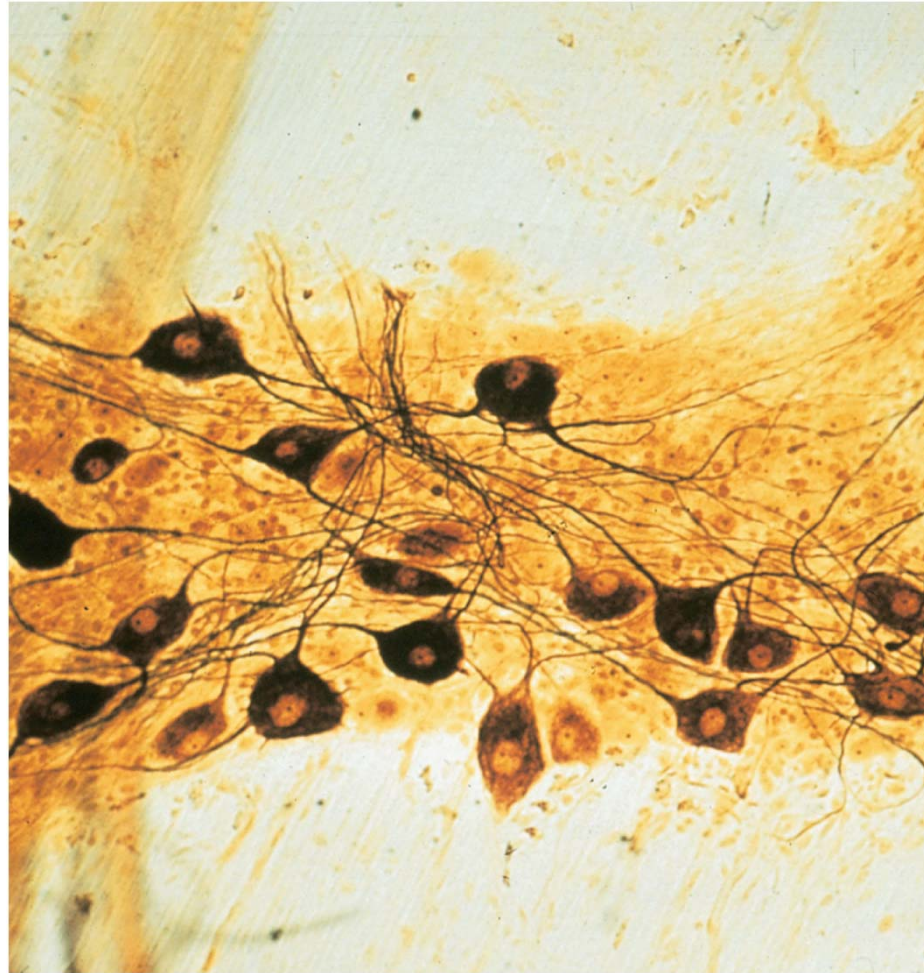


# Chapter 15

## Enteric Nervous System



# Enteric Nervous System

- **enteric nervous system** – the nervous system of the digestive tract
  - does not arise from the brainstem or spinal cord
  - does innervate smooth muscle and glands
- composed of 100 million neurons found in the walls of the digestive tract
- no components in CNS
- has its own reflex arcs
- **regulates motility** of esophagus, stomach, and intestines and secretion of digestive enzymes and acid
- normal digestive function also requires regulation by sympathetic and parasympathetic systems

# Megacolon

- **Hirschsprung disease** – hereditary defect causing absence of enteric nervous system
  - no innervation in sigmoid colon and rectum
  - constricts permanently and will not allow passage of feces
  - feces becomes impacted above constriction
  - **megacolon** – massive dilation of bowel accompanied by abdominal distension and chronic constipation
  - maybe colonic gangrene, perforation of bowel, and **peritonitis**
  - usually evident in newborns who fail to have their first bowel movement