



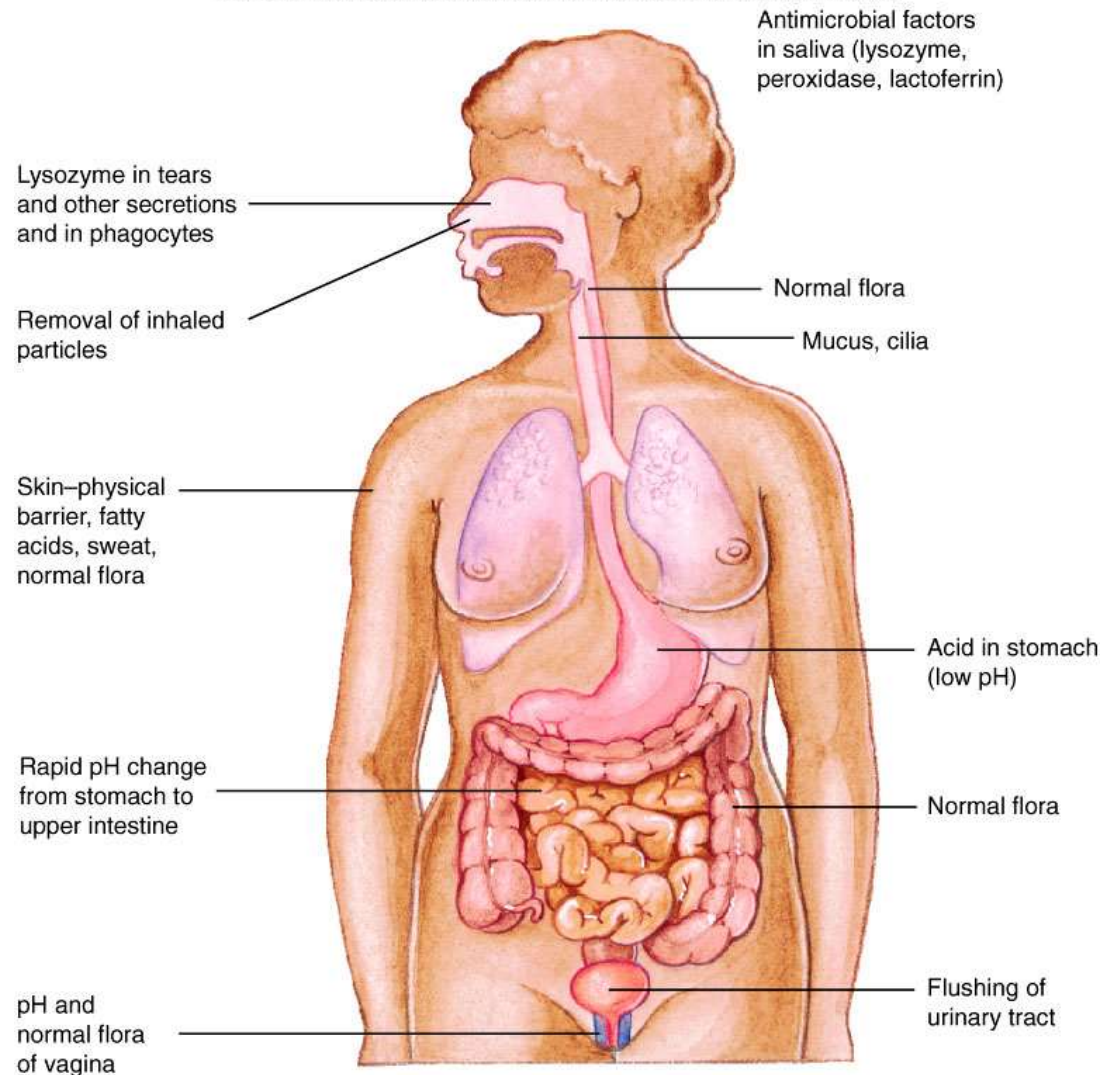
Imunski odziv na okužbe

Imunizacija

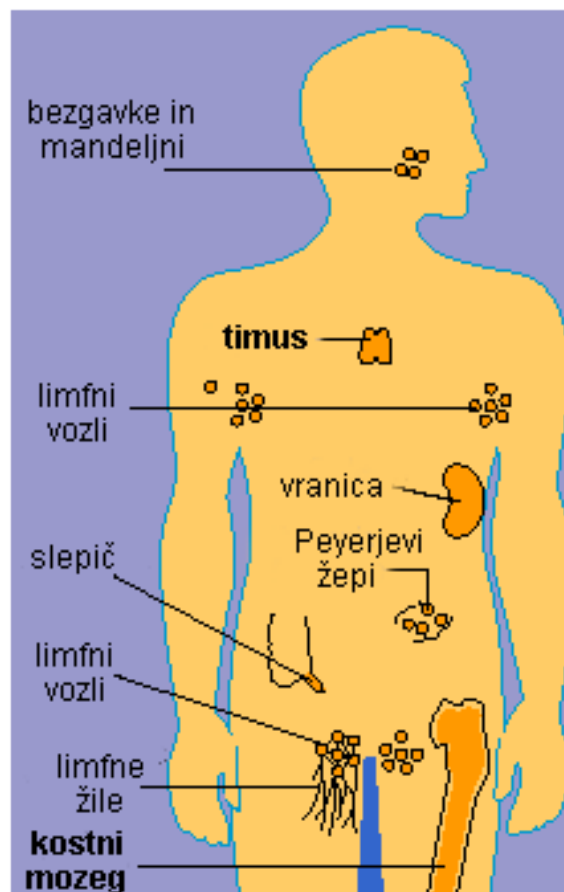
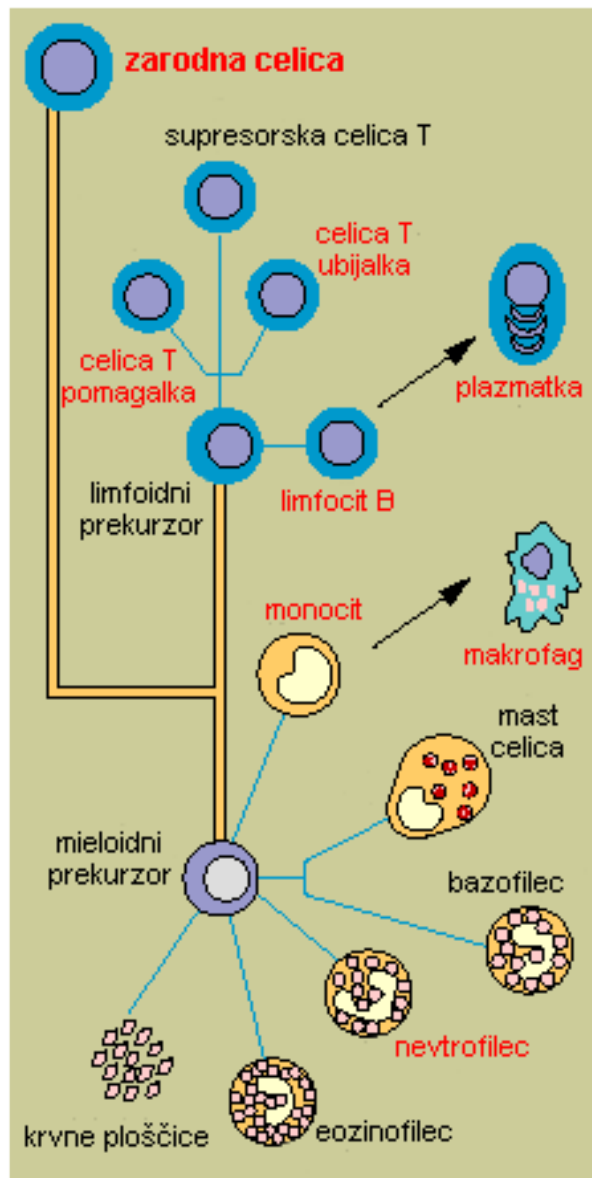
Prve bariere

Copyright © The McGraw-Hill Companies, Inc. Permission required for reproduction or display.

- Koža
- Sluznice
- Želodčna kislina
- Žolčne soli

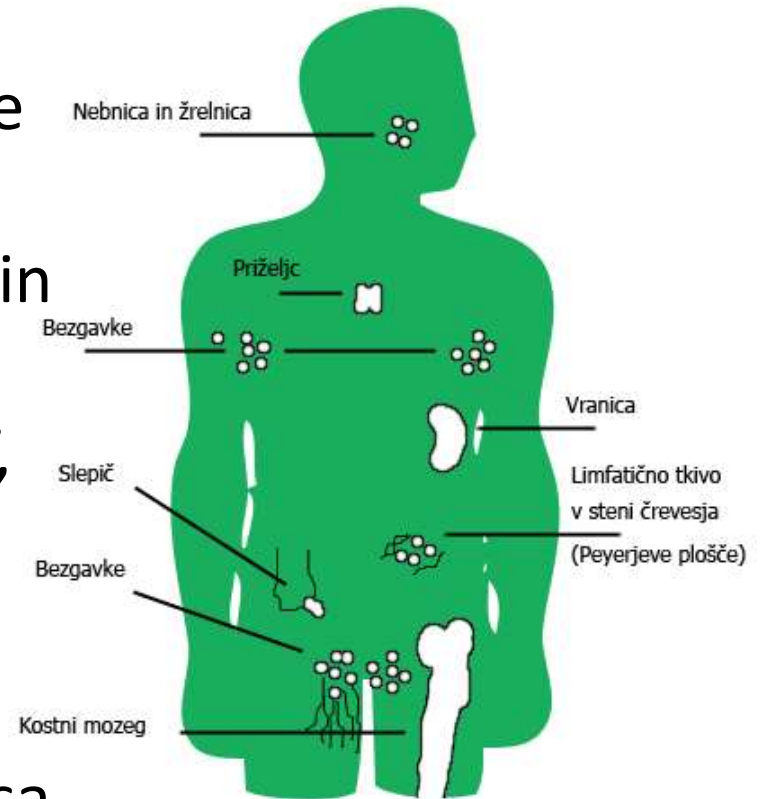


Imunski sistem in imunske celice



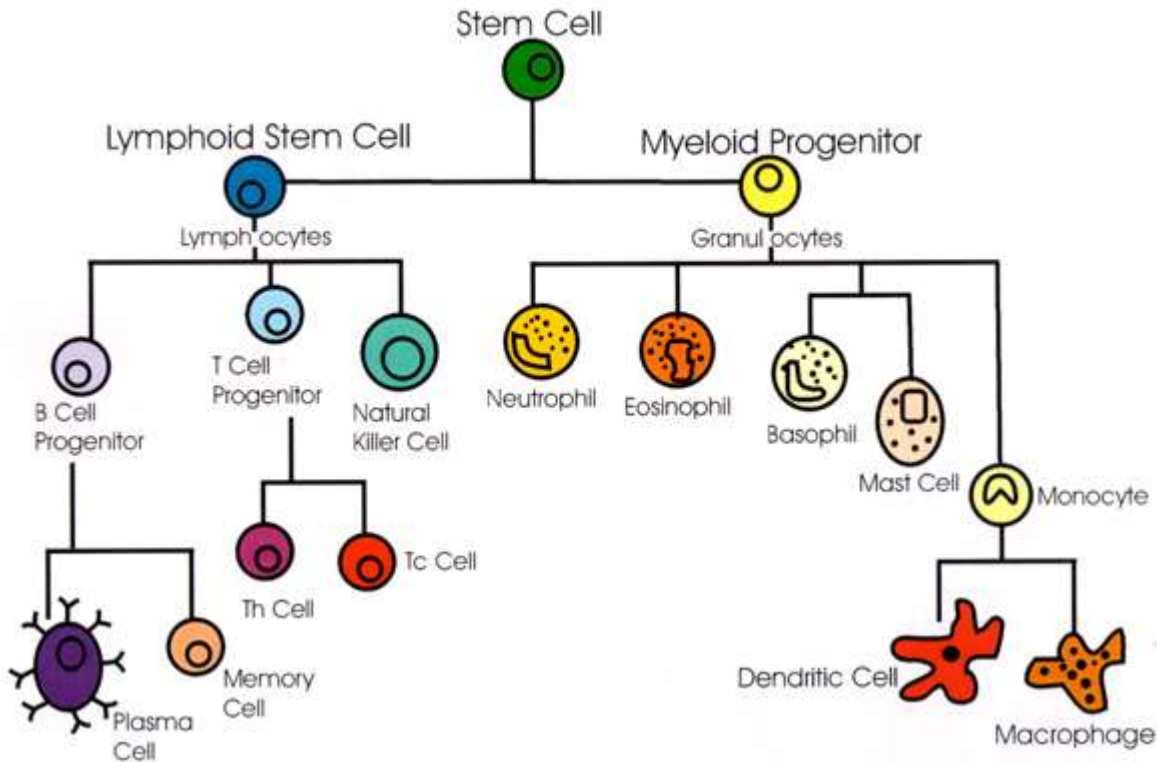
Organi imunskega sistema

- **Kostni mozeg:** matične celice iz katerih nastanejo imunske celice
- **Timus (priželjc):** dozorevanje limfocitov T v celice pomagalka in citotoksične
- **Bezgavke:** makrofagi, limfociti T, limfociti B
- **Vranica:** makrofagi, limfociti T, limfociti B
- **Sluznice:** limfociti, IgA protitelesa



Imunske celice

Cells of the Immune System



Fagociti: tujke požrejo in razgradijo

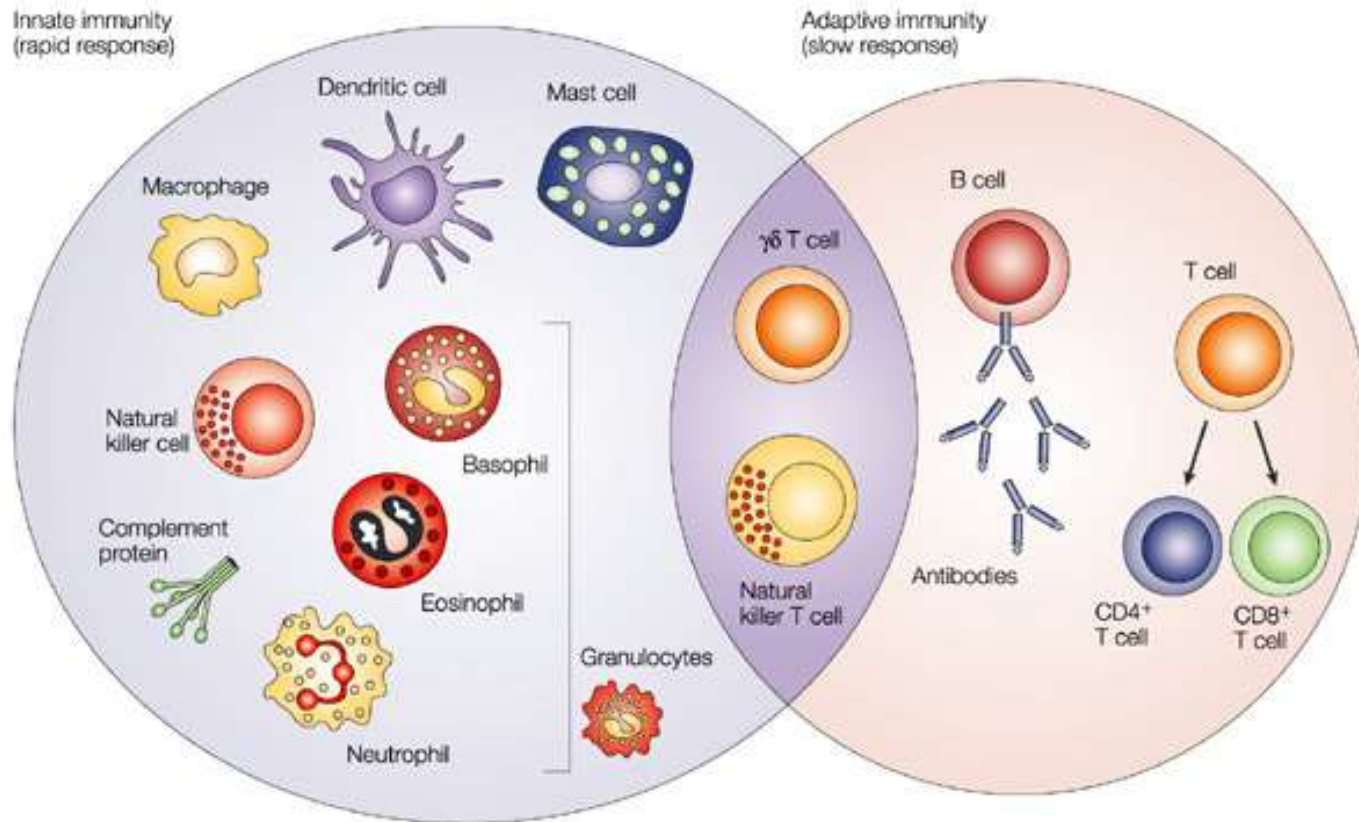
Nevtrofilci: požrejo tujke

Monociti in makrofagi: požrejo tujke in predstavijo Ag, apoptoza

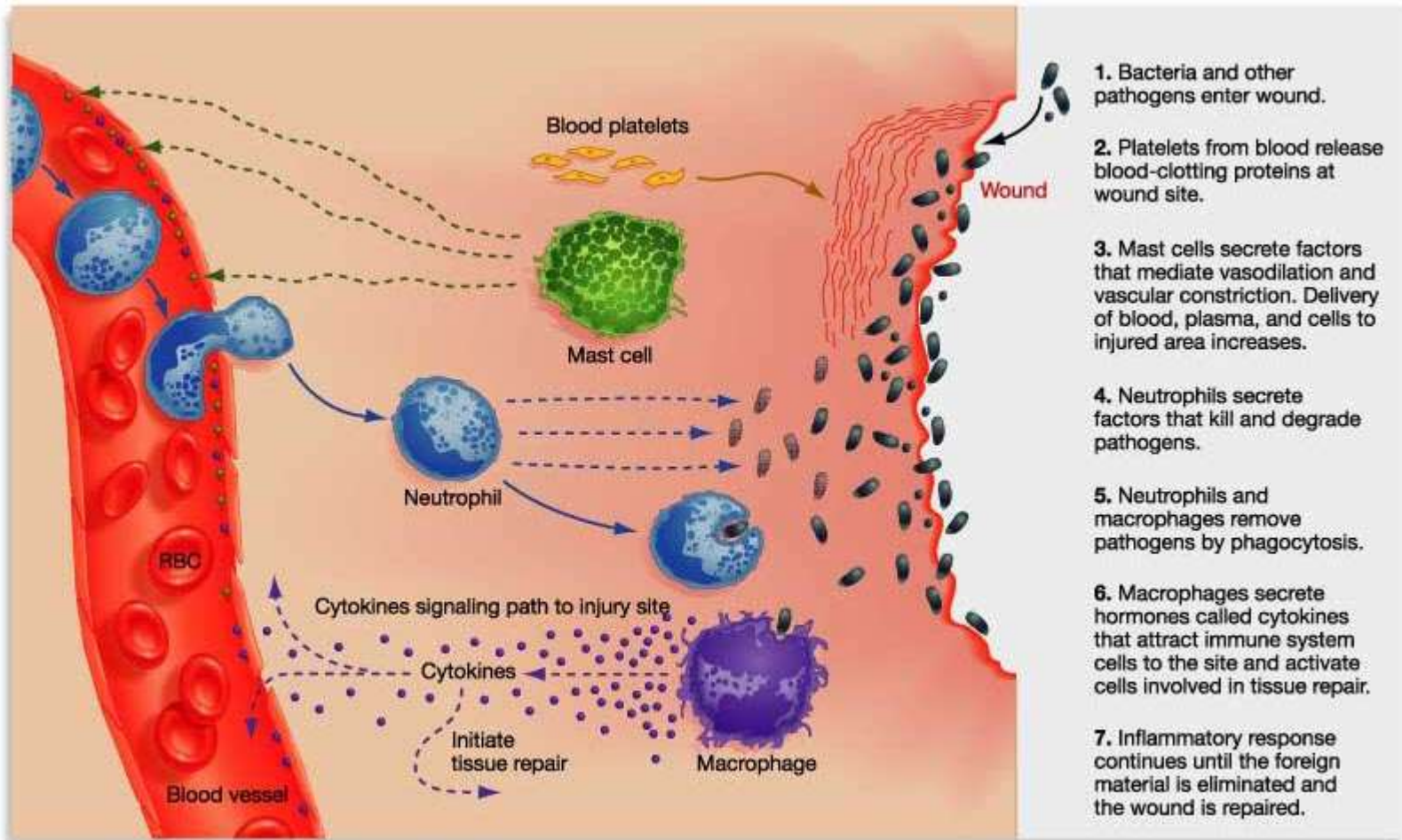
Bazofilci: IgE, aktivacija – preobčutljivost

Eozinofilci: eozinofilna zrna za uničevanje parazitov

Prirojena in pridobljena imunost

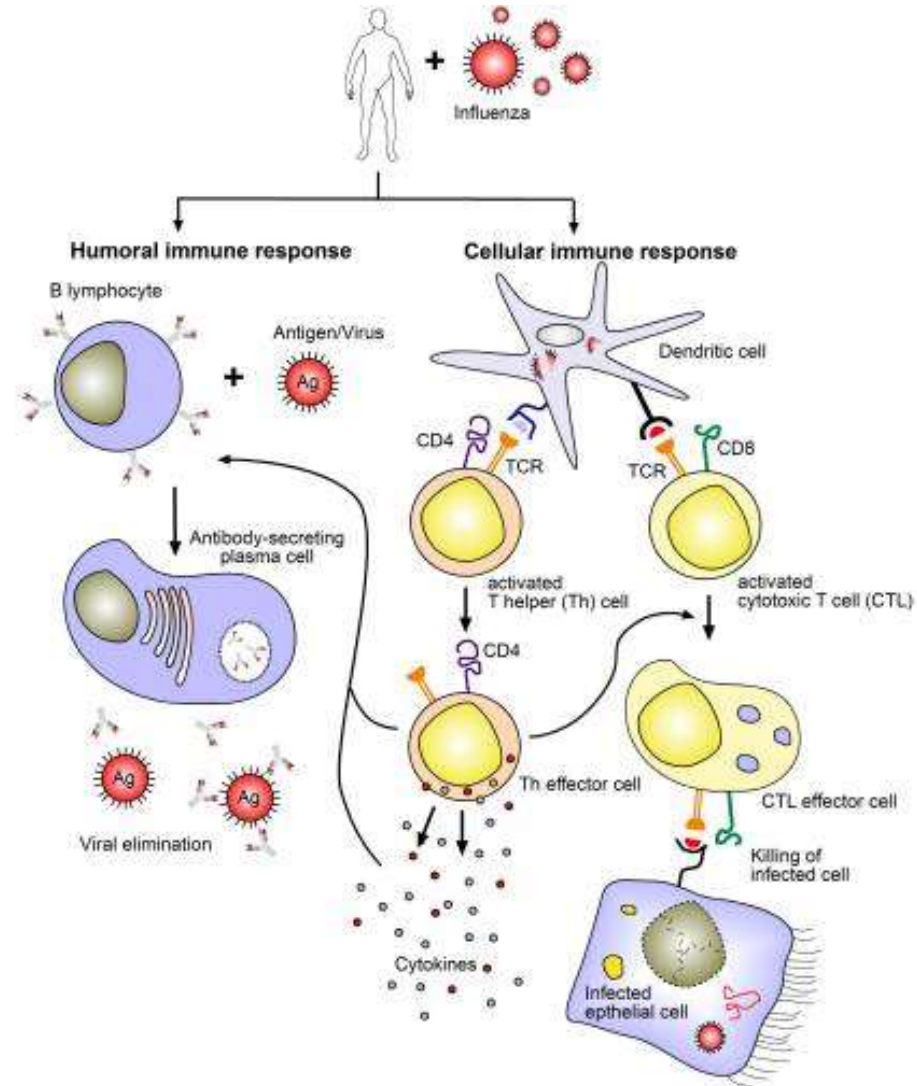


Vnetje



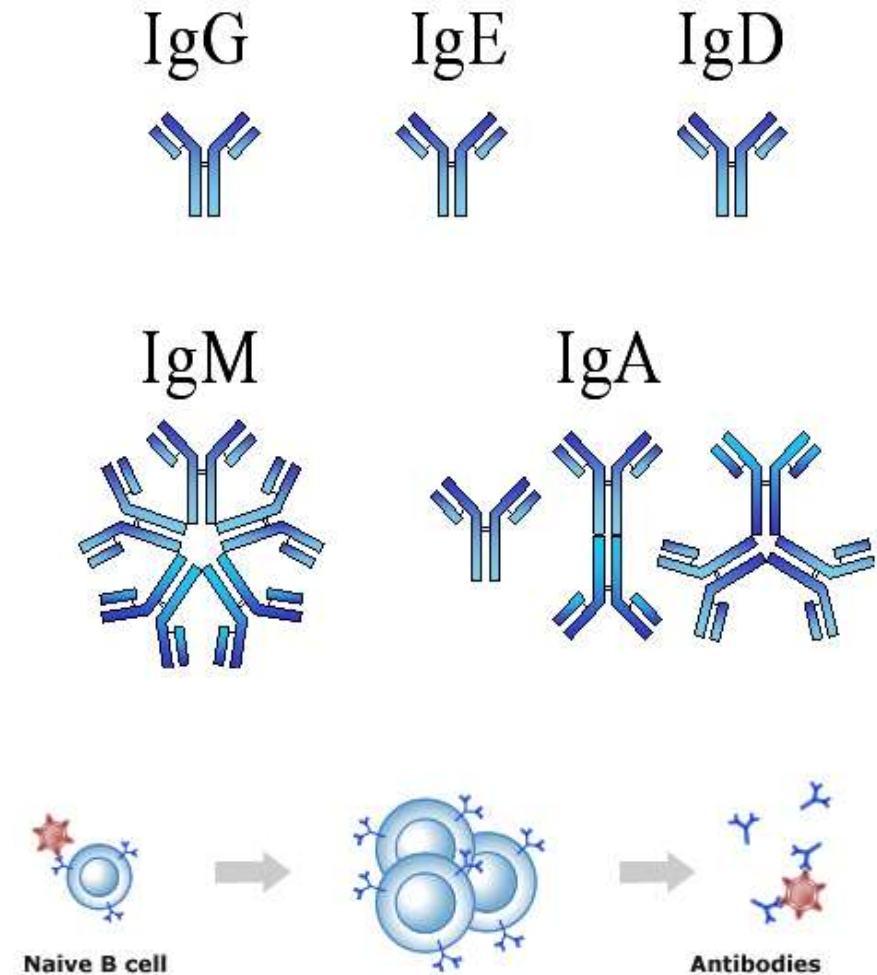
Pridobljen imunski odziv

- **Limfociti B:** plazmatke in spominski limfociti B
- **Limfociti T:** celice pomagalke in citotoksične
- **Celice NK:** prepoznajo tuje in okužene celice in jih uničijo

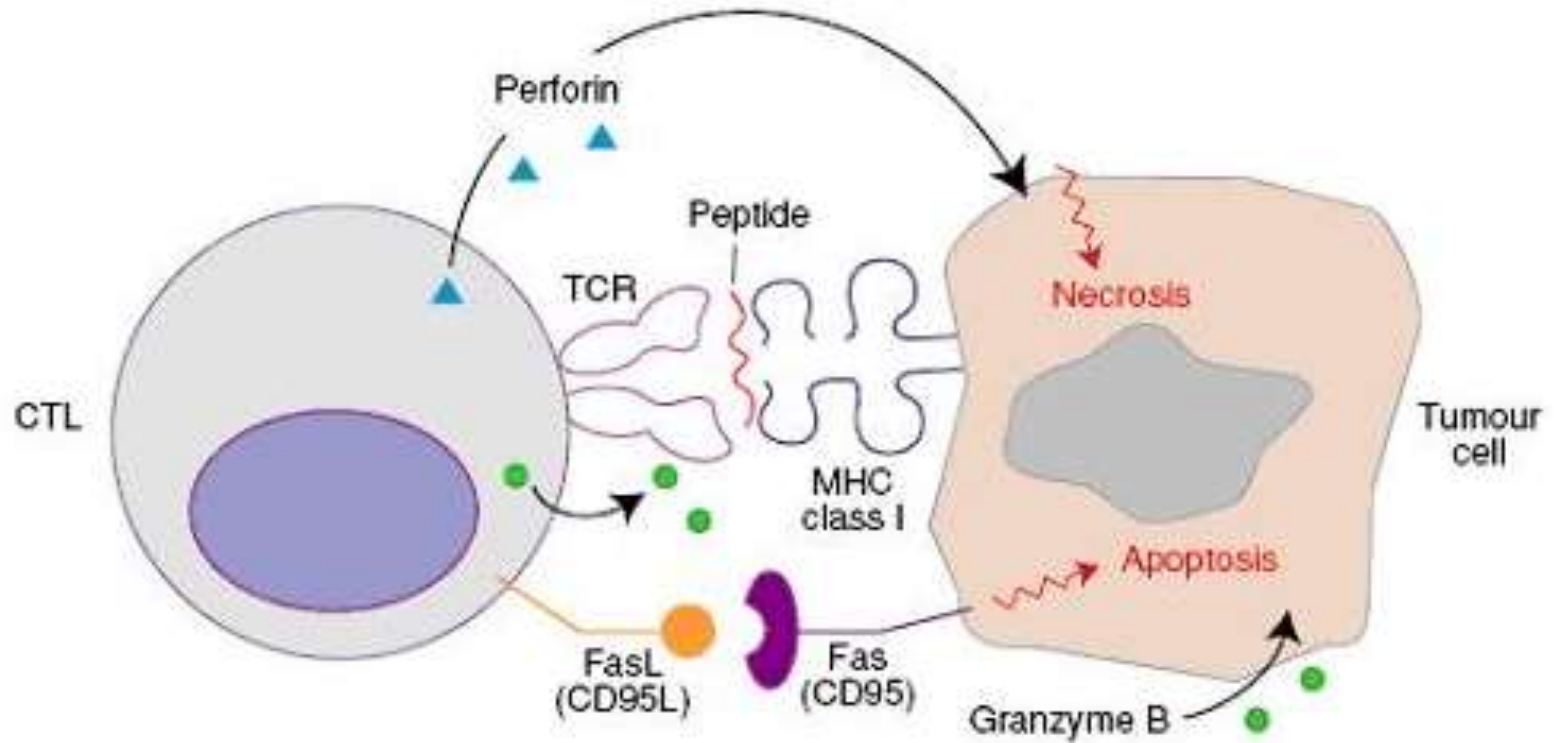


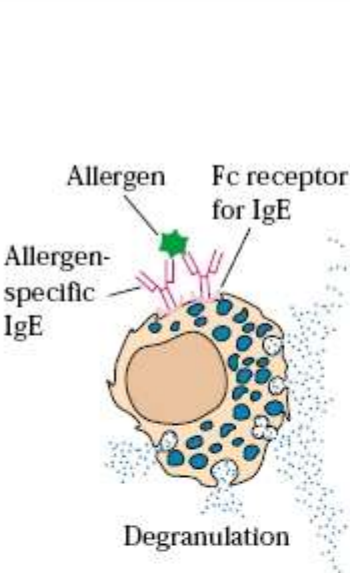
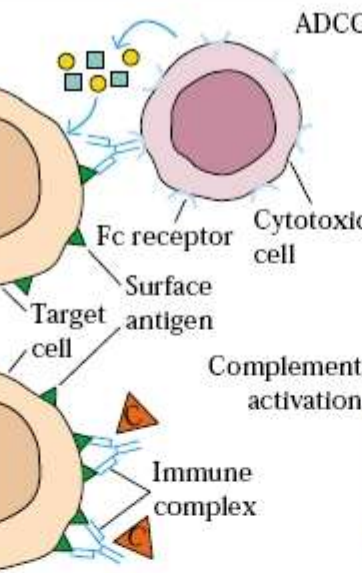
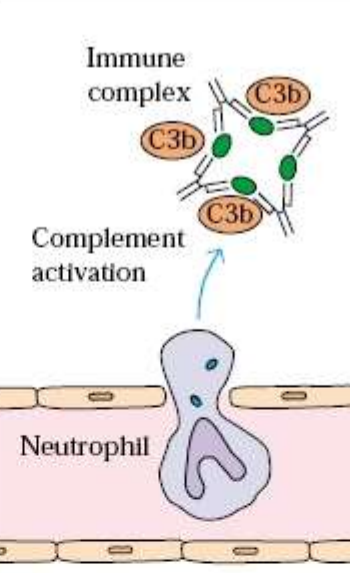
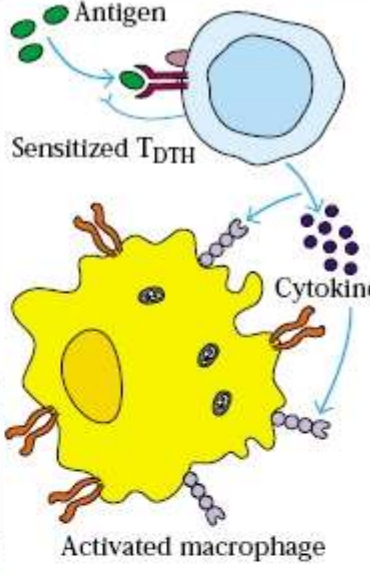
Limfociti B: Imunoglobulini

- IgG: 70% vseh, prehaja placento
- IgM; prva nastanejo, ne prehaja placento
- IgA: na sluznici in oteži vstop mikrobom
- IgE: sluznica črevesa in dihal, alergije in odziv na parazite
- IgD: diferenciacija limfocitov B



Limfociti T



 <p>Type I</p>	 <p>Type II</p>	 <p>Type III</p>	 <p>Type IV</p>
<p>IgE-Mediated Hypersensitivity</p>	<p>IgG-Mediated Cytotoxic Hypersensitivity</p>	<p>Immune Complex-Mediated Hypersensitivity</p>	<p>Cell-Mediated Hypersensitivity</p>
<p>Ag induces crosslinking of IgE bound to mast cells and basophils with release of vasoactive mediators</p>	<p>Ab directed against cell surface antigens mediates cell destruction via complement activation or ADCC</p>	<p>Ag-Ab complexes deposited in various tissues induce complement activation and an ensuing inflammatory response mediated by massive infiltration of neutrophils</p>	<p>Sensitized T_H1 cells release cytokines that activate macrophages or T_C cells which mediate direct cellular damage</p>
<p>Typical manifestations include systemic anaphylaxis and localized anaphylaxis such as hay fever, asthma, hives, food allergies, and eczema</p>	<p>Typical manifestations include blood transfusion reactions, erythroblastosis fetalis, and autoimmune hemolytic anemia</p>	<p>Typical manifestations include localized Arthus reaction and generalized reactions such as serum sickness, necrotizing vasculitis, glomerulonephritis, rheumatoid arthritis, and systemic lupus erythematosus</p>	<p>Typical manifestations include contact dermatitis, tubercular lesions and graft rejection</p>