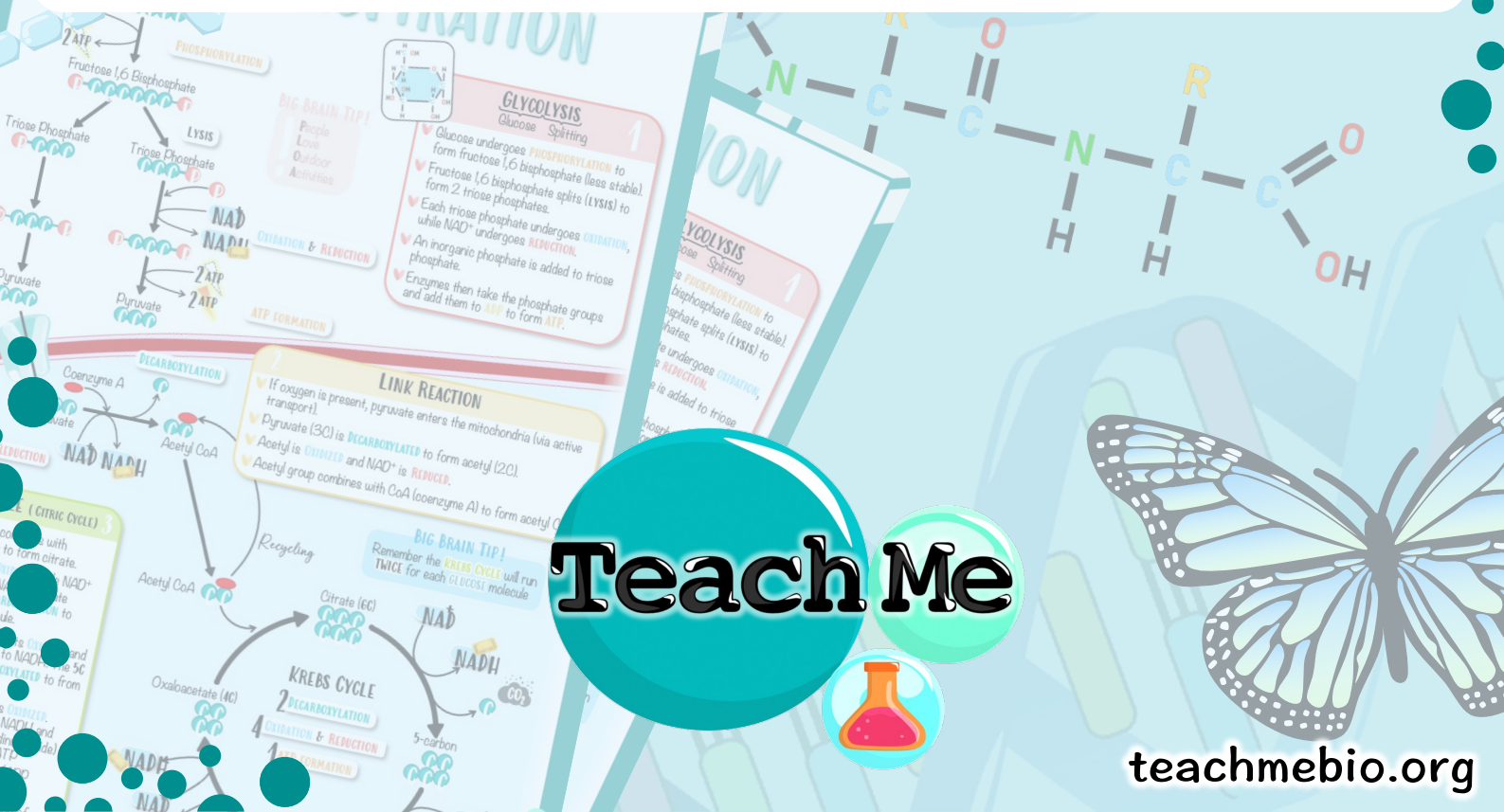


TeachMe

STUDY NOTES

CHAPTER 11 – IMMUNITY

THE IMMUNE SYSTEM



THE IMMUNE SYSTEM

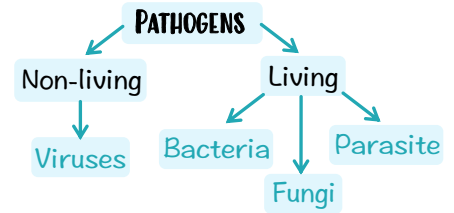


THE IMMUNE SYSTEM

IMMUNE SYSTEM – Network of organs that protect your body from **infections**.

PATHOGENS are disease-causing organisms. They include viruses, parasites, bacteria, fungi...

Our bodies have various “barriers” in place to prevent such pathogens from infecting us including first, second and third line of defense (see below).

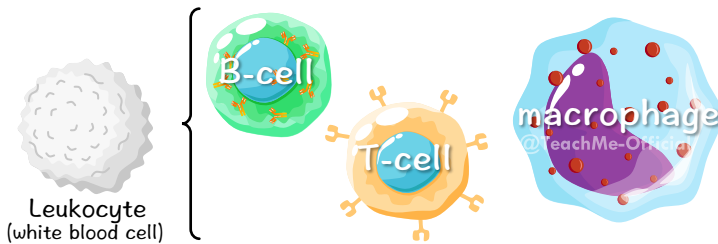


The best way to prevent an infection would theoretically be **QUARANTINE**, however, that is no way of living – therefore our body has its own way of dealing with infectious pathogens.

INNATE IMMUNITY (NON-SPECIFIC)

ADAPTIVE IMMUNITY (SPECIFIC)

I, FIRST LINE OF DEFENSE	II, SECOND LINE OF DEFENSE	III, THIRD LINE OF DEFENSE
Skin Mucous membranes	Blood clotting Phagocytes (macrophages)	Lymphocytes (T-cells & B-cells) Antibodies Memory B-cells

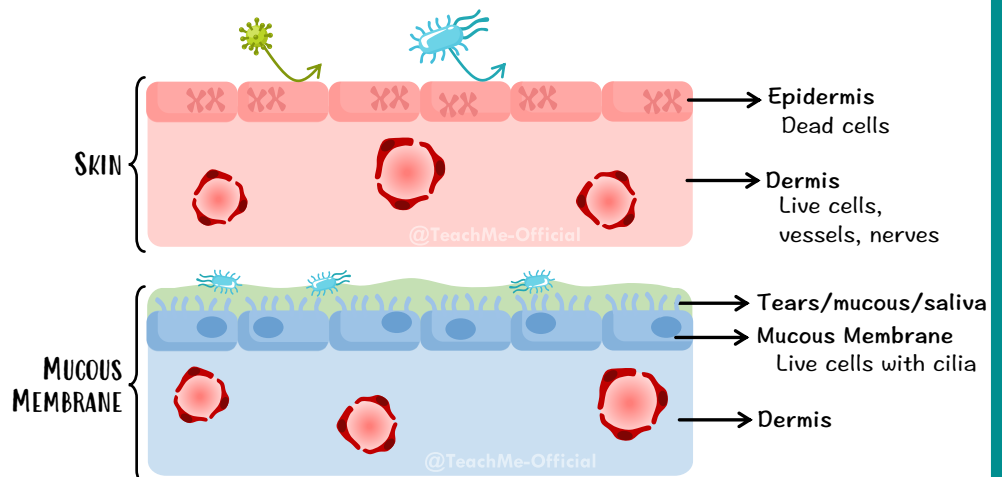


LEUKOCYTES (white blood cells) are important cells which play a role in our immune system. It is important to notice that leukocytes are just a **GENERAL NAME** for many different types of cells. Some of which you learn about in this chapter such as **B-CELLS, T-CELLS AND MACROPHAGES**.

FIRST LINE OF DEFENSE

The **SKIN** and **MUCOUS MEMBRANE** are the first line of defense. The **SKIN**, with its thick layer of dead epithelial cells, forms a physical barrier against pathogenic invaders.

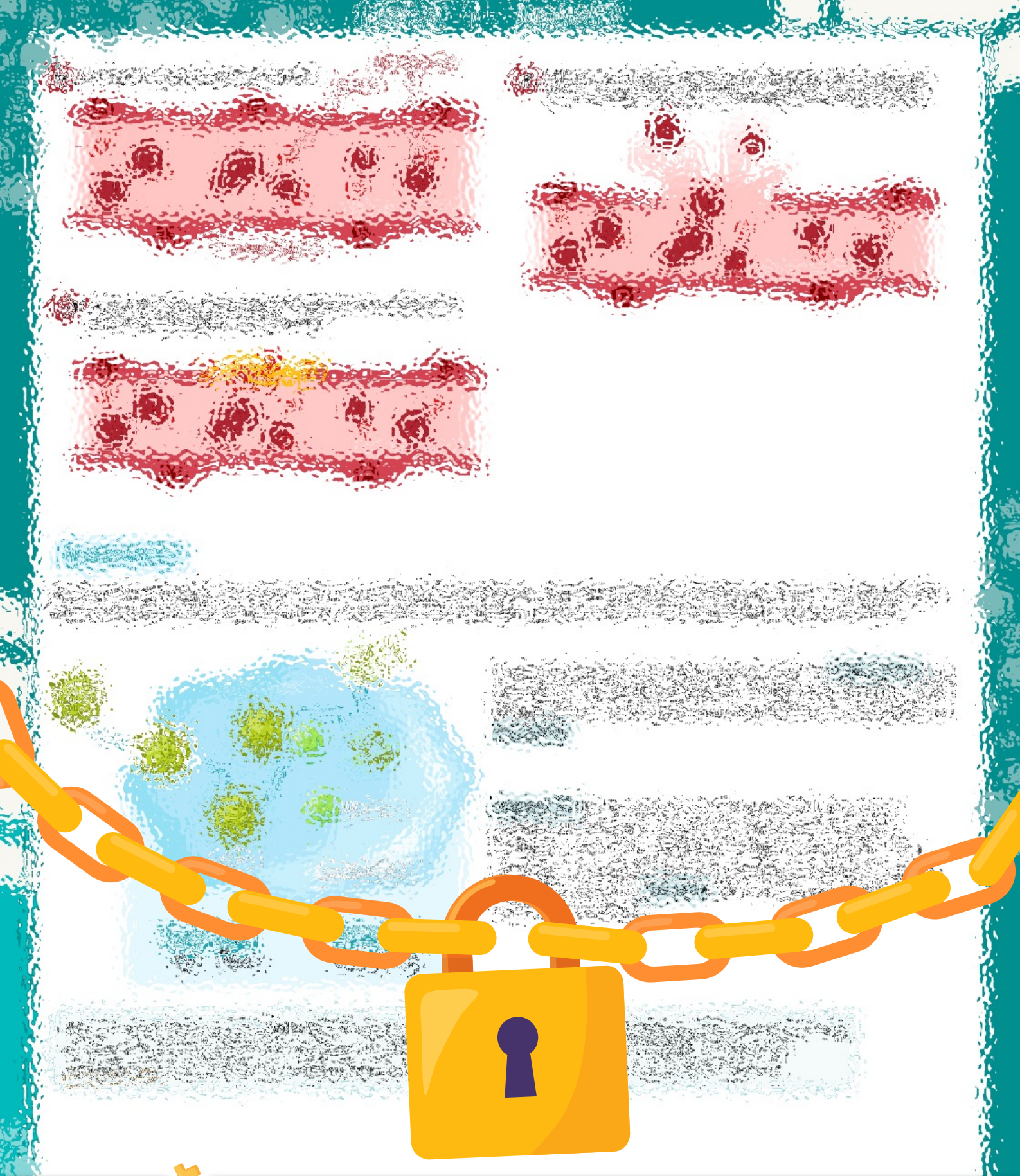
MUCOUS MEMBRANES are found at body openings such as the trachea, the nose, urethra, vagina; they produce secretions to trap pathogens and use their cilia, hair-like extensions, to sweep the pathogens out of the body.



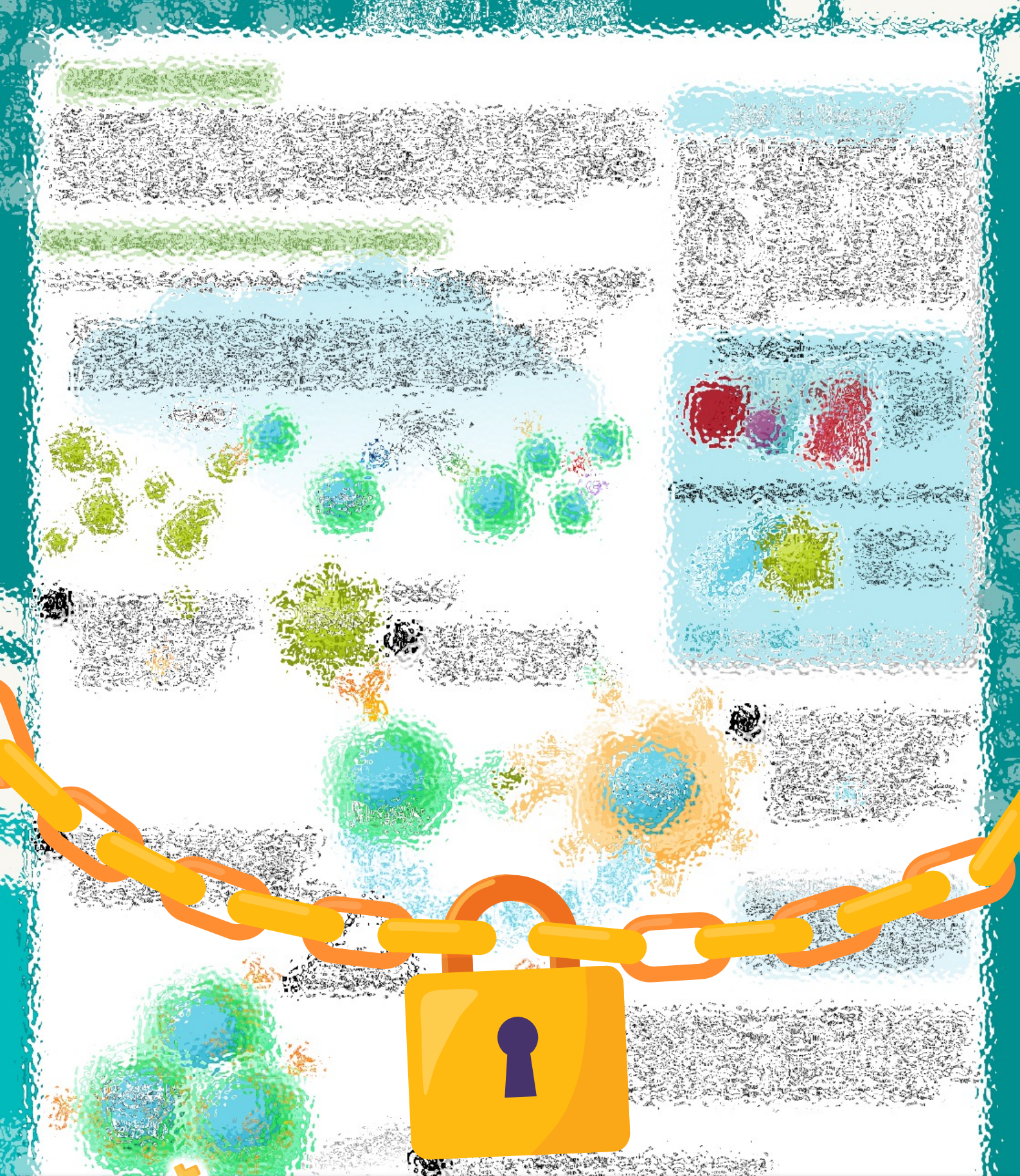
SECOND LINE OF DEFENSE

BLOOD CLOTTING

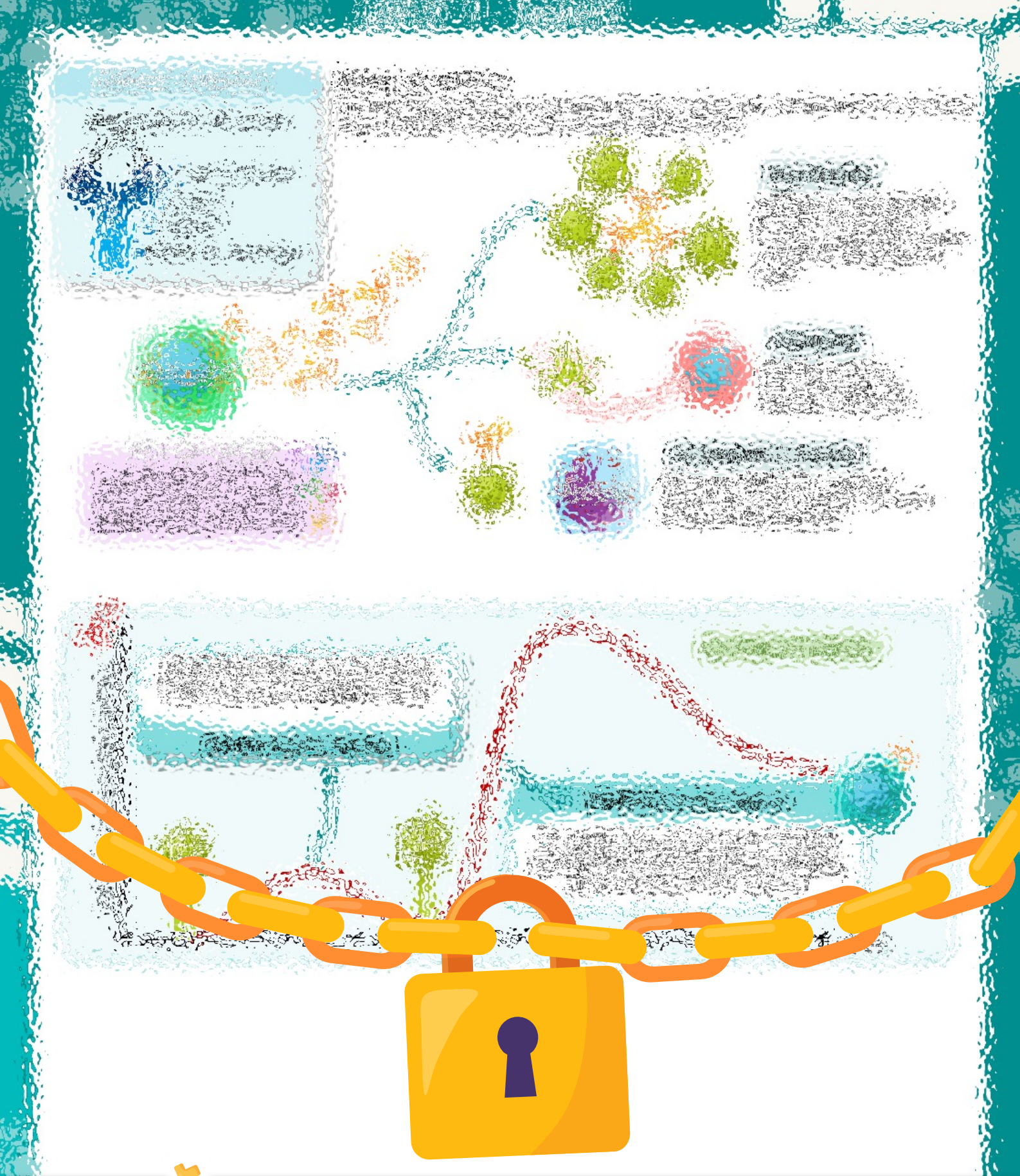
If the skin or mucous membrane barrier is disrupted (for example by a cut), the pathogen now has a gateway to enter your body tissues or bloodstream. To prevent this from occurring, as part of the second line of defense, the body can make a blood clot to close the wound created by a cut (on PAGE 2).



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A yellow padlock with a dark blue keyhole is centered in the image. It is surrounded by a chain of yellow and orange links. The background is a light blue gradient with a subtle pattern of small, light blue dots.



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