

## Name(s)

- **Generic:** montelukast (*mon te LOO kast*) | **Brand:** Singular

## Therapeutic Category

- Leukotriene Receptor Antagonist

## Indication(s)

1. **Allergic rhinitis (seasonal, perennial):** Treatment in seasonal allergic rhinitis adult and pediatric ( $\geq 2$  years) patients. Treatment of perennial allergic rhinitis in adult and pediatric ( $\geq 6$  months) patients. Used in patients as adjunctive or as an alternative in patients getting inadequate or intolerant to other treatments.
  2. **Asthma:** Treatment/Prophylaxis in chronic asthma
  3. **Exercise-induced bronchoconstriction:** Prevention of bronchoconstriction caused from exercise
- NOTE: Not used as first-line treatment
  - OFF-LABEL: Urticaria (chronic, NSAID-induced urticaria)

## Dosage Form / Strength / Dosing

- **Dosage Form & Strengths:**
  - **Packet/Granules:** 4 mg; **Tablet:** 10 mg; **Chewable tabs:** 4 mg, 5 mg
- Dosing in **Adults & Geriatric:**
  - **Allergic rhinitis (seasonal, perennial):** 10 mg once daily (in the evening; may individualize morning or evening)
  - **Asthma:** 10 mg once daily (in the evening)
- Dosing in **Pediatrics:**
  - **Allergic rhinitis (seasonal):**
    - Children 2 – 5 years: 4 mg once daily
    - Children  $\geq 6$  years and adolescents  $<15$  years: 5 mg once daily
    - Adolescents  $\geq 15$  years: 10 mg once daily
  - **Allergic rhinitis (perennial):**
    - Infants  $\geq 6$  months and children  $<6$  years: 4 mg once daily
    - Children  $\geq 6$  years and adolescents  $<15$  years: 5 mg once daily
    - Adolescents  $\geq 15$  years: 10 mg once daily
  - **Asthma:**
    - 12 months to 5 years: 4 mg once daily in the evening
    - 6-14 years: 5 mg once daily in the evening
    - $\geq 15$  years: 10 mg once daily in the evening
  - **Exercise-induced bronchospasm prevention:**
    - Children  $\geq 6$  years and adolescents  $<15$  years: 5 mg at least 2 hours prior (limit 1 dose/24 hours)
    - Adolescents  $\geq 15$  years: One 10 mg tablet at least 2 hours prior (limit 1 dose/24 hours)
  - Urticaria (NSAID-induced)
    - **Adolescents  $\geq 15$  years:** 10 mg once daily
- OFF-LABEL:
  - **Urticaria (chronic, NSAID-induced):** 10 mg once daily
- NOTE:



- With or without food, generally in the evening unless individualized therapy required
- Granules can be mixed with spoonful of cold/room temp applesauce, carrots, rice, ice cream (NOT any other liquids/food). Admin w/in 15 min of opening.

## Mechanism of Action & Pharmacology

- A selective leukotriene receptor antagonist (LTRA) that inhibits cysteinyl leukotrienes. Cysteinyl leukotriene receptor inhibition is proposed to have pulmonary and nasal mucosal benefits along with altering the process of inflammation.
- **Absorption:** Rapid; **Metabolism:** Hepatic (CYP3A4, 2C8, 2C9)
- **Time to Peak:**
  - **Packet/Granules:** 4 mg (fasting,  $2.3 \pm 1$  hours)(high-fat meal,  $6.4 \pm 2.9$  hours)
  - **Tablet:** 10 mg (fasting, 3-4 hours)
  - **Chewable tabs:** 4 mg (child 2-5 years, fasting, 2 hours); 5 mg (fasting, 2-2.5 hours)
- **Duration of Action:** >24 hours
- **Half-Life Elimination:** 2.7 – 5.5 hours (7.4 hours for mild – moderate hepatic impairment)
- **Protein Binding:** >99% plasma bound

## Side Effects

- 1-10%: Headache, **dizziness**, **fatigue**, dermatitis, eczema, **urticaria**, abdominal pain, diarrhea, nausea, **infection** (tooth, skin, zoster, other viral), cough (cold/flu-like s/sx)

**BLACK BOX WARNING: Serious neuropsychiatric events** – Serious neuropsychiatric (NP) events reported. Highly variable including agitation, aggression, depression, sleep disturbances, suicidal thoughts and behavior, suicide. Mechanism behind NP events are not well understood. Due to NP events the benefits of montelukast may NOT outweigh the risks in some patients. Reserve usage for patients with inadequate/intolerant response to alternative therapies after first-lines attempted. Advise patients/caregivers to be alert in changes in behavior consistent with NP symptoms. If NP symptoms present, discontinue and contact healthcare professional.

## Drug Interactions

- **Gemfibrozil** increases montelukast concentrations; **Loxapine** toxic effects may increase due to montelukast
- Montelukast concentration in serum decreased from **lumacaftor** and **ivacaftor**

## Monitoring Parameters

- Mood/behavior changes; Suicidal thinking/behavior; Liver function tests

## Patient Counseling Information

- Used to ease allergy signs/symptoms & used to treat/prevent breathing issues such as asthma. With or w/o food.

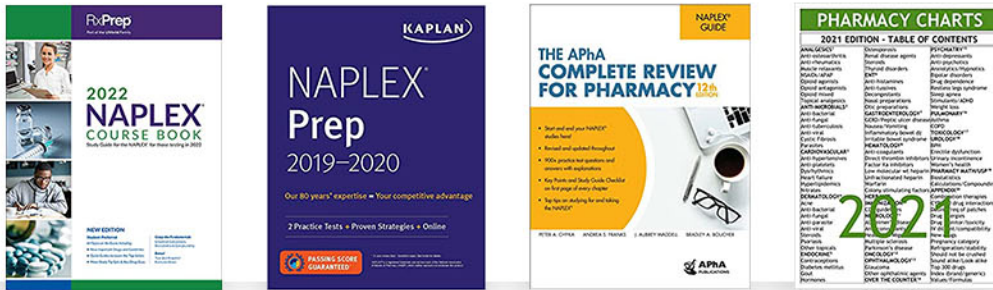
## Reference(s)

- <https://www.drugs.com/ppa/montelukast.html>

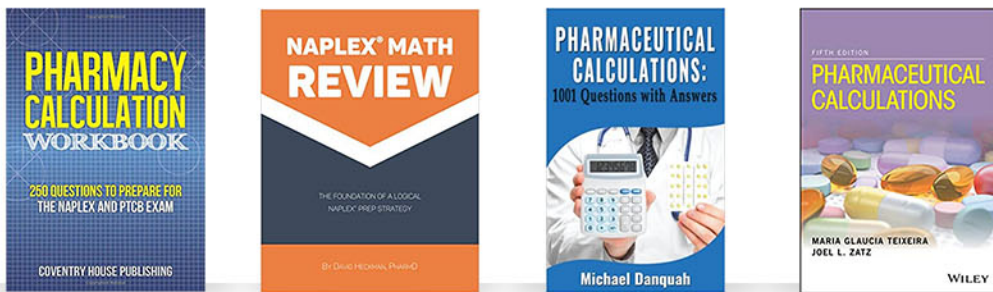


# PREPARE FOR SUCCESS!

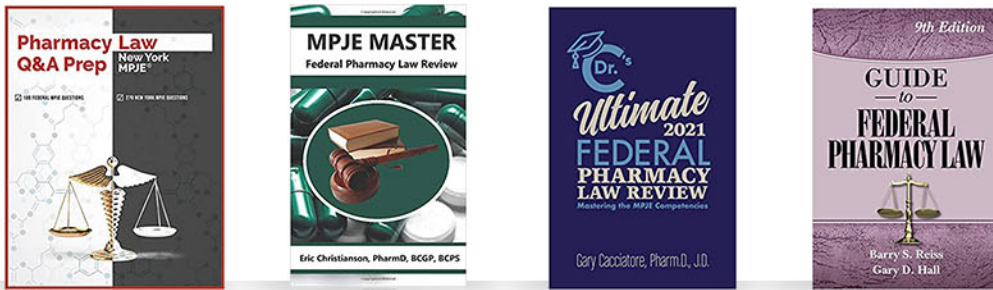
## Comprehensive (NAPLEX)



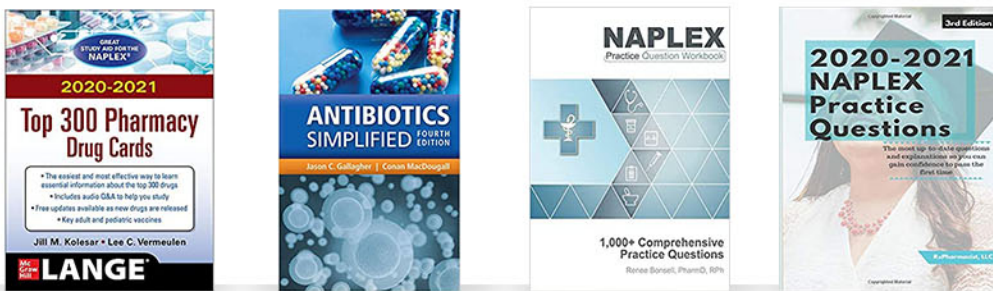
## Calculations (NAPLEX)



## Pharmacy Law (MPJE)



## Supplemental



# DRUG CARDS DAILY

Monday at 7 am EST  
(6 am CST, 4 am PST)

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