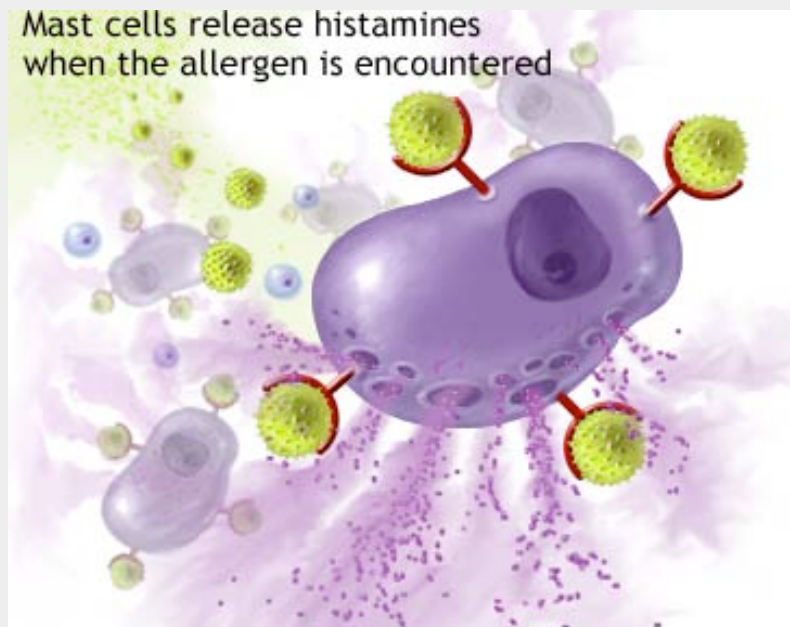


Anti-allergy Medications



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What is an allergy

- The body's immune response to an irritant or allergen
- An abnormal reaction where the body fights off a substance that is normally harmless such as pollen or dander
- The body will produce antibody E to bind the allergen, forming mast blood cells. This causes the mast cells to release chemicals into the blood. Histamine, the main chemical, causes the allergic symptoms
- Symptoms depend on exposure:
 - Inhaled, skin= itchy watery eyes/nose, sneezing, rashes, hives, fatigue
 - Food= cramps, vomiting, diarrhea
 - Insect sting/bite= localized swelling redness pain

Severity ranges from
mild which can be unnoticeable,
moderate where symptoms are similar to the flu
severe where the individual is uncomfortable or incapacitated

Treatment

- There is no cure for allergies
- Medications, both over-the-counter and prescription treat and ease the symptoms
- Allergy drugs can be organized in the following categories:

Antihistamine

Decongestants

Combination Drugs

Corticosteroids

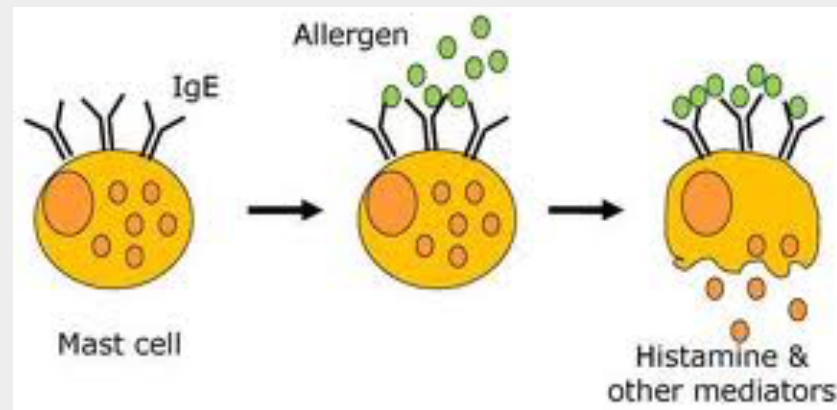
Bronchodilators

Mast Cell Stabilizers

Leukotriene Modifiers

Immunotherapy

Epinephrine Auto-injector



Antihistamine

- Seen in pill form, liquid, nasal spray or eye drops
- Over the counter: Allegra (fexofenadine), Benadryl (diphenhydramine), Dimetane (brompheniramine), Claritin, Alavert (loratadine), Tavist (clemastine), Chlor-Trimeton (chlorpheniramine), Zyrtec (certirizine), Ocu-Hist is an OTC eye drop
- Prescription: Emadine (emedastine difumarate) eyedrop, Livostin (levocabastine) eyedrop, Optivar (azelastine hydrochloride) eyedrop, Astelin, Astepro (azelastine) nasal sprays, Atarax, Vistaril (hydroxyzine), Clarinex (desloratadine), Cyproheptadine (generic only), Palgic (carbinoxamine), Xyzal (levocetirizine)
- During an allergic reaction, the mast blood cells release histamine which attach the blood vessel receptors, causing them to enlarge as well as binding to other receptors that lead to redness, itching, swelling. The antihistamines block histamine from binding to receptors
- Side effects= Dry mouth, drowsiness,, dizziness, nausea and vomiting, restlessness or moodiness, trouble urinating, blurred vision and confusion

Decongestant

- Seen in pill, liquid, nasal spray or eye drops
- Vicks Sinex (oxymetazoline), Sudafed PE, Suphedrin PE (phenylephrine), Silfedrine, Sudafed, Suphedrin (pseudoephedrine), Clear Eyes (naphazoline HCL), Refresh (phenylephrine HCL), Visine (tetrahydrozoline HCL, oxymetazoline HCL)
- During an allergic reaction, blood vessels in the eyes and tissues of the nose can swell, cause secretion of mucous and redness. Decongestants shrink the swollen blood vessels and tissues.
- Side effects= increase blood pressure, insomnia or irritability, restrict urinary flow and problems or complications for those with glaucoma

Combination

- Usually a combination of antihistamine and decongestant
- Over-the-counter: Allegra-D, Claritin-D, Zyrtec-D, Benadryl Allergy and Sinus, Tylenol Allergy and Sinus
- Prescription: Semprex-D for nasal allergies; Naphcon, Vasocon, Zaditor, Patanol, and Optivar for allergic conjunctivitis; Dymista combines an antihistamine with a steroid for in a nasal spray for seasonal nasal allergies.

Corticosteroids

- Seen in pill, liquid, nasal spray/ inhalers, eye drops, topical creams
- Over-the-counter nasal steroids: Nasacort Allergy 24HR and Flonase Allergy Relief(fluticasone)
- Prescription steroids: Beconase, Q-Var, Qnasl(beclomethasone), Azmacort, Nasocort(triamcinone), Asmanex, Nasonex(mometasone furoate), Pulmicort, Rhinocort(budesonide), Flovent, Veramyst(fluticasone), Alvesco, Zetonna(ciclesonide) are used to treat asthma.
- Advair and Symbicort are inhaled drugs called bronchodilators that combine a steroid with another drug to treat asthma. Inhaled steroids are available only with a prescription, Alrex and Dexamethasone, Deltasone(prednisone)
- During an allergic reaction, corticosteroids reduce inflammation
- Side effects:
gain, water retention, high blood pressure, growth suppression, diabetes, cataracts of eye, osteoporosis, muscle weakness, cough, fungal infection of the mouth

Bronchodilators

- Bronchodilators can be grouped as short acting or long acting. Short acting are for quick relief usually during an asthma attack. Long acting can provide 12hours of relief for asthma symptoms and is the preferred choice for those who suffer from asthma attacks at night
- Ventolin, Pro-Air, Proventil (albuterol sulfate), Xopenex (levalbuterol) Maxair (Pirbuterol)
- During an allergic reaction, the muscles are relaxed and blood vessel dilate
- Side effects: wheezing, tremor, nausea, rash, bruising, dizziness, insomnia depression, anxiety chest pain, increased blood pressure, fast heartbeat

Mast Cell Stabilizer

- Seen in inhaler form, eye drops and nasal spray
- Medications: Intal (cromolyn Inhalation Aerosol), Tilade (nedocromil inhalation aerosol), Crolom, Opticrom (Cromolyn Ophthalmic), Alomide (Lodoxamide Tromethamine), Alocril (Nedocromil), Alamast (Pemirolast Potassium Ophthalmic), Nasalcrom (Cromalyn Sodium)
- Over-the-counter mast cell stabilizer drops include:
 - Claritin Eye (ketotifen fumarate)
 - Refresh Eye Itch Relief (ketotifen fumarate)
- Prescription mast cell stabilizer eye drops include:
 - Alamast (pemirolast potassium)
 - Alocril (nedocromil sodium)
 - Alomide (lodoxamide)
 - Crolom (cromolyn)
- Mast cell stabilizers inhibit the release of histamine chemical from the mast cells
- Side effects= throat irritation, coughing, rashes, blurred vision, stinging, burning

Leukotriene Modifier

- Seen in pill and tablet forms
- Usually seen to treat asthma and nasal allergy symptoms
- Accolate (zafirlukast), Singulair (monteleukast), Zylflo (zileuton)
- During an allergic reaction, chemical leukotrienes are produced in response to the allergic reaction. Leukotriene modifiers block the effects of leukotrienes either as a leukotriene receptor antagonist(prevent binding receptors) or leukotriene inhibitor(limiting leukotriene production)
- Side effects= Stomach pain or stomach upset, Heartburn, Fever, Stuffy nose, Cough, Rash, Headache, Irritability, Behavioral issues(depression, suicide, aggression)

Immunotherapy

- Immunotherapy or allergy shots are used as way to gradually build tolerance to allergies
- FDA has approved three under-the-tongue tablets that can be taken at home. The prescription tablets, called Grastek, Ragwitek, and Oralair, are used for treating hay fever and work the same way as shot
- allergy shots work for allergies to bee stings, pollen, dust mites, mold, and pet dander. There's no proof that they work for food, drug, or latex allergies.
- The immunotherapy session involve injecting the individual with small amounts of the allergen to help build resistance slowly
- Done in phases:
 - Initial:* injections are given every 1-3 weeks for 3-6 months with a gradual increase in the amount of allergen
 - The *maintenance phase* last for 3-5 years where shots are given monthly
- Side effects= swelling, irritation, sneezing, hives, congestion, tight chest, anaphylaxis

Epinephrine

- Only rapid effective treatment for anaphylaxis
- Epinephrine is also adrenaline which reverses the anaphylaxis symptoms
- EpiPen, Twinject, or Auvi-Q are commonly used auto-injectors and injected at the thigh
- Anaphylactic symptoms: Difficulty breathing, wheezing, airways shutting down, Swelling of face, mouth, lips, tongue, Skin reactions like hives, itching, flushing, Nausea, stomach pain, vomiting, diarrhea, Dizziness, fainting, collapsing
- After the shot is administered:

If there is no relief, give a second dose. Wait 5-15 minutes. Call 911. You can also massage the site of injection to stimulate the blood flow, helping the medication be absorbed into the body.

It is always safer to bring pt to the emergency room, even if symptoms subside because reactions can reoccur 4-12 hours later. In addition to epinephrine, intravenous fluids and medicine can be given to support other organs like the heart. Antihistamines and steroids ca also be given to reduce symptoms (after pt is stabilized).

Allergies and Dental Hygiene

- Medical history: know your pt's allergies and what provokes possible attacks
- Knowing your pt's allergies makes you capable of recommending appropriate products for home care
- Be aware that certain dental products we use contain allergens. Ex: prophylaxis paste (gluten) and topical anesthesia (fruit coloring)
- Does your pt carry an emergency Epi-pen? Know the location and how to administer in case of an allergic reaction