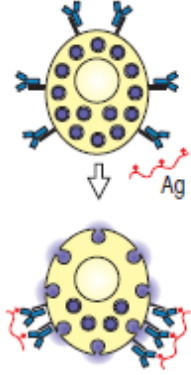
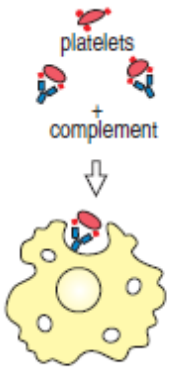
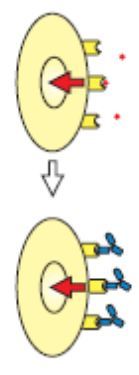
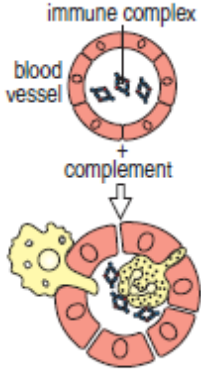
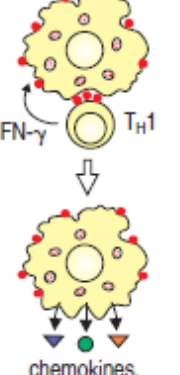
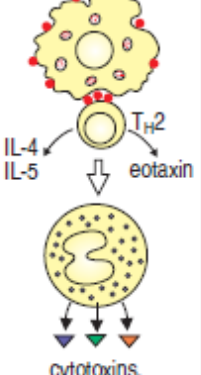
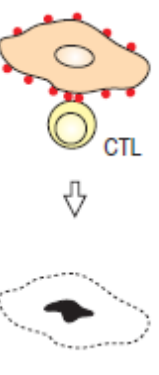


| | Type I | Type II | | Type III | Type IV | | |
|--------------------------------------|--|--|---|--|--|--|--|
| Immune reactant | IgE | IgG | | IgG | T _H 1 cells | T _H 2 cells | CTL |
| Antigen | Soluble antigen | Cell- or matrix-associated antigen | Cell-surface receptor | Soluble antigen | Soluble antigen | Soluble antigen | Cell-associated antigen |
| Effector mechanism | Mast-cell activation | Complement, FcR ⁺ cells (phagocytes, NK cells) | Antibody alters signaling | Complement, phagocytes | Macrophage activation | IgE production, eosinophil activation, mastocytosis | Cytotoxicity |
| |  |  |  |  |  |  |  |
| Example of hypersensitivity reaction | Allergic rhinitis, allergic asthma, atopic eczema, systemic anaphylaxis, some drug allergies | Some drug allergies (e.g. penicillin) | Chronic urticaria (antibody against FcεRI alpha chain) | Serum sickness, Arthus reaction | Allergic contact dermatitis, tuberculin reaction | Chronic asthma, chronic allergic rhinitis | Graft rejection, allergic contact dermatitis to poison ivy |