

NAME(S): **Generic**: duloxetine (doo LOX e teen) | **Brand**: Cymbalta, Drizalma

THERAPEUTIC CATEGORY: **Antidepressant** | Serotonin Norepinephrine Reuptake Inhibitor (SNRI)

DOSAGE FORM & STRENGTH: **DR Caps**: 20 mg, 30 mg, 40 mg, 60 mg | **DR Sprinkle**: 20 mg, 30 mg, 40 mg, 60 mg

INDICATION(S) & DOSING(S): **ADULTS** (General dosing of 60 mg PO qd)

1. **Fibromyalgia**: DR capsules only. When initiating start at 30 mg PO qd for 1 wk. Max of 60 mg/day.
  2. **Generalized anxiety disorder**: When initiating start at 30 mg PO qd for 1 wk. Over 2 wks if the elderly pt or if tolerability is a concern. Dose inc in 30 mg increments. Max 120 mg/day but >60 mg/day rarely more effective.
  3. **Major unipolar depressive disorder**: When initiating start at 20-30 mg PO bid. May initiate at 30 mg PO qd for 1 wk if tolerability is a concern. Max 120 mg/day but doses of >60 mg/day rarely more effective.
  4. **Chronic musculoskeletal pain**: When initiating start at 30 mg PO qd for 1 wk. Max of 60 mg/day.
  5. **Neuropathic pain due to diabetes mellitus**: When initiating start at 30 mg PO qd for 1 wk unless tolerability is a concern. Max 120 mg/day but >60 mg/day rarely more effective.
- OFF LABEL | Chemo-induced peripheral neuropathy and stress urinary incontinence (men & women).

INDICATION(S) & DOSING(S): **PEDIATRICS** (General dosing b/t 30-60 mg PO qd)

1. **Fibromyalgia**: DR capsules only. ≥13 years of age up. | When initiating start at 30 mg po qd for 1 wk. Max 60 mg/day.
2. **Generalized anxiety disorder**: ≥7 years of age up. | When initiating start at 30 mg po qd. Increase by 30 mg/day after 2 wks. Max 120 mg/day.
3. **Major unipolar depressive disorder**: 7-17 years of age. | When initiating start at 30 mg po qd. May consider increasing dose after 2 wks. Max 120 mg/day.

MECHANISM OF ACTION & PHARMACOLOGY

- **MOA**: Strong inhibition of neuronal serotonin and norepinephrine reuptake. Also weak inhibition of the reuptake of dopamine. There is minimal to no activity for muscarinic cholinergic H1-histaminergic or alpha2-adrenergic receptors. There appears to be MAO inhibition. | Well **absorbed**. | **Metabolized** hepatically via CYP1A2 and CYP2D6 pathways forming multiple inactive metabolites. | 70% **excreted** in the urine and 20% in the feces. | The **Onset of Action** for **anxiety** is typically observed w/in 2 wks w/ continued improvement through wks 4-6. For **depression** effects typically observed w/in 1-2 weeks with continued improvement through wks 4-6. | **Time to Peak** seen w/in 5-6 hours with food delaying this by 1.7-4 hours. | **Half-Life elimination** in children ≥7 years and Adolescents occurs at about 10.4 hours. In adults this occurs around 12 hours and in 4 hours in elderly women. | >90% **protein bound**.

SPECIAL POPULATIONS & CONSIDERATIONS

- **Elderly**: 25% increase of AUC in elderly women. | **Smoking cigarettes** reduces bio availability by 33%. | **Discontinuation of therapy**: Gradually titrate dose down over 2-4 wks. | **Renally impaired**: Avoid use if CrCl <30, otherwise consider lower starting doses. | **Hepatically impaired**: Avoid use in Child-Pugh Class A, B, or C. |



**Switching to or from MAOI:** allow 14 days b/t d/c'ing MAOI and initiation of duloxetine. | **Pregnancy:** Caution especially in 3<sup>rd</sup> trimester. Low fetal harm but risk of w/d and serotonin syndrome.

## SIDE EFFECTS

- **General:** Nausea, dry mouth, constipation, appetite loss, and feeling tired or drowsy.
- **Serious:** Confusion, bleeding, bruising, ↓libido, muscle cramps, tremor, yellowing eyes or skin, and dark urine.

**BLACK BOX WARNING: Suicidality** – Increased risk in children and adolescents as well as in young adults with major depressive disorder. When using this medications risk vs benefit should be weighed. Observe patients for clinical worsening, suicidality, and unusual changes in behavior.

## DRUG INTERACTIONS

- **↑Bleed Risk:** Clopidogrel, NSAIDs, and warfarin.
- **↑Toxicity and ↓Efficacy:** Cimetidine, ciprofloxacin, imipramine, & flecainide

## MONITORING PARAMETERS

- Clinical improvement or worsening | Changes of behavior | Liver and renal function tests | Blood pressure.

## PATIENT COUNSELING INFORMATION

- Duloxetine is used to treat various mood disorders such as **depression** and **anxiety** in adults and children. It can also be used in treating **diabetic neuropathic pain** and other pain disorders such as **fibromyalgia**.
- When taking duloxetine **do not open up the capsules**. It should be taken whole w/o crushing or chewing. It may be taken w/ or w/o food.
- If just starting therapy it **may take up to 4 weeks before symptoms improve**.
- In some patients it **may affect blood pressure** so it is advised to check it regularly.

## REFERENCE(S)

- <https://online.epocrates.com/drugs/374610/Cymbalta/Monograph>
- <https://www.drugs.com/ppa/duloxetine.html>
- <https://www.webmd.com/drugs/2/drug-91490-404/duloxetine-oral/duloxetine-oral/details>

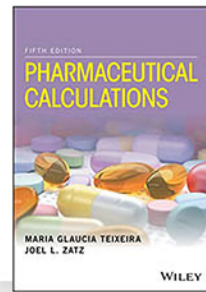


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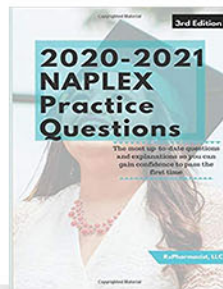
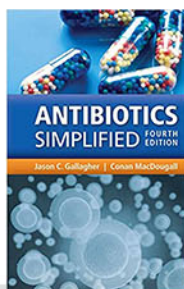
## Calculations (NAPLEX)



## Pharmacy Law (MPJE)



## Supplemental



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