3 wks to effect or 150 mg.	Notes: Tertiary amines have greater anticholinergic effects—avoid use in elderly.
Desipramine (NORPRAMIN) Nortriptyline (PAMELOR)	25 mg QHS; increase by 25 mg every 3 wks to effect or 150 mg.	Notes: Secondary amines have fewer anticholinergic effects.
Selective Serotonin Reuptake Inhibitors		SE: Nausea, constipation, sedation or agitation, serotonin syndrome, weight gain, sexual dysfunction, decreased libido, insomnia, possibility of at least initially increased suicidal ideation. Notes: Efficacy in chronic pain is relatively poor; several branded & generic.
Serotonin & Norepinephrine Reuptake Inhibitors		SE: Nausea, constipation, sedation or agitation, serotonin syndrome, weight gain, sexual dysfunction, decreased libido, insomnia, possibility of at least initially increased suicidal ideation. Notes: Good evidence of efficacy in chronic pain.
Duloxetine (CYMBALTA)	20-60 mg QD; for pain consider 60 mg BID.	
Milnacipran (SAVELLA)	50 mg BID; for pain consider 12.5 mg QD x1 day, then 12.5 mg BID x2 days, then 25 mg BID x4 days, then 50 mg BID; Max: 200 mg/day.	
Venlafaxine (EFFEXOR)	Start at 37.5 mg QD; increase to 75 mg/150 mg/225 mg/max 300 mg every 3 wks.	Notes: Only serotoninergic effects below 150 mg; generic.
Novel Antidepressants		
Bupropion (WELLBUTRIN)	Start at 150 mg XL QAM; increase to 300 mg in a wk if necessary.	SE: Agitation or sedation, insomnia, weight loss, lowering of seizure threshold, possibility of at least initially increased suicidal ideation.

		Notes: Evidence of efficacy in chronic pain is very limited; the SR generic is cheaper than the XL generic, but it has to be dosed BID.
Anticonvulsants		
First-Generation Agents		Notes: Good evidence of efficacy in chronic pain; many generics.
Carbamazepine (TEGRETOL, CARBATROL)	Start at 100 mg BID; titrate to 1200 mg/day divided BID-QID.	SE: Dizziness, sedation, rarely aplastic anemia & other severe hypersensitivity reactions. Notes: There are branded ER formulations.
Oxcarbazepine (TRILEPTAL, GENERIC)	Start at 300 mg BID; titrate 600 mg/day weekly up to 1200 mg BID.	SE: Same as carbamazepine, though usually less severe.
Phenytoin (DILANTIN)	Start at 100 mg QHS; titrate every 1-3 wks, to 500 mg QHS max.	SE: Dizziness, sedation, ataxia, confusion, nausea, gingival hypertrophy, rarely blood dyscrasias, hepatotoxicity, & other severe hypersensitivity reactions. Notes: There are branded ER formulations.
Valproate (DEPAKENE), Divalproex (DEPAKOTE)	Start at 250 mg BID, titrate rapidly to lowest effective dose, typically as high as 500 mg TID.	SE: Dizziness, sedation, ataxia, confusion, nausea, rarely blood dyscrasias, hepatotoxicity, pancreatitis, & other severe hypersensitivity reactions. Notes: There are generic versions of valproate.
Second-Generation Agents		Notes: Good evidence of efficacy in chronic pain.
Gabapentin (NEURONTIN)	Start at 300 mg QD; titrate every few days to max 3600 mg/day divided TID.	SE: Dizziness, sedation, ataxia, fatigue, nausea, weight gain. Notes: Maximum efficacy may be seen several wks after initiation; generic.
Lamotrigine (LAMICTAL)	Start at 50 mg QD; titrate every 2 wks to max 400 mg/day divided QD-BID.	SE: Dizziness, nausea, constipation, rarely serious toxic rashes. Notes: Scheduled, but low risk of abuse; generic.
Pregabalin (LYRICA)	Start at 75 mg BID; titrate every few days to max 300 mg/day divided BID-TID.	SE: Dizziness, sedation, ataxia, fatigue, nausea, weight gain. Notes: Scheduled, but low risk of abuse.
Corticosteroids		
Dexamethasone, several others	2-20 mg or more QD.	SE: Proximal myopathy, candidiasis, bone loss, and other toxicities are possible, but are seldom a problem in the setting of terminal disease. Observe for steroid-induced psychosis. Notes: Dexamethasone is preferred, due to its long half-life and minimal mineralocorticoid effect.
Nonsteroidal Anti-inflammatory Drugs		
Many	Various.	SE: Gastrointestinal, hepatic, and renal toxicities. Notes: NSAIDs can provide analgesic effects additive to other agents, but their toxicities may preclude use in many patients.

Miscellaneous		
Caffeine	65-200 mg per opiate dose.	May increase the analgesic effect of acetaminophen, aspirin, and NSAIDs.
Hydroxyzine	25-50 mg parenterally or 50-100 mg PO per opiate dose.	May add to the analgesic effect of opiates while also relieving nausea.
Topical analgesics (lidocaine, capsaicin, diclofenac, others)	Various.	Helpful for neuropathic and localized orthopedic pain.