

The Basic Structure of Cnidarians

MOUTH

TENTACLES

EPIDERMIS

MESOGLEA

GASTRODERM

GASTROVASCULAR CAVITY

- nerve net is located in this tissue layer, and extends into the gastroderm
- site of digestion
- contains specialized sensory cells that detect chemicals from food and the touch of foreign objects
- specialized cells in this tissue absorb food fragments and break them down further
- cells of this tissue can change shape when stimulated by the nervous system; serve the same function as muscles
- only opening in the gastrovascular cavity
- symbiosis between cnidarians and photosynthetic protists occurs within cells of this tissue
- nerve net is concentrated around this structure
- layer of tissue that contains nematocysts (stinging structures)
- layer of tissue that contains sensory nerve cells which detect chemical from food and the touch of foreign objects
- ranges from a thin noncellular membrane to a thick jellylike material containing amebocytes
- layer of tissue that contains nerve cells
- materials that are not digested leave the cnidaria through this structure
- in medusa, groups of sensory cells are organized into simple organs (statocysts and ocelli) in this tissue
- layer of cells that cover the inner surface of the cnidarian
- layer of cells between the epidermis and gastroderm
- layer of cells that cover the outer surface of the cnidarian
- push food through the mouth and into the gastrovascular cavity

