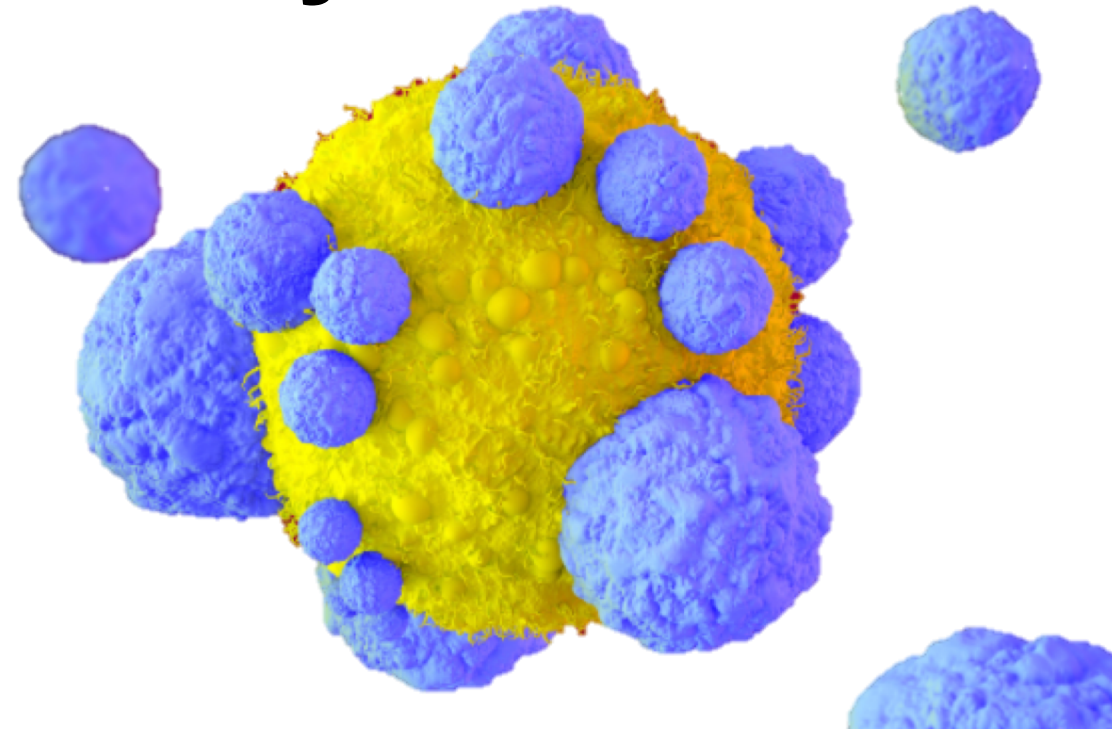




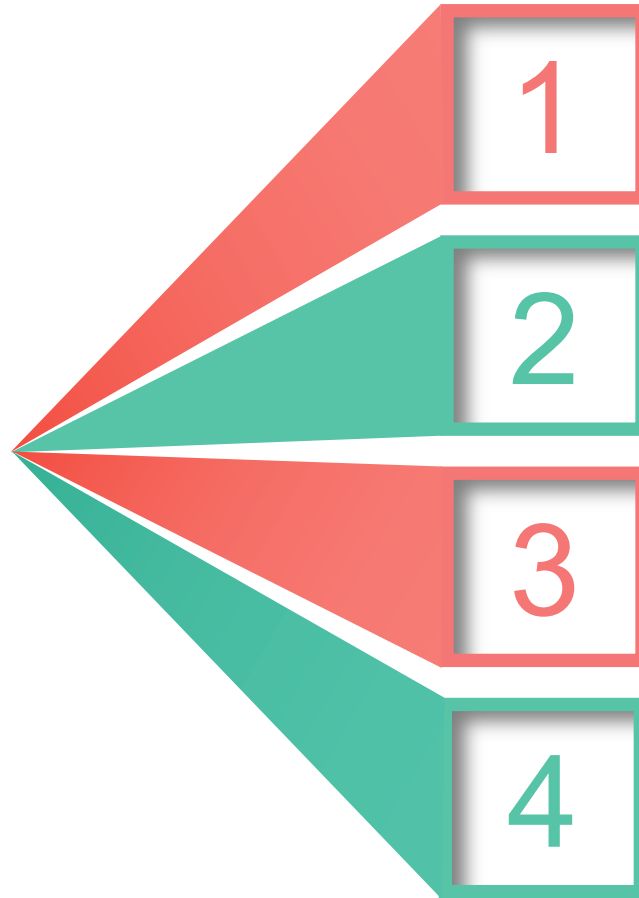
# Hypersensitivity

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# CONTENTS



**Introduction**

**Differentiate between immediate and delayed hypersensitive reaction**

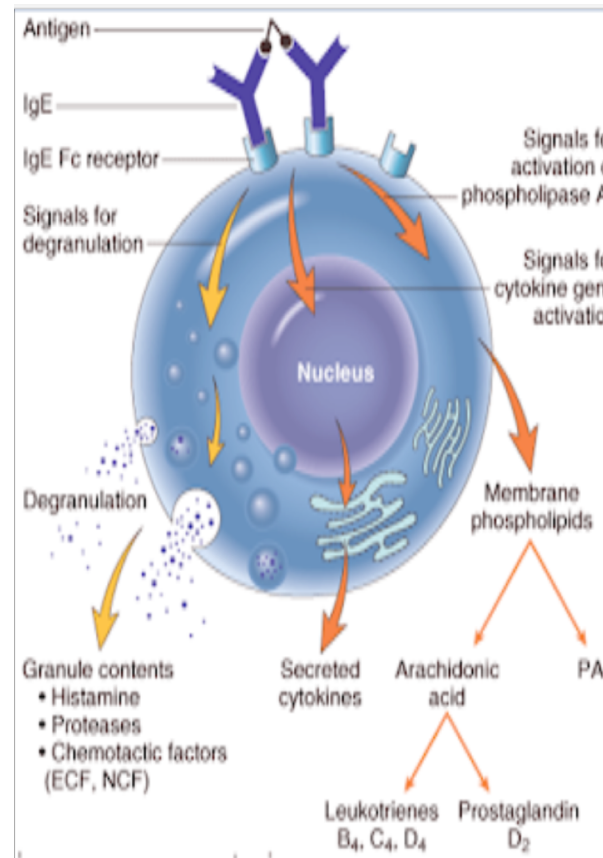
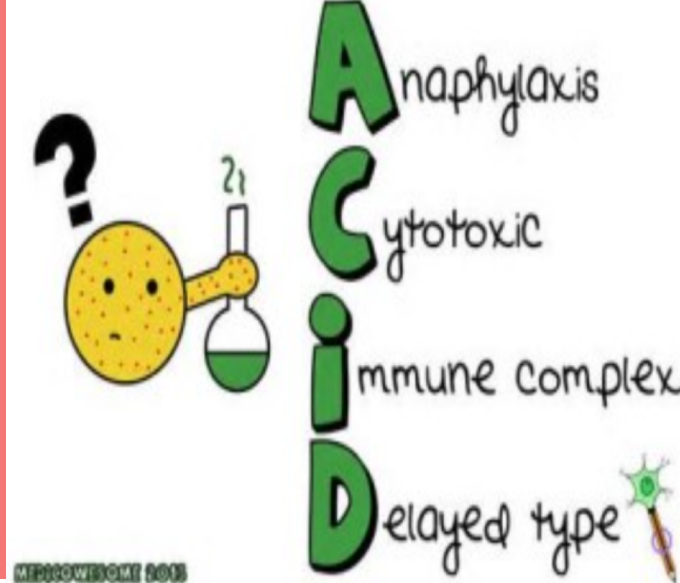
**Explain the different between types of hypersensitivity reaction**

**Summary**

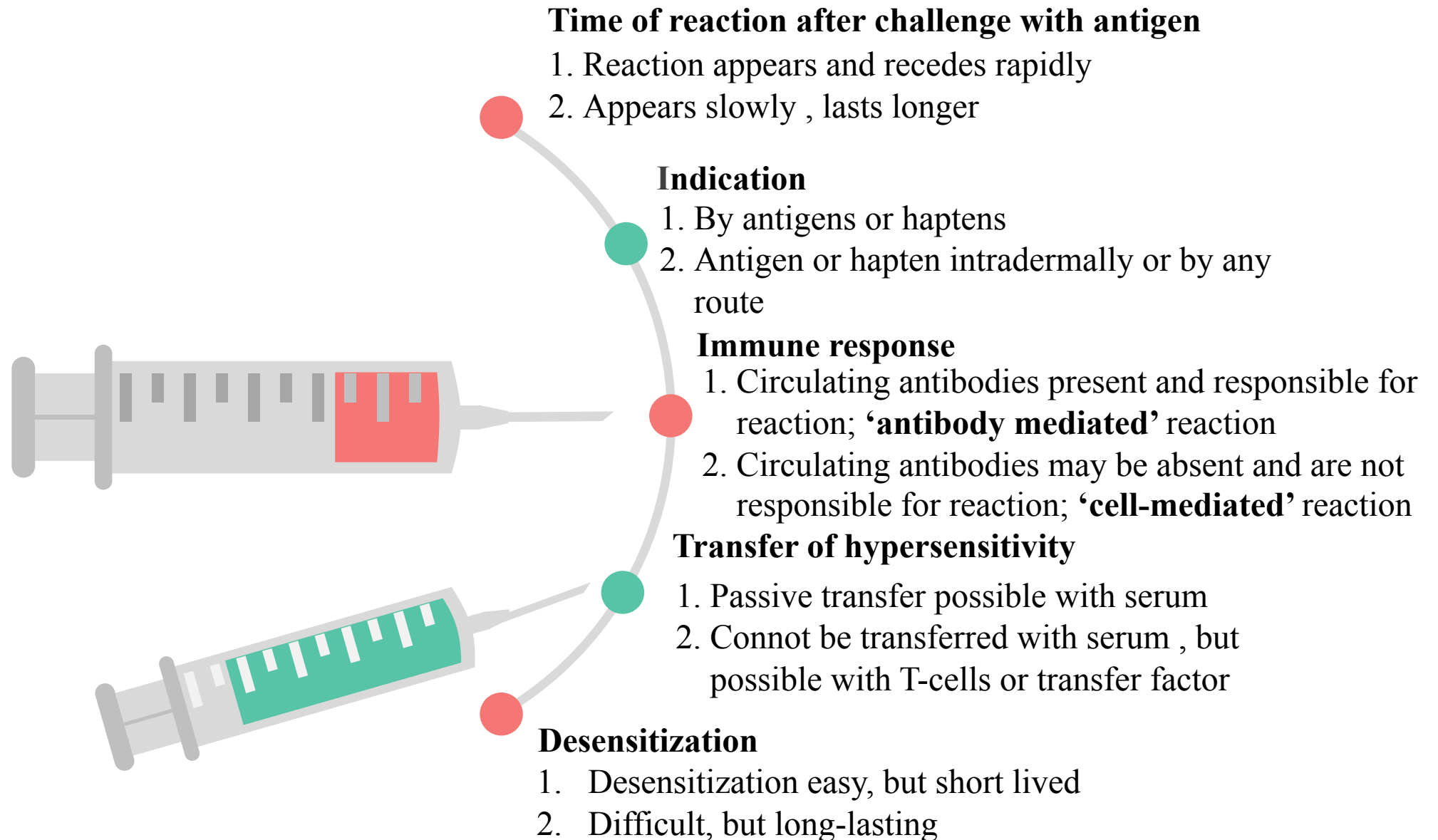
# Introduction

**hypersensitivity reaction** the exaggerated or inappropriate immune response occurring in HYPERSENSITIVITY, in response to a substance either foreign or perceived as foreign and resulting in local or general tissue damage.

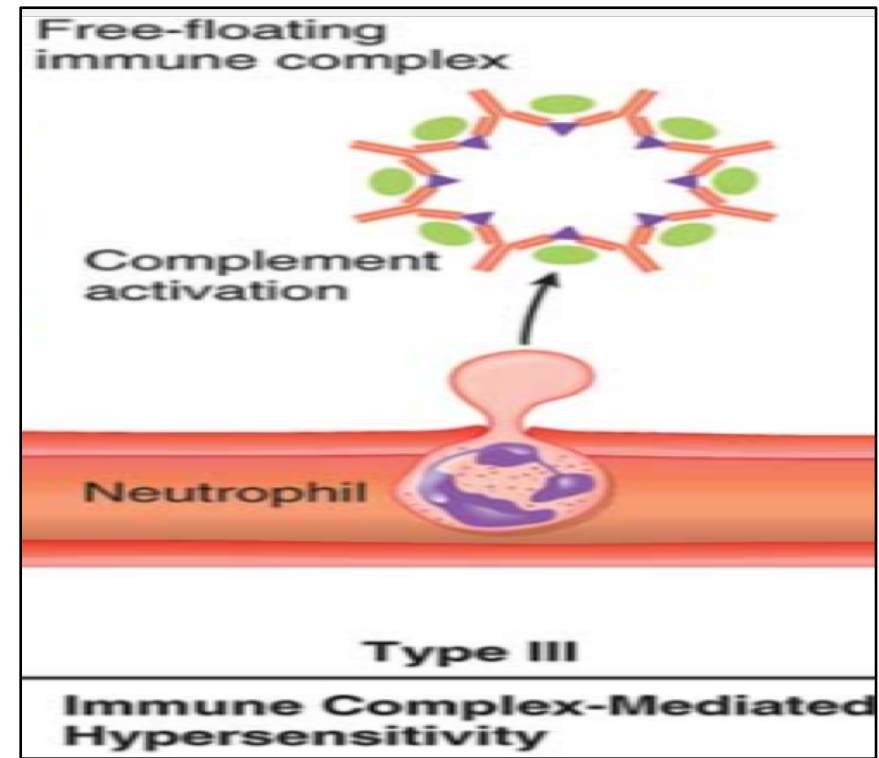
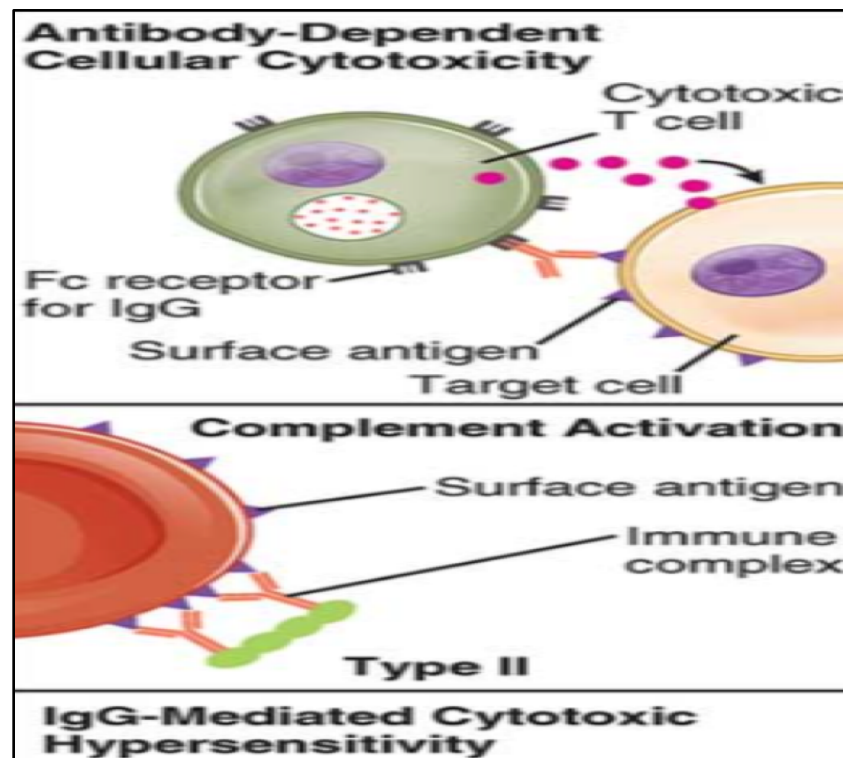
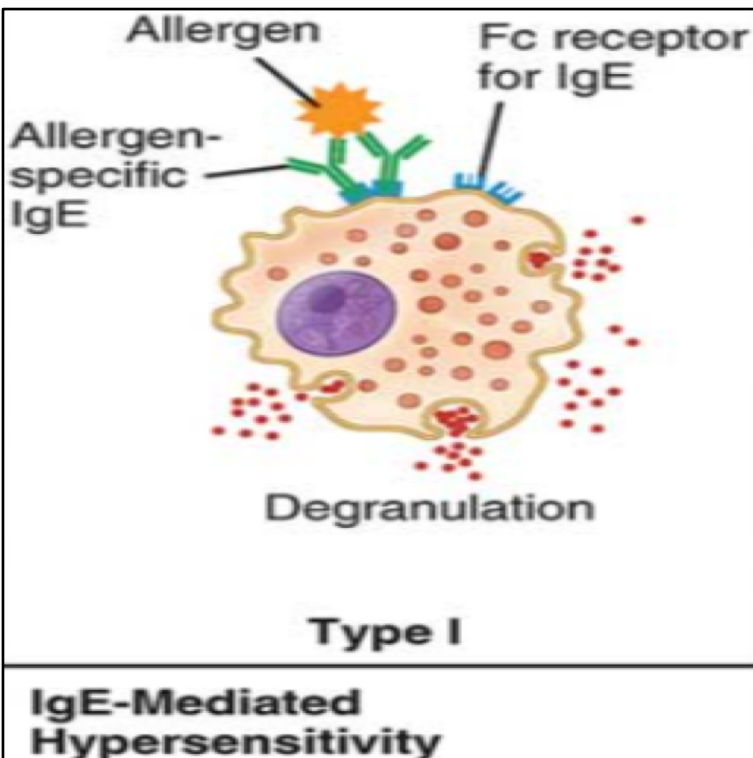
Such reactions are usually classified as type I–IV on the basis of the GELL AND COOMBS CLASSIFICATION



# DIFFERENTIATE BETWEEN IMMEDIATE AND DELAYED

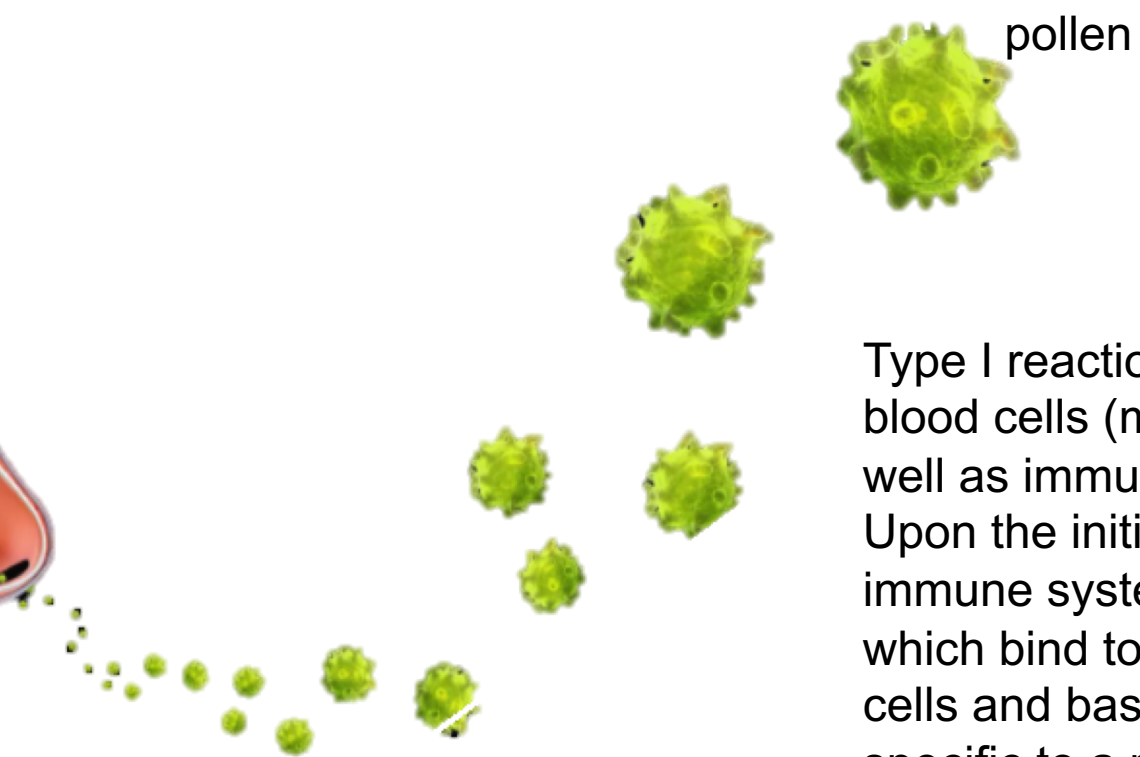
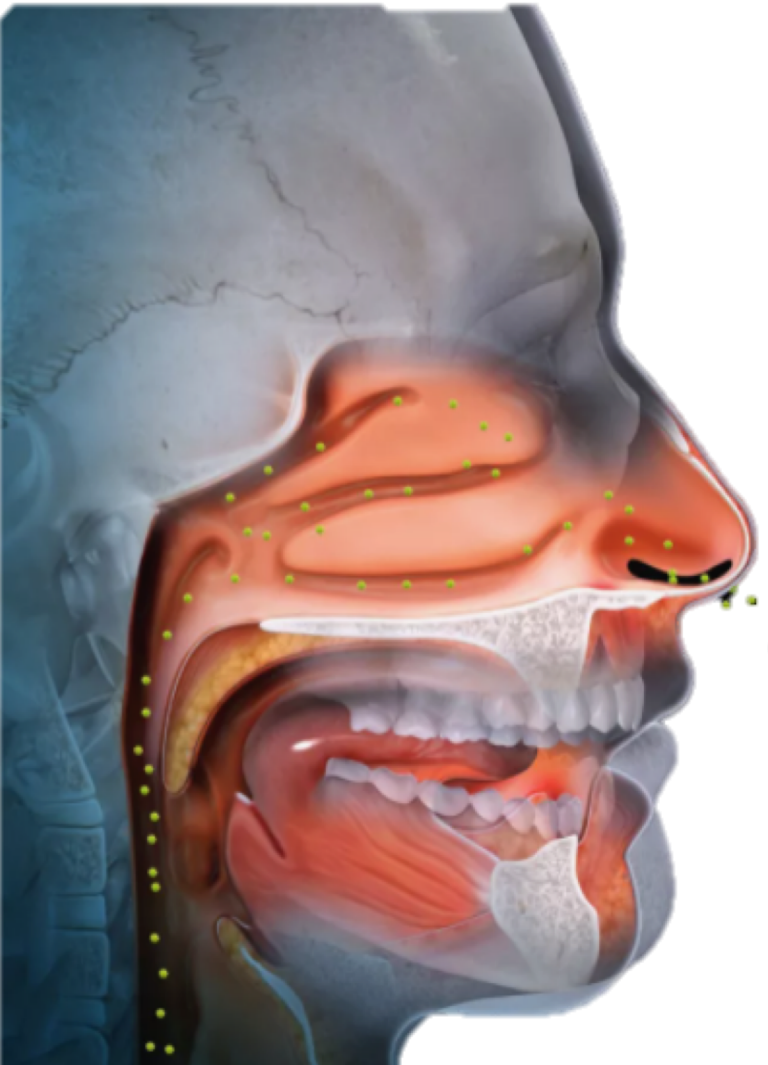






“ Immediate hypersensitivity ”

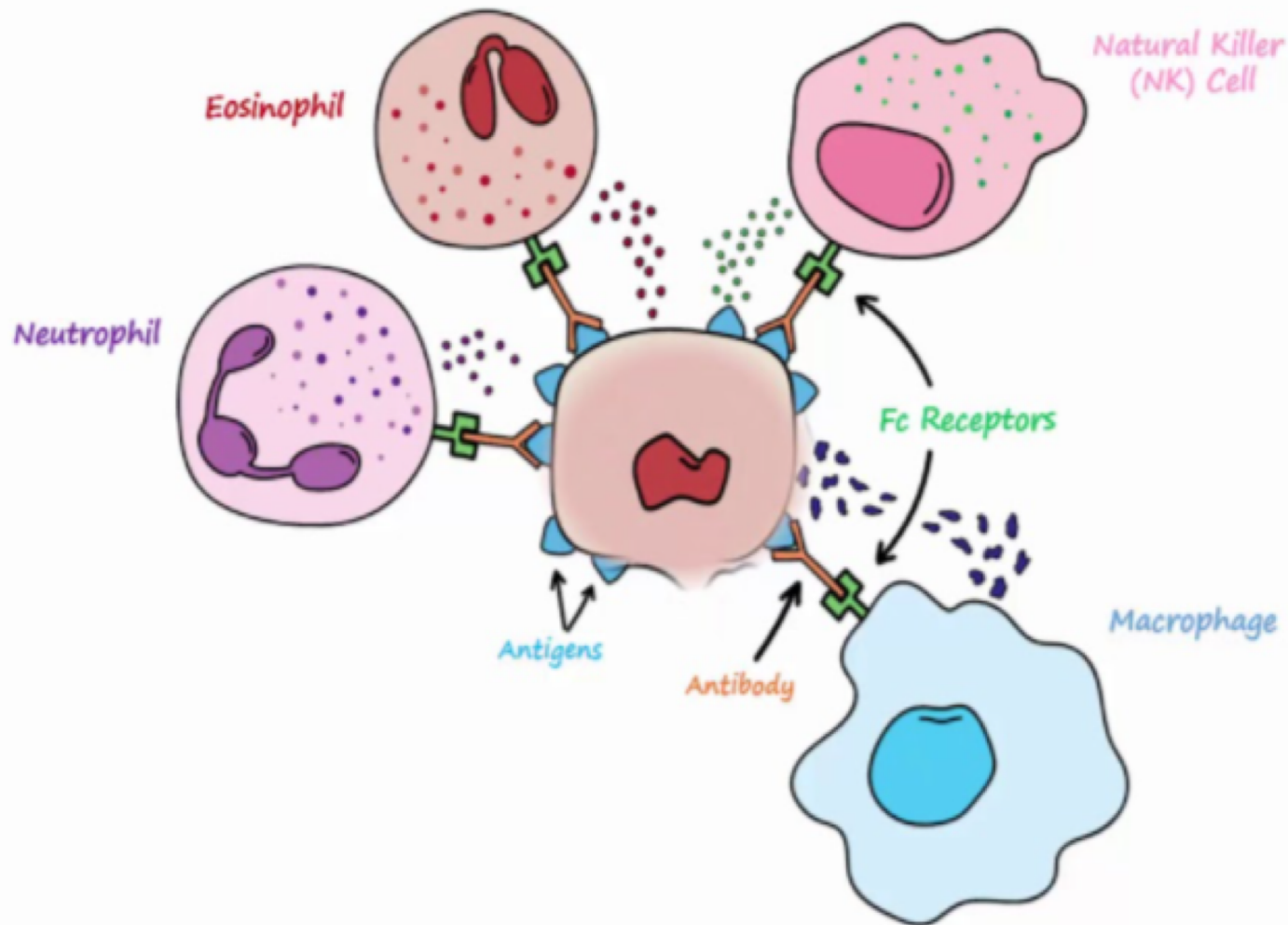
# Type I Hypersensitivity Reactions



pollen

Type I reactions involve two types of white blood cells (mast cells and basophils), as well as immunoglobulin E (IgE) antibodies. Upon the initial exposure to an allergen, the immune system produces IgE antibodies which bind to the cell membranes of mast cells and basophils. The antibodies are specific to a particular allergen and serve to detect the allergen upon subsequent exposure.

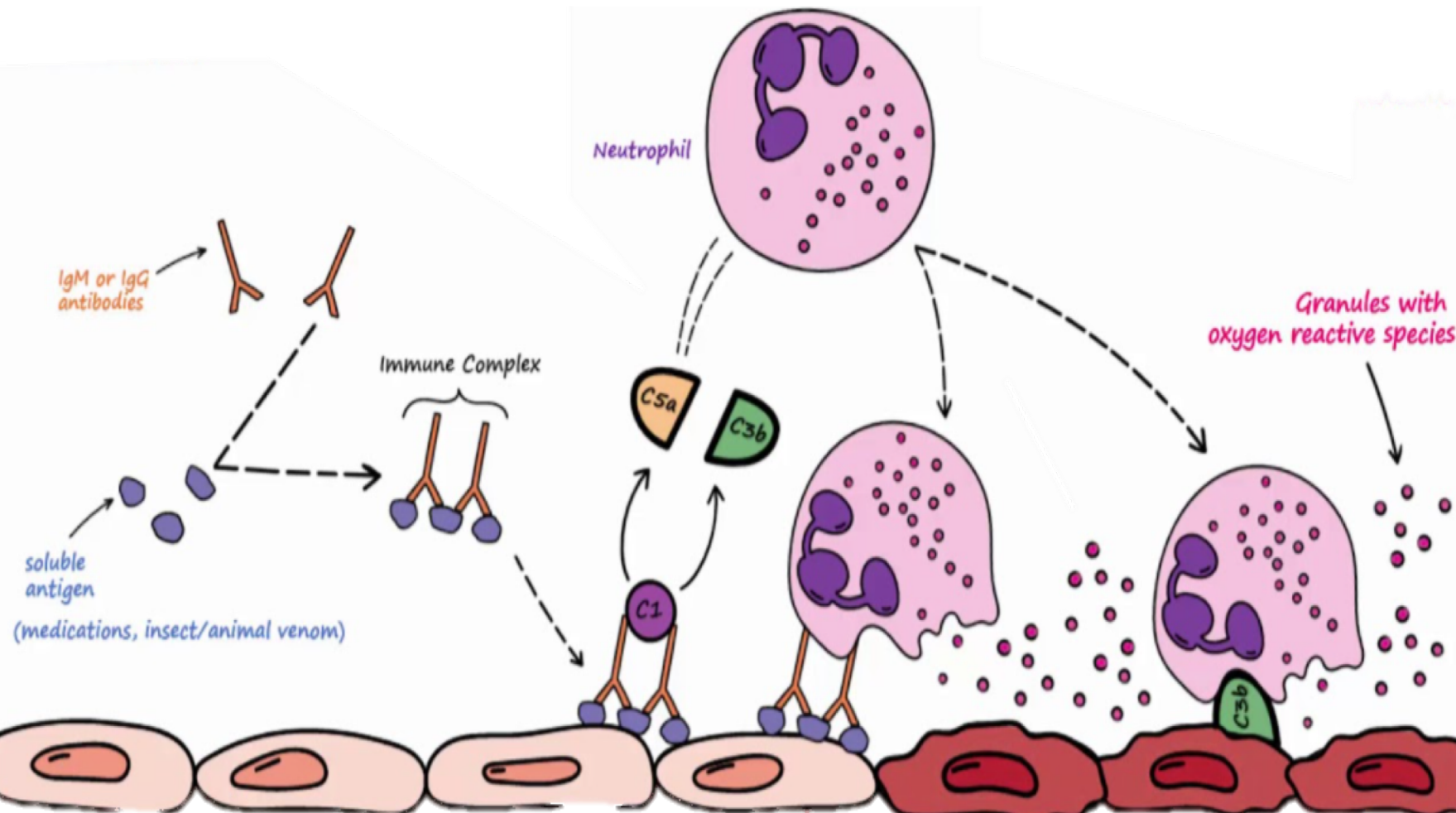
# Type II Hypersensitivity Reactions



Type II hypersensitivities, also called cytotoxic hypersensitivities, are the result of antibody (IgG and IgM) interactions with body cells and tissues that lead to cell destruction. Once bound to a cell, the antibody initiates a cascade of events, known as complement, that causes inflammation and cell lysis. **Two common type II hypersensitivities are hemolytic transfusion reactions and hemolytic disease of newborns.**

- Blood grouping
- RH+
- Cytolytic

# Type III hypersensitivities



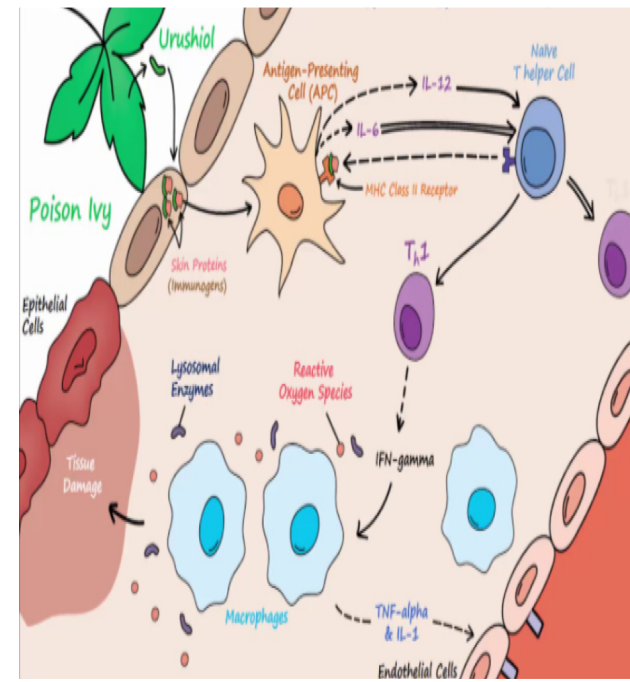
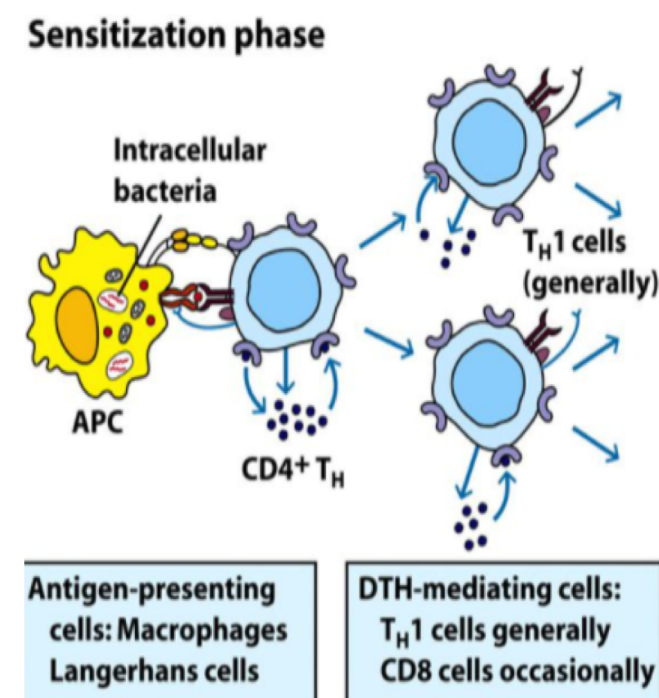
Type III hypersensitivities are caused by the formation of immune complexes in body tissues. Immune complexes are masses of antigens with antibodies bound to them. These antigen-antibody complexes contain greater antibody (IgG) concentrations than antigen concentrations. The small complexes can settle on tissue surfaces, where they trigger inflammatory responses. The location and size of these complexes make it difficult for phagocytic cells, like macrophages, to remove them by phagocytosis. Instead, the antigen-antibody complexes are exposed to enzymes that break down the complexes but also damage underlying tissue in the process.



# Delayed Hypersensitivity

## Type IV hypersensitivity

Type IV hypersensitivities do not involve antibody actions but rather T cell lymphocyte activity. These cells are involved in cell mediated immunity, a response to body cells that have become infected or carry foreign antigens. Type IV reactions are delayed reactions, as it takes some time for a response to occur. Exposure to a particular antigen on the skin or an inhaled antigen induces T cell responses that result in the production of memory T cells..



# summary

So in summary, hypersensitivity is classified into

- Immediate hypersensitivity
- delayed hypersensitivity

There are 4 types of hypersensitivity

- Type I
- Type II
- Type III
- Type IV

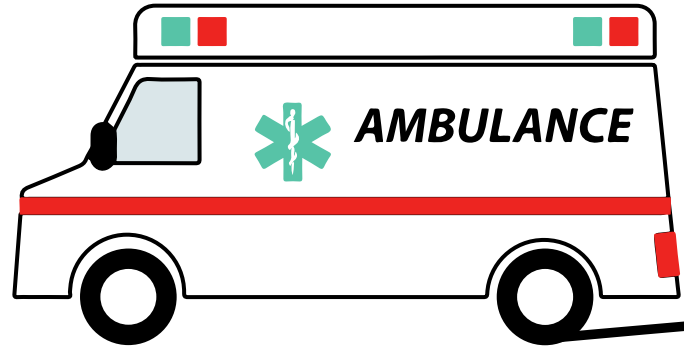
# Reference

[File:2228 Immune Hypersensitivity new.jpg - Wikimedia Commons](#)

[Hypersensitivity | definition of hypersensitivity by Medical dictionary \(thefreedictionary.com\)](#)

[4 Types of Hypersensitivity Reactions \(thoughtco.com\)](#)





Thank You