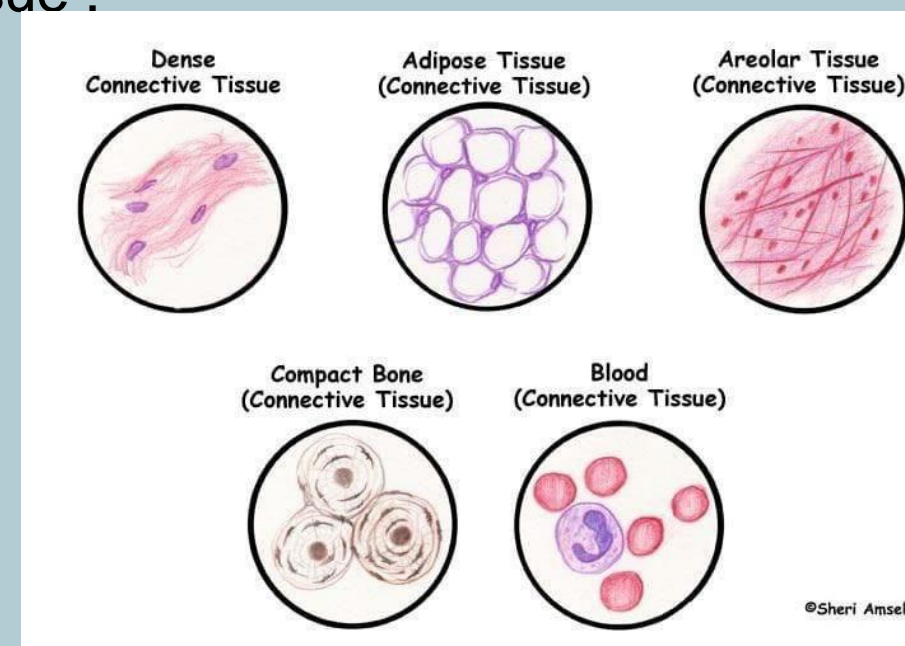


Introduction

- Loose connective tissue is a cellular connective tissue with thin and relatively sparse collagen fibers. Its ground substance occupies more volume than the fibers do. It has a viscous to gel-like consistency and plays an important role in the diffusion of oxygen and nutrients from the capillaries that course through this connective tissue as well as in the diffusion of carbon dioxide and metabolic wastes back to the vessels.
- There are 4 types of loose connective tissue :
 1. Areolar tissue
 2. Reticular connective tissue
 3. Mucoïd connective tissue
 4. Adipose tissue



Second: Reticular connective tissue

- Reticular tissue is a special type of connective tissue that predominates in various locations that have a high cellular content. It has a branched and mesh-like pattern, often called reticulum, due to the arrangement of reticular fibers (reticulin). These fibers are actually type III collagen fibrils. It's found in the kidney, spleen, lymph nodes, and bone marrow to form stroma and provide structural support.



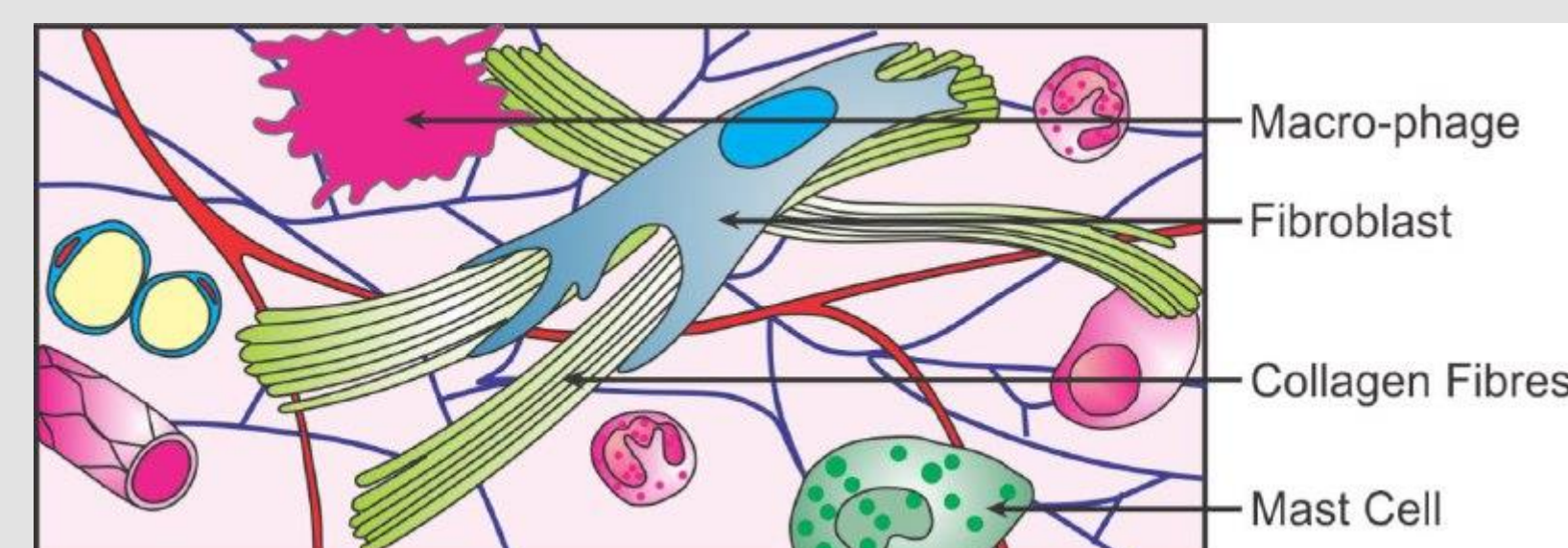
First: what is the Areolar tissue?

- Areolar tissues are widely distributed in the body and primarily function as a packing material between other tissues.

Functions of the Areolar Connective Tissue:

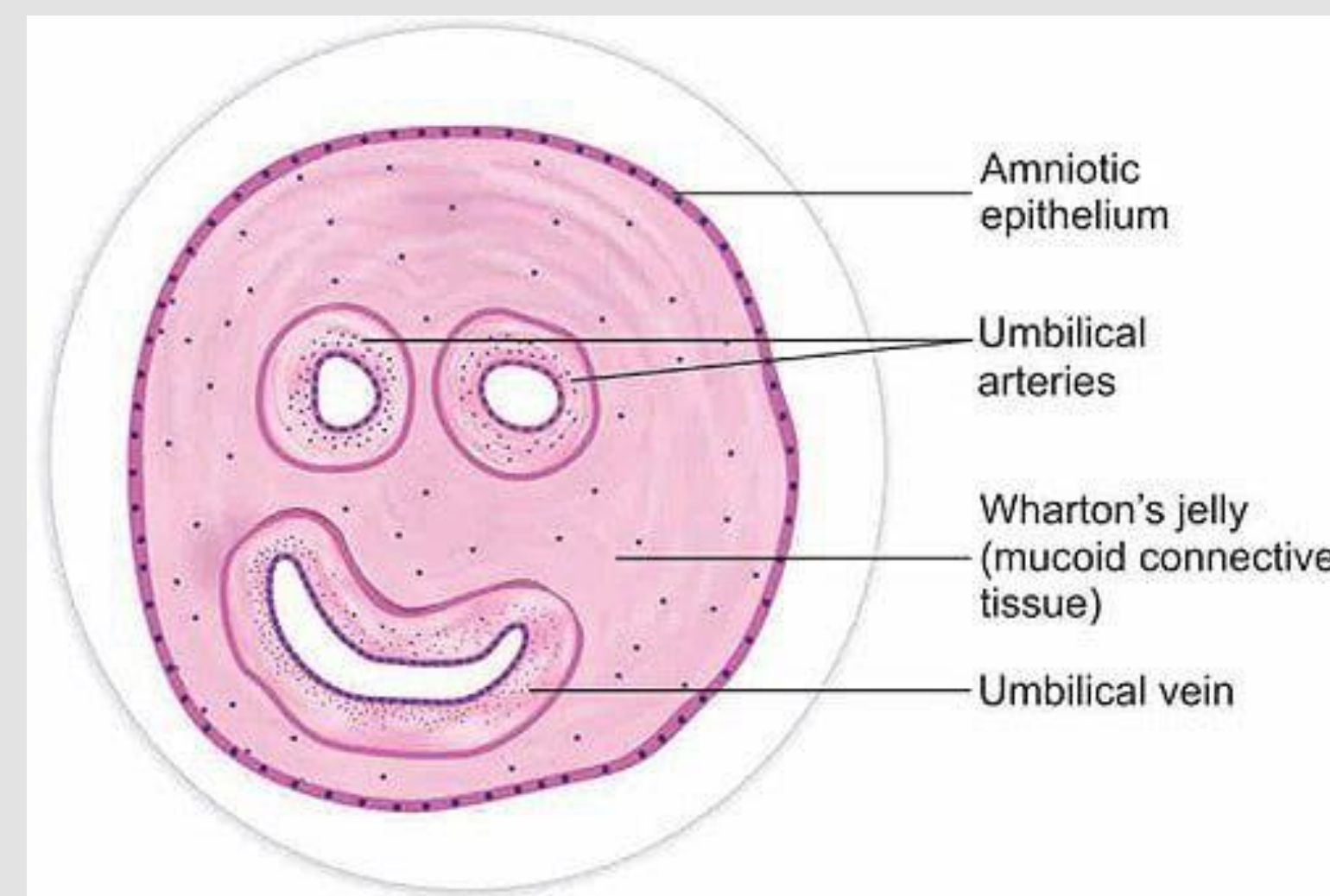
 1. Provides a protective framework that keeps major structures in place and offers support.
 2. Contains mast cells that help prevent infection.
 3. The areolar tissue is also dense with collagen fibers, which makes it strong and rigid.
 4. The areolar connective tissue lies deep under the epidermis and is important for keeping the skin flexible and elastic.
 5. It provides a cushioning layer that prevents friction.
- Ehlers-Danlos syndrome (EDS):

It is a group of hereditary disorders that affect connective tissues. This can cause overly flexible joints (which can potentially dislocate joints easily), tendons and ligaments to stretch too much, skin to be extraordinarily stretchy but fragile, and blood vessels easily form blood clots and lethal vascular problems may occur.



Third: Mucoïd connective tissue

- A type of connective tissue little differentiated beyond the mesenchymal stage; its ground substance of glycoproteins is abundant and contains fine collagenous fibers and fibroblasts; in its most characteristic form, it appears in the umbilical cord as Wharton's jelly, which functions to support and cushion the blood vessels within the umbilical cord.



Fourth: What is Adipose tissue?

- Adipose tissue, otherwise known as body fat, is a connective tissue that extends throughout your body. It's found under your skin (subcutaneous fat), between your internal organs (visceral fat) and even in the inner cavities of bones (bone marrow adipose tissue). It has many important functions including: Energy storage and release. Insulation from cold and heat. Cushioning around soft organs. And more recently, the endocrine function of adipose tissue has been discovered and it's now known to be a very important and active endocrine gland.
- In addition to adipocytes, adipose tissue contains numerous other cells that are able to produce certain hormones in response to signals from the rest of the organs throughout the body. Through the actions of these hormones, adipose tissue plays an important role in the regulation of glucose, cholesterol and the metabolism of sex hormones.
- Some hormones secreted from adipose tissue and their functions:
 1. TNF alpha, IL-6 and leptin, which are together called "cytokines" and are involved in the connection between cells.
 2. Plasminogen activator inhibitor-1, which is involved in blood clotting.
 3. Angiotensin, which is involved in blood pressure control.
 4. Adiponectin, which improves the body's sensitivity to insulin thus helps to protect against type 2 diabetes.
- What could go wrong with adipose tissue?

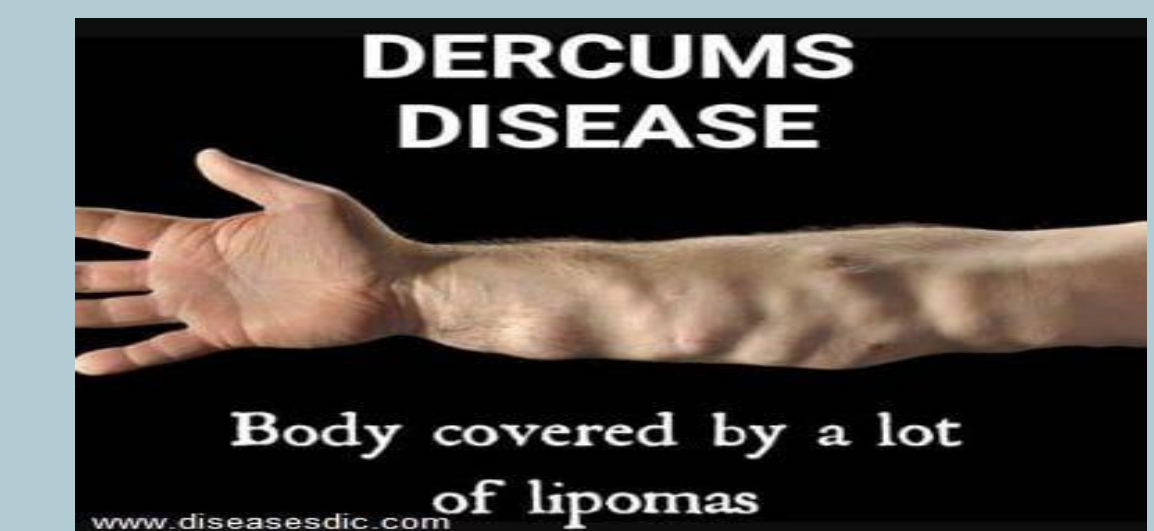
Both too much and too little adipose tissue can have severe health implications. More commonly, too much adipose tissue leads to obesity, mainly from too much visceral fat. Obesity leads to a number of serious health problems. Obesity increases the risk of developing type 2 diabetes as it causes the body to become resistant to insulin. This resistance results in high levels of blood sugar, which is bad for health. Obesity also increases the chance of developing high blood pressure, high cholesterol levels and an increased tendency for blood to clot. All of these raise the risk of heart attacks and stroke. A lack of adipose tissue (lipodystrophy) can also cause similar problems and is seen with increasing frequency as a result of medication used to treat HIV.

In eating disorders (such as anorexia nervosa), the patient does not eat enough food to maintain their adipose tissue levels. This means that they can lose a dangerous amount of body weight.



Dercum's disease:

This disease is characterized by multiple, painful growths consisting of fatty tissue. Pain may be caused by these growths pressing on nearby nerves. The cause of this disease is still unknown which is difficult to manage it.



G8

Serial	Student ID	Name
1.	22110029	Shahd mohamed
2.	22110015	Malak yasser
3.	22110045	Jana ahmed
4.	22110148	Jana magdy
5.	22110106	Mariam mohammed
6.	22110078	Dalia mohamed
7.	22110014	Malak mohamed
8.	22110048	Bishoy adel
9.	22110090	Mostafa tharwat
10.	22110099	Omar mohamed