Collenchyma

Characteristics

- The cells are mostly elongated, spherical, oval or polygonal in shape.
- Cells are alive at maturity.
- They contain a primary cell wall.
- The primary cell wall is unevenly thickened and mostly thickened at the corners.
- Cellulose, hemicellulose and pectin deposition in the cell wall makes it thick.
- They are compactly arranged and intercellular spaces are mostly absent.
- They often contain chloroplasts and store food.
- They are found under the epidermis of most dicot plants. E.g. in the young stem, midrib and petiole of leaves, etc.
- They can extend and adjust to the growth of the organs like stem and leaves.
- They provide mechanical support to the growing parts of the plant, e.g. petiole, young stem, etc.

Types:

Angular Collenchyma

Thickening of walls occurs only at the corners. Intercellular spaces are absent and they have a circular lumen.

Lacunar Collenchyma

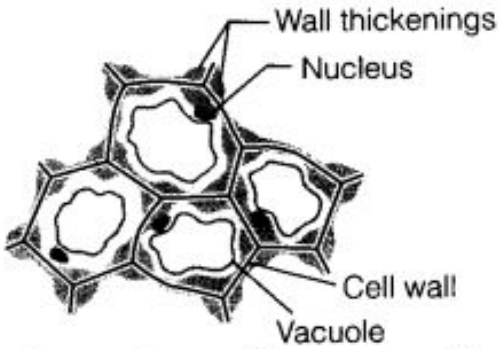
This type of collenchyma has intercellular spaces, thickening is more at the places adjacent to intercellular spaces.

Annular Collenchyma

The cell walls are uniformly thickened.

Function

- It provides flexibility and support to the growing parts.
- It protects leaf margins from tearing.



Collenchyma tissue (Transverse Section)