

Immunity: Fight infection through the production of cells that inactivate foreign substances or cells.

Summary of 3 Lines of Defense for Protection

Innate/Nonspecific

1 & 2nd LINE OF

1ST LINE OF DEFENSE:

- **OUTSIDE**

(PREVENT FROM GETTING IN)

2nd LINE OF DEFENSE:

- **INSIDE**

(PREVENT FROM GETTING FURTHER)

Innate defenses
= Born with it

Surface barriers

- Skin
- Mucous membranes

Internal defenses

- Phagocytes
- Fever
- NK cells
- Antimicrobial proteins
- Inflammation

(a)

Adaptive/Specific

3rd LINE OF DEFENSE

3rd LINE OF DEFENSE:

- **CELLULAR**

- NEED TO KNOW WHO YOU ARE
- LAUNCH SPECIFIC ATTACK

Adaptive defenses

Requires contact w/the antigen

Humoral immunity

- B cells

Cellular immunity

- T cells

Study Guide: Hummoral/Cell Mediated

B Cells

AKA Humoral Response

Made in Bone marrow

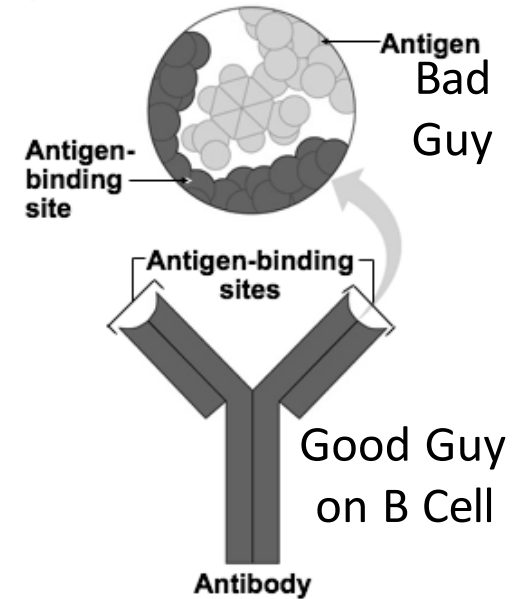
Produce Antibody
(Flag that something is bad)

Types of B Cells

Plasma Cells: Make antibodies

Memory Cells Stick around so next time they can respond faster

Figure 24.7a

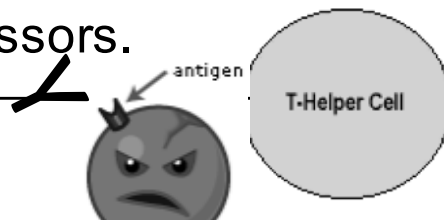


T-CELLS: AKA Cell Mediated Response

Helper-T's:

Whistle Blowers

Release chemicals (interleukin-2) to killers & Suppressors.



Killer-T's:

Stabbie Pete

Destroy infected cells by puncturing



Suppressor T's:

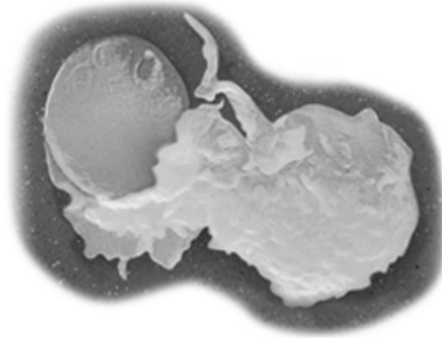
Clean Up Guys

Divide slowly; shut off Killers & P-Cells.

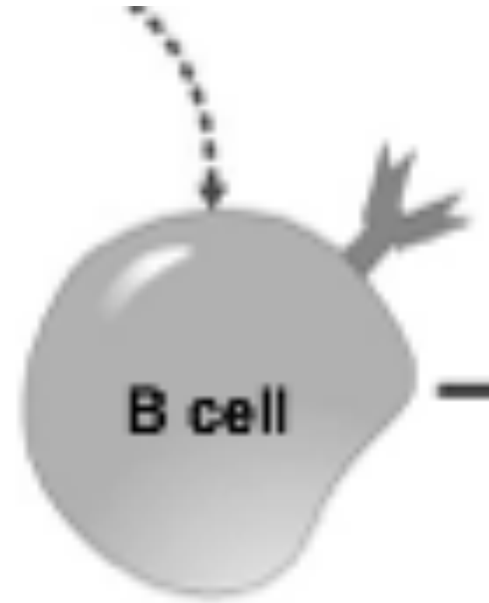


Study Guide: Immune Cells

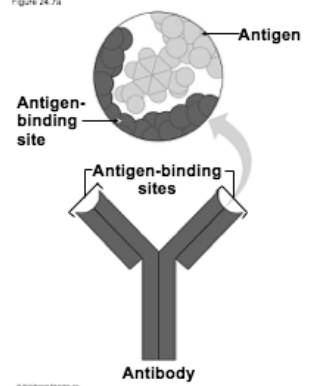
Bad Cell
AKA Pathogen



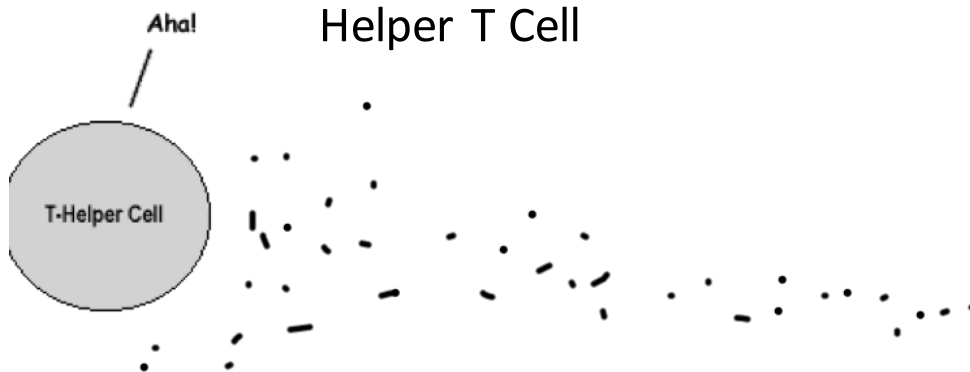
Phagocytic cell (yellow)
engulfing a foreign cell



Antibody
Made By B-Cell



3 Type of T Cells



Helper T Cell

Killer T Cell



Suppressor T Cell

