

Name(s)

- **Generic:** fluticasone (floo TIK a zone) | **Brand:** Flovent HFA, Flovent Diskus, Arnuity Ellipta, ArmonAir Digihaler

Therapeutic Category

- Inhaled Corticosteroid (ICS)

Indication(s)

1. **Asthma:** Flovent variations are used as daily maintenance therapy in the treatment of asthma for patients 4 years of age or older. The exception is the ArmonAir Digihaler which is approved for ages 12 years or older. This medication cannot be used for the relief of acute bronchospasms.
- (OFF-LABEL) uses in Stable Chronic Obstructive Pulmonary Disease (**COPD**) and Eosinophilic esophagitis (EoE)

Dosage Form / Strength / Dosing

- **Dosage Form & Strengths:** Inhaler
 - Aerosol Inhalation as **propionate**
 - Flovent HFA: 44 mcg/actuation; 110 mcg/actuation; 220 mcg/actuation
 - Aerosol **Powder Breath Activated** Inhalation as **furoate**
 - Arnuity Ellipta: 50 mcg/actuation; 100 mcg/actuation
 - Aerosol **Powder Breath Activated** Inhalation as **propionate**
 - Flovent Diskus: 50 mcg/blister; 100 mcg/blister; 250 mcg/blister
 - ArmonAir Digihaler: 55 mcg/actuation; 113 mcg/actuation; 232 mcg/actuation
- **Dosing:** Asthma (≥4 years of age Flovent Diskus & Flovent HFA; ≥12 years of age ArmonAir Digihaler)
 - Titrate dosing to the lowest effective dose in which stability in the patient's asthma is achieved.
 - There are two main points to think about when it comes with the inhalers
 - Think about which are the furoate or propionate
 - Think about which are Dry powder inhalers or Metered dose inhalers
 - **Dry powder inhaler:** Arnuity Ellipta (furoate); ArmonAir Digihaler (furoate); Flovent Diskus (propionate)
 - **Metered dose inhaler:** Flovent HFA (propionate)
 - **NOTE:** Initial dosing begins with 1-4 inhalations/day depending on strength with increases in dose every 1-2 weeks if adequate response not achieved.
 - Arnuity Ellipta (fluticasone **furoate**); Dry powder inhaler
 - No prior ICS treatment: 100 mcg once daily (low-dose therapy) with 200 mcg/day max
 - Prior ICS treatment: 100 (low-dose) to 200 mcg (high-dose) once daily with 200 mcg/day max
 - **NOTE:** GINA 2020 Guidelines
 - fluticasone **furoate**; Dry powdered inhaler
 - Low-dose: 100 mcg/day
 - High-dose: 200 mcg/day
 - ArmonAir Digihaler (fluticasone **propionate**); Dry powder inhaler
 - No prior ICS treatment: 55 mcg twice daily with 232 mcg twice daily max
 - Prior ICS treatment: 55 to 232 mcg twice daily with 232 mcg twice daily max
 - Flovent HFA (fluticasone **propionate**); Metered dose inhaler
 - No prior ICS treatment: 88 mcg twice daily with 880 mcg twice daily max
 - fluticasone **propionate**; Metered dose inhaler
 - Mild asthma: 100-250 mcg twice daily
 - Moderate asthma: 250-500 mcg twice daily
 - Severe asthma: 500 mcg twice daily
 - Very severe: 1,000 mcg twice daily
 - **NOTE:** GINA 2020 Guidelines
 - fluticasone **propionate**; Metered dose inhaler
 - Low-dose: 88 to 250 mcg/day



- Medium-dose: >250 to 500 mcg/day
 - High-dose: >500 mcg/day
 - Flovent Diskus (fluticasone propionate); Dry powder inhaler
 - fluticasone **propionate**; Dry powder inhaler
 - Mild asthma: 100-250 mcg twice daily
 - Moderate asthma: 250-500 mcg twice daily
 - Severe asthma: 500 mcg twice daily
 - Very severe: 1,000 mcg twice daily
 - **NOTE:** GINA 2020 Guidelines
 - fluticasone **propionate**; Dry powder inhaler
 - Low-dose: 100 to 250 mcg/day
 - Medium-dose: >250 to 500 mcg/day
 - High-dose: >500 mcg/day
- Dosing: Asthma in **pediatrics** (Not covered please refer to the GINA Guidelines)
- (OFF-LABEL) Dosing: **COPD**
 - Not covered. Please follow GOLD Guidelines for full details.
 - Typical dosing is 50 to 500 mcg/day as a component of a dual or triple combination therapy
- (OFF-LABEL) Dosing: **esophagitis**
 - Not covered.
 - Typical dosing is 880 mcg/day swallowed in 2 divided doses for 4-8 weeks

Mechanism of Action & Pharmacology

- **NOTE:** Lower dosing of the furoate form is used due to having a higher binding affinity for the lung's glucocorticoid receptor in comparison to the propionate form.
- Potent local vasoconstrictive and anti-inflammatory corticosteroid that takes advantage of a fluorocarbothioate ester linkage at the 17 carbon.
- **Metabolism:** Hepatic (CYP3A4) | **Excretion:** Fecal (Primarily as parent drug and metabolite; Urine (<5%) | **Onset of Action:** Max benefit ≥1-2 weeks | **Time to Peak:** 0.5 to 1 hour | **t_{1/2}:** Inh furoate (24 hours); Inh propionate (11 hours) | **Protein Binding:** >99%

Side Effects

- >10%: Oral candidiasis (Thrush), sinus infection, sinusitis, upper respiratory tract infection, throat irritation, nasal congestion, rhinitis, fatigue, malaise, headache

Drug Interactions

- Fluticasone is a CYP3A4 substrate
- May increase serum concentrations of CYP3A4 substrates
- CYP3A4 inhibitors may decrease metabolism of CYP3A4 substrates, may increase serum concentration of fluticasone
- Tobacco (smoked) may decrease effects of corticosteroids (ICS)

Monitoring Parameters

- S/sx of oral candidiasis | FEV1 | Peak flow | Pulmonary function tests | Hepatic fxn | glaucoma/cataracts

Patient Counseling Information

- **Pregnancy:** Can be detected in cord blood; Small risk of malformations in one study but generally not associated w/ fetal malformations; ICS recommended treatment of asthma during pregnancy.
- Used to treat asthma
- It's used as maintenance therapy; Not used to treat asthma attacks

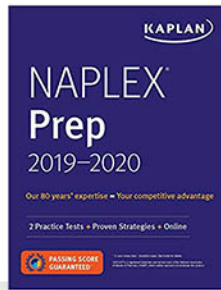
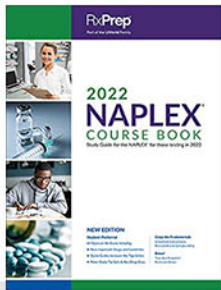
Reference(s)

- <https://www.drugs.com/ppa/fluticasone-oral-inhalation.html>

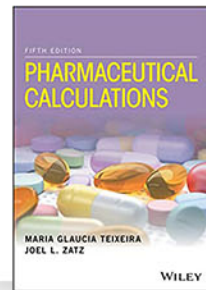
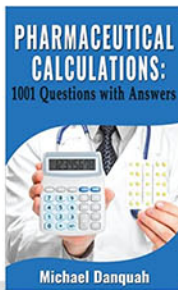
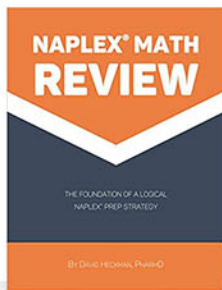
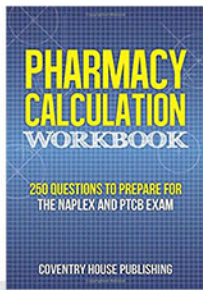


PREPARE FOR SUCCESS!

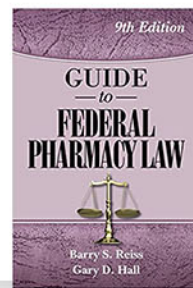
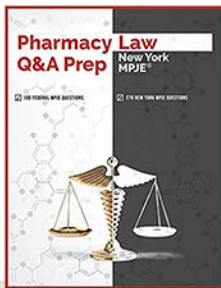
Comprehensive (NAPLEX)



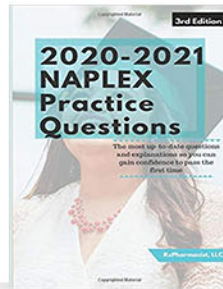
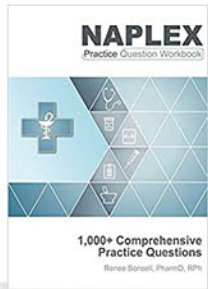
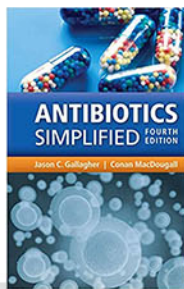
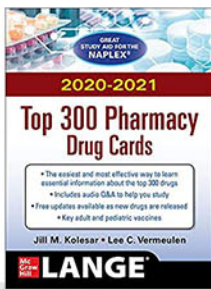
Calculations (NAPLEX)



Pharmacy Law (MPJE)



Supplemental



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So you landed that perfect job offer or got the perfect match for your PGY1 and now the **ONLY** thing standing in your way is passing the NAPLEX and MPJE.

Here are some NAPLEX & MPJE prep recommendations to help you do everything you can to **pass the first time!**

HEY STUDENT!

When I was P1 one of the best pieces of advice I got from those before me was to use a NAPLEX Prep book while learning each topic.

This helps focus your learning and the repetition helps to retain info and indirectly prepare you for the NAPLEX



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