



## Comparing New Antihistamines

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In allergic conditions, the actions of histamine help to cause symptoms such as sneezing, itchiness, and a runny nose (rhinitis). Rhinitis may occur at certain times of year (seasonal allergic rhinitis, or hay fever) or all year round (perennial allergic rhinitis). Histamine also plays a role in urticaria, also known as hives, where itchy red welts appear on the skin. If symptoms last for more than 6 weeks and the trigger is unknown, it is referred to as chronic idiopathic urticaria.

Oral antihistamines generally relieve allergic symptoms. The earlier drugs tended to be sedating, whereas the newer antihistamines are less sedating.

The "[Drug Class Review on Newer Antihistamines](#)" compares the safety and effectiveness of seven drugs. A summary of the findings is below.

### How do newer antihistamines compare in treating allergic rhinitis?

In adults with seasonal allergic rhinitis, a number of direct comparisons did not find any significant differences. Two studies found azelastine nasal spray was superior to oral cetirizine for improving symptoms and quality of life, and a single study found that quality of life was better with fexofenadine than loratadine.

For improving the symptoms of perennial allergic rhinitis, there is no significant difference between levocetirizine and loratadine or desloratadine. [[details](#)]

### How do newer antihistamines compare in treating urticaria?

In chronic idiopathic urticaria, two studies found levocetirizine was superior to desloratadine for improving symptoms, and a single study found loratadine was superior to cetirizine (but there was no difference in quality of life). [[details](#)]

### How do newer antihistamines compare in children?

Newer antihistamines have not been directly compared in children with seasonal allergic rhinitis or with urticaria.

In perennial allergic rhinitis, single studies have found that cetirizine is superior to loratadine in children aged 2 to 6 years, and superior to levocetirizine in improving symptoms in children aged 6 to 12 years. [[details](#)]

### How do newer antihistamines compare in safety?

Sedation and headaches are the most common adverse events.

First generation antihistamines (diphenhydramine, chlorpheniramine) are more sedating than the newer agents. Of the newer antihistamines, cetirizine and levocetirizine are more sedating than loratadine and desloratadine, and possibly more sedating than fexofenadine.

The rates of headaches are similar in patients taking cetirizine, loratadine, and fexofenadine. [details]

Two antihistamines have previously been withdrawn from the market because they caused EKG changes linked with cardiac arrhythmias. One study of several of the newer antihistamines found a greater risk of cardiac arrhythmias with cetirizine compared to non-use. [details]

In children, evidence is limited, but in general, newer antihistamines are well tolerated with low rates of withdrawal because of adverse events. [details]

## Does age, gender, or other patient factors influence the safety or effectiveness of newer antihistamines?

There is insufficient evidence to determine whether age, gender, or ethnicity influence the safety and effectiveness of the newer antihistamines.

There is fair evidence that adults with allergic rhinitis, who also have asthma or atopic dermatitis, tolerate newer antihistamines similarly to adults without these underlying conditions. [details]

## Drugs included in this review

Generic Name	Trade Names
Azelastine	Astelin Astepro
Cetirizine	Zyrtec Reactine
Desloratadine	Clarinx Aerius
Fexofenadine	Allegra
Levocetirizine	Xyzal
Loratadine	Claritin
Olopatadine	Patanase

## Further information

 This PubMed Clinical Q&A was reviewed by Marian McDonagh, PharmD.

For the full report and evidence tables, please see:

Carson S, Lee N, Thakurta S. *Drug Class Review: Newer Antihistamines: Final Report Update 2* [Internet].

Portland (OR): Oregon Health & Science University; 2010 May. Available at: <http://www.ncbi.nlm.nih.gov/books/NBK50558/>.