HAY FEVER & HAY FEVER MEDICATIONS

THE CAUSE

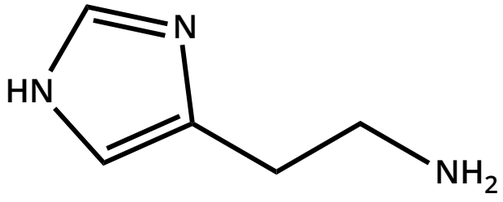
TREE, GRASS & WEED POLLENS

10-15% The percentage of the UK population affected by hay fever.

90-95% The percentage of hay fever sufferers that are allergic to grass pollens.

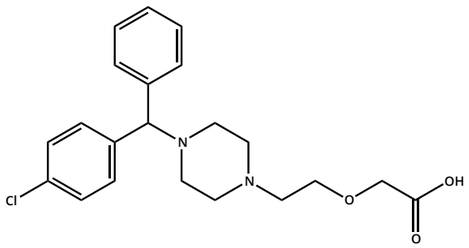
THE ALLERGIC RESPONSE

1. Exposure to pollen results in the body misidentifying it as a threat, and antibodies are released to combat it.
2. The antibodies produced bind to two types of cell in tissues - mast cells and basophils.
3. These cells release a number of chemicals, including histamine, which produce an inflammatory response.
4. Symptoms of this response include a runny nose, itching, sneezing fits, and nasal congestion.

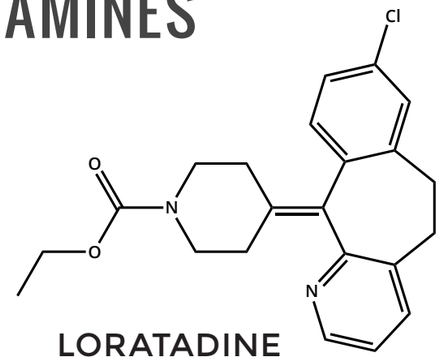


HISTAMINE

ANTIHISTAMINES



CETIRIZINE



LORATADINE

Block histamine action, prevent most symptoms

All oral formulations for treatment of hay fever are antihistamines. These bind to H_1 histamine receptors instead of histamine, preventing the effects produced by the allergic response - although they may not clear blocked noses.

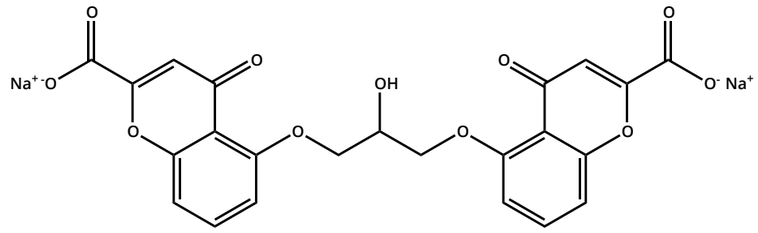
1st Gen & 2nd Gen

First generation antihistamines can cause undesireable effects, including sedation. Second generation are less likely to exhibit sedative effects, particularly loratadine. Peak levels of antihistamines are generally reached 1 hour after taking.

Take when hay fever symptoms are expected, rather than when they have already started.

This is because they cannot reverse the effects of histamine already binding to the H_1 receptors, and so will not provide relief.

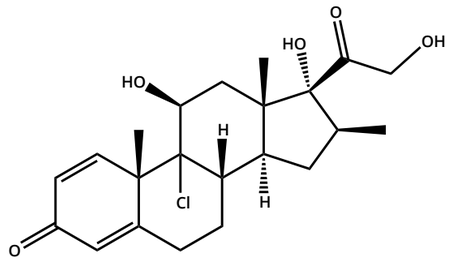
SODIUM CROMOGLICATE



Prevents release of histamine

Commonly used in eye drop solutions, sodium cromoglicate prevents hay fever symptoms by stabilising mast cells, and preventing them from releasing histamine. Unlike anti-histamines, it is effective at remedying itchy eyes even after symptoms have started.

CORTICOSTEROIDS



BECLOMETHASONE

Prevent the inflammatory symptoms of hay fever

Prevent nasal symptoms more effectively than antihistamines, and also relieve itchy eyes. They act to reduce inflammation, rather than directly blocking or preventing the action of histamine.