INNATE IMMUNE DEFENSES

Innate Immunity: These are ways that our bodies react to anything foreign that invades. We are born with these abilities fully functional. Macrophages and dendritic cells are key leukocytes in alerting lymphocytes of danger and thus allowing for adaptive immunity to commence.

Adaptive Immunity: These are ways that our bodies learn to recognize and remember a pathogen from the past, and mount an assault so that we (ideally) never become ill again from that pathogen. T and B lymphocytes are the critical leukocytes involved in this process.

Innate Immunity: the following defend against all manner of invaders.

1. **Physical Barriers**
    - unbroken skin
    - hair
    - mucus
2. **Chemical Barriers**
    - salty sweat—most bacteria grow poorly in salt, but *Staphylococcus* tolerates it well
    - lysozyme—found in sweat, tears, saliva, and other bodily secretions. Breaks connections between sugar links.
    - HCl of the stomach destroys most bacteria.
    - complement: a group of ~30 different chemicals that circulate in the blood. Once one encounters an invader, they all activate to form a large structure that can punch holes (cytolysis) in the pathogen's cell wall.