

CONNECTIVE tissue is made of 3 things:

- 1) Specialized cells , 2) ground substance and 3) protein fibers

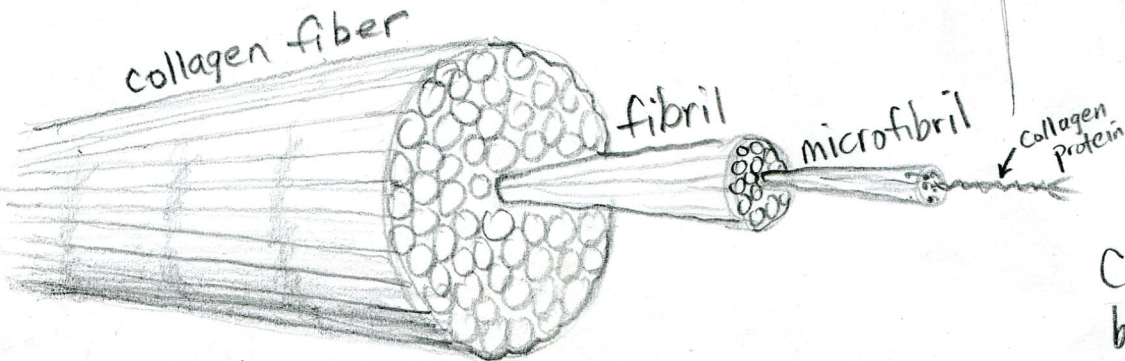
The ground substance and the protein fibers make the MATRIX.

The protein fibers can be made of 1) collagen , 2) elastin or 3) reticular fibers
(tiny collagens)

There are three types of connective tissues, and several categories under each:

<u>FIBROUS</u>	<u>CARTILAGINOUS</u>	<u>OTHER</u>
1) <u>Loose (areolar)</u>	1) <u>Hyaline</u>	1) <u>Bone</u>
2) <u>Dense</u>	2) <u>Elastic</u>	2) <u>Blood</u>
3) <u>Adipose (fat)</u>	3) <u>Fibrocartilage</u>	3) <u>Lymph</u>

COLLAGEN is a protein cable made of three separate polypeptide chains (alpha helices). Every third amino acid is glycine, the smallest amino, so that the triple helix can be wound very tightly.



Collagen fibers are bundled for strength.

One type of specialized cell is the **FIBROBLAST**, which makes collagen proteins and exports them (using exocytosis) outside the cell, where they then join together and make collagen fibers.

Fibroblasts also made the ground substance which is a mixture of water (90%) and glycoproteins (10%).

Fibroblasts live 2 to 3 months. They multiply rapidly after an injury. Scar tissue is a result of very active fibroblasts.

