

## Second Generation Antihistamines

Second generation antihistamines are indicated for allergic (allergic rhinitis). They are lipophobic molecules that work as histamine H1 receptor antagonists. An example is azelastine + fluticasone (Dymista), which is commonly administered as an intranasal spray instead of orally. Other examples include cetirizine (Zyrtec), loratadine (Claritin), and fexofenadine (Allegra). These drugs have fewer anticholinergic and CNS effects than their first generation counterparts.



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### Indications

#### Allergies

##### Allergy-alligator

Second generation antihistamines can be used as a monotherapy for mild allergic rhinitis symptoms including rhinorrhea, sneezing, urticaria, itching, and nasal congestion.

### Mechanism of Action

#### Lipophobic

##### Lip-pho-bee

Second generation antihistamines are faster and longer acting (>24 hours) than first generation antihistamines. They are lipophobic, so they have fewer CNS effects.

#### Histamine H1 Receptor Antagonist

##### History-man with (1) Wand in Ant-toga

These drugs compete with histamine for H1 receptor sites. H1 receptors are found all over the body including on smooth muscle cells (in the respiratory tract and blood vessels), cardiomyocytes, and the central nervous system.

### Drugs

#### Azelastine + Fluticasone (Dymista)

##### Dime-Mister

Dymista is composed of azelastine, a second generation antihistamine, and a steroid called fluticasone. Patient education should include correct intranasal medication administration. Patients should prime the pump for first time use. Then shake the medication and blow their nose before administration. Medication applicator should be inserted about 1/4 or 1/2 an inch into the nostril. Patients should tilt their head when spraying the medication, and close the opposite nostril when administering. Patients should be sure to direct the medication away from their nasal septum.

#### Intranasal Spray

##### In-nose Sprayer

Some second generation antihistamines can be administered via intranasal spray. Dymista is commonly administered this way.

### **Cetirizine (Zyrtec)**

[Citrus-magazine](#)

Cetirizine (brand name Zyrtec) is the most sedating of the second generation antihistamines.

### **Loratadine (Claritin)**

[Low-rationing](#)

Loratadine (brand name Claritin) may be taken once or twice daily depending on severity of symptoms. Its peak action occurs 8 hours after administration.

### **Fexofenadine (Allegra)**

[Fox-fenced](#)

Fexofenadine is the least sedating second generation antihistamine. High fat meals and fruit juice decrease the bioavailability of fexofenadine.

## **Considerations**

### **Fewer Anticholinergic Effects**

[Down-arrow Fx Ant-tie-cola](#)

Second generation antihistamines have fewer anticholinergic effects than first generation antihistamines. Anticholinergic effects include dry mouth or dry eyes. These drugs are also less sedating than their first generation counterparts.

### **Fewer CNS Effects**

[Down-arrow CNS-brain](#)

Second generation antihistamines cause fewer CNS effects than first generation antihistamines since they are lipophobic. Patients often can take second generation antihistamines during the day since they are less sedating.