Allergy tests
Common symptoms of allergy

- Nose: swelling of the nasal mucosa
- Sinuses: allergic sinusitis
- Eyes: redness and itching of the conjunctiva
- Airways: sneezing, coughing, wheezing, asthma, laryngeal edema
- Ears: feeling of fullness
- Skin: rashes
- Gastrointestinal tract: abdominal pain, bloating, vomiting, diarrhea
cause

- **Ingested allergens**: Foods (peanut, milk, soy, wheat, chicken, egg, beef, seafood, cheeses, vegetables, fruits, ...)
- **Inhalant allergens**: Pet danders, dust mites, mold spores, pollen, cockroaches
- **Other allergens**: latex, drugs, insect stings
- Immediate hypersensitivities
- Antibody-mediated cytotoxicity
- Immune complex disorders
- Cell-Mediated hypersensitivities
ALLERGY TEST

• Skin test:
  – skin prick test.
  – Intradermal test.
  – Patch test

• Blood tests: RAST, specific IgE antibodies level, elisa...

• Other tests:
  Elimination type tests
  Unproven allergy tests:
  – Cytotoxic testing
  – Provocation- neutralization
  – Electrodermal diagnosis
  – Kinesiology
  – Reaginic pulse
  – Body chemical analysis
  – Measurement of IgG antibodies
  – Histamine release assays
Contraindications for skin test

- History of anaphylaxis
- High risk of anaphylactic reaction to testing (poor controlled asthma, reduced lung function, history of severe reaction to minute amounts of allergens)
- Rashes, acute skin injection
- Can not stop medication
- Cardiovascular disease (coronary artery, cardiac arrhythmias)
Skin prick test

- The first choice
- Simple, quick, safe, sensitive, inexpensive
- Identify inhaled allergens, ingested allergens, determine whether a person may be allergic to a medicine or insect venom
- Place drops of the possible allergen on the skin
- Prick the skin under each drop with a needle
- Check the skin after 12 to 15 minutes for red, raised itchy areas called wheals
- The rate of systemic reactions to skin prick testing was 0.001%
- If skin prick test negative: choose intradermal test at a later visit
Intradermal test

• The intradermal test is sensitive more than the skin prick test
• A small amount of the allergen solutions is injected into the skin
Patch test

- Doses of the allergens are placed on the patches that look like adhesive bandages
- Wear the patches for 24 to 72 hours, no bath, no exercise
- Contact dermatitis
Blood test (immunoassay)

- Measure the mount of specific IgE, RAST, elisa

- When?
  - Risk of an anaphylaxis.
  - Rash (hives, eczema).
  - Can not stop taking a medicine (antihistamine, tricycle antidepressant, beta blocker, ACE inhibitor, immunomodulatory creams, topical steroids)
  - Unusual and rare allergens are suspected

- Less sensitive than skin test
- Cost more than skin test
IDENTIFY POSITIVE TEST

• Positive skin test: a wheal created by the allergen is at least 3mm larger than the reaction to the negative control

• Positive blood test: the levels of immunoglobulin IgE antibodies for a particular allergen or group of allergens are four times the normal level
Thank you