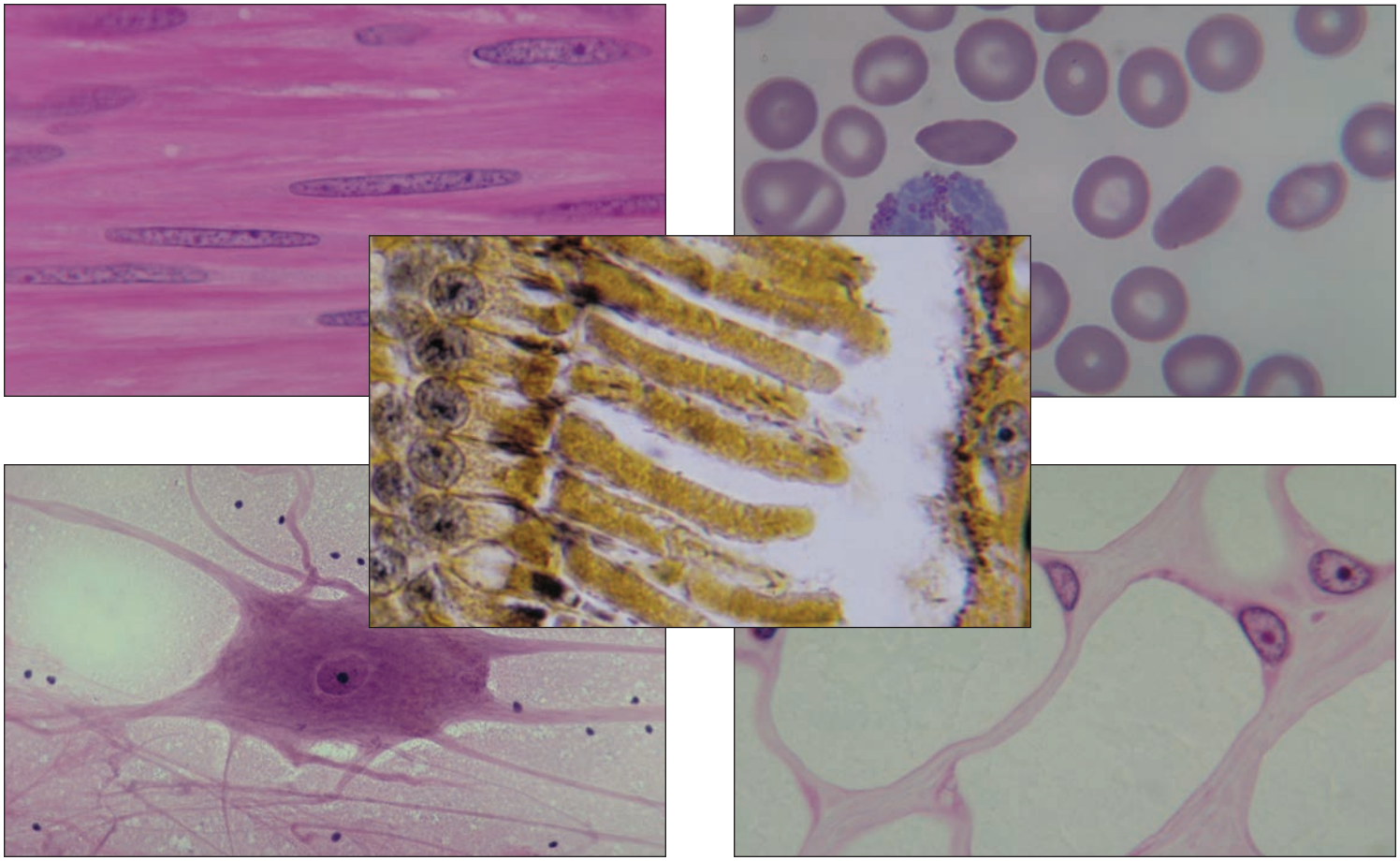

A Brief Look at Cells: Shape and Function

Fold along the dotted line and use these images and notes as flash cards to learn about the fascinating world of cells.

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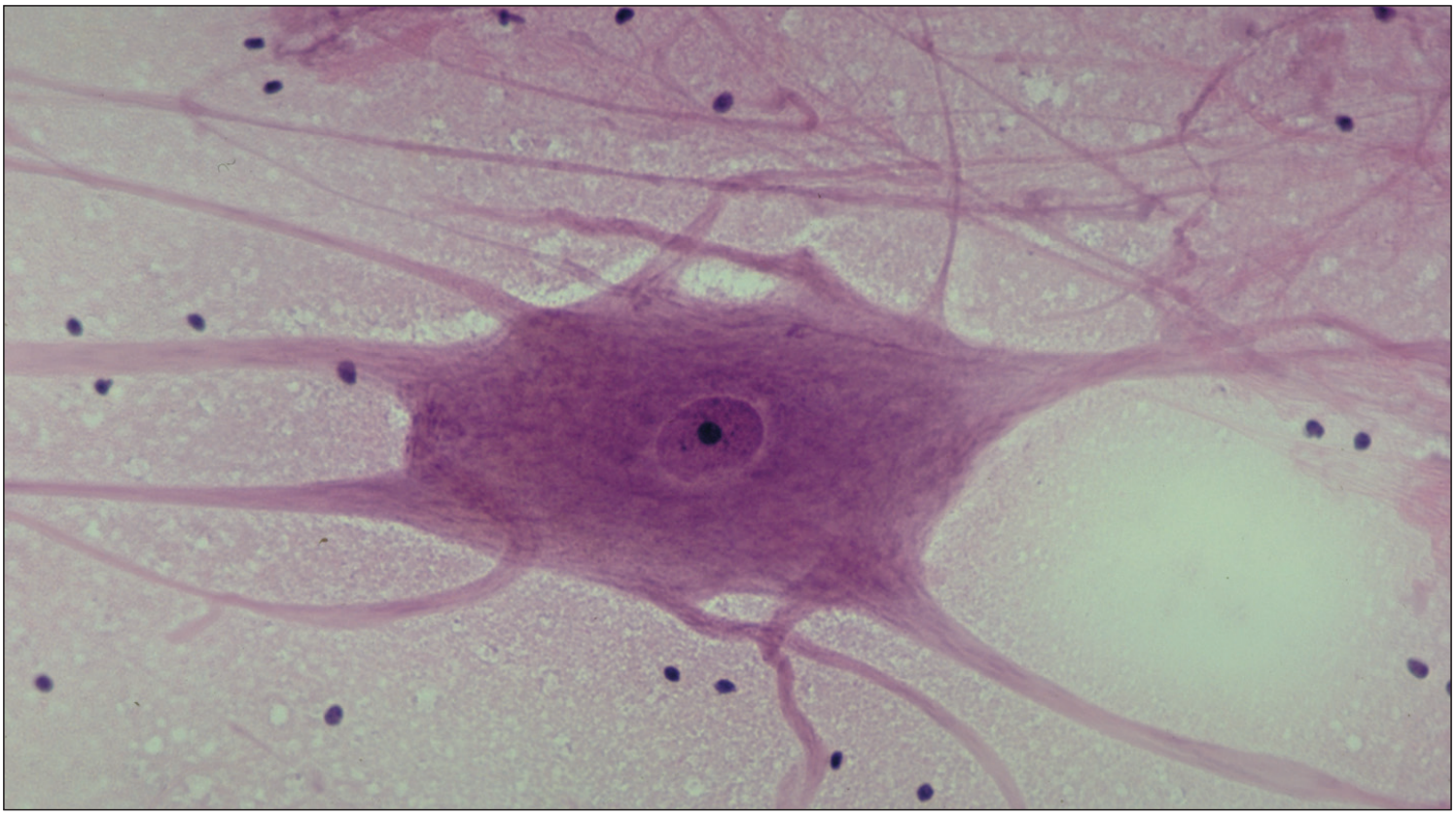

Nerve Cell

Neuron

A neuron consists of a cell body (soma), an axon, and dendrites. Dendrites are highly branched projections that transmit information in the form of electrical impulses toward the soma. The axon transmits impulses away from the soma. Neurons are found in the brain, spinal cord, and peripheral nerves.

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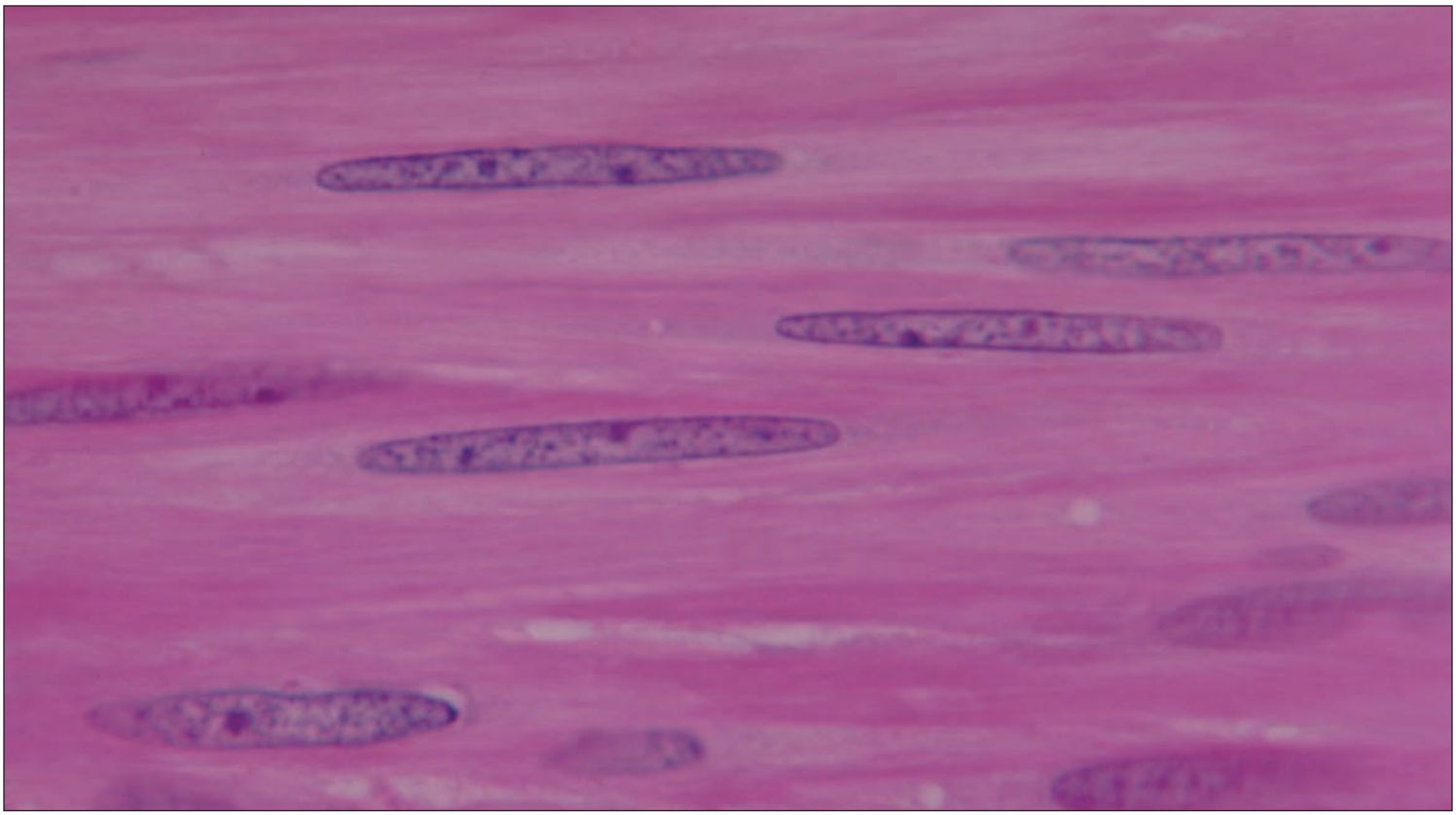
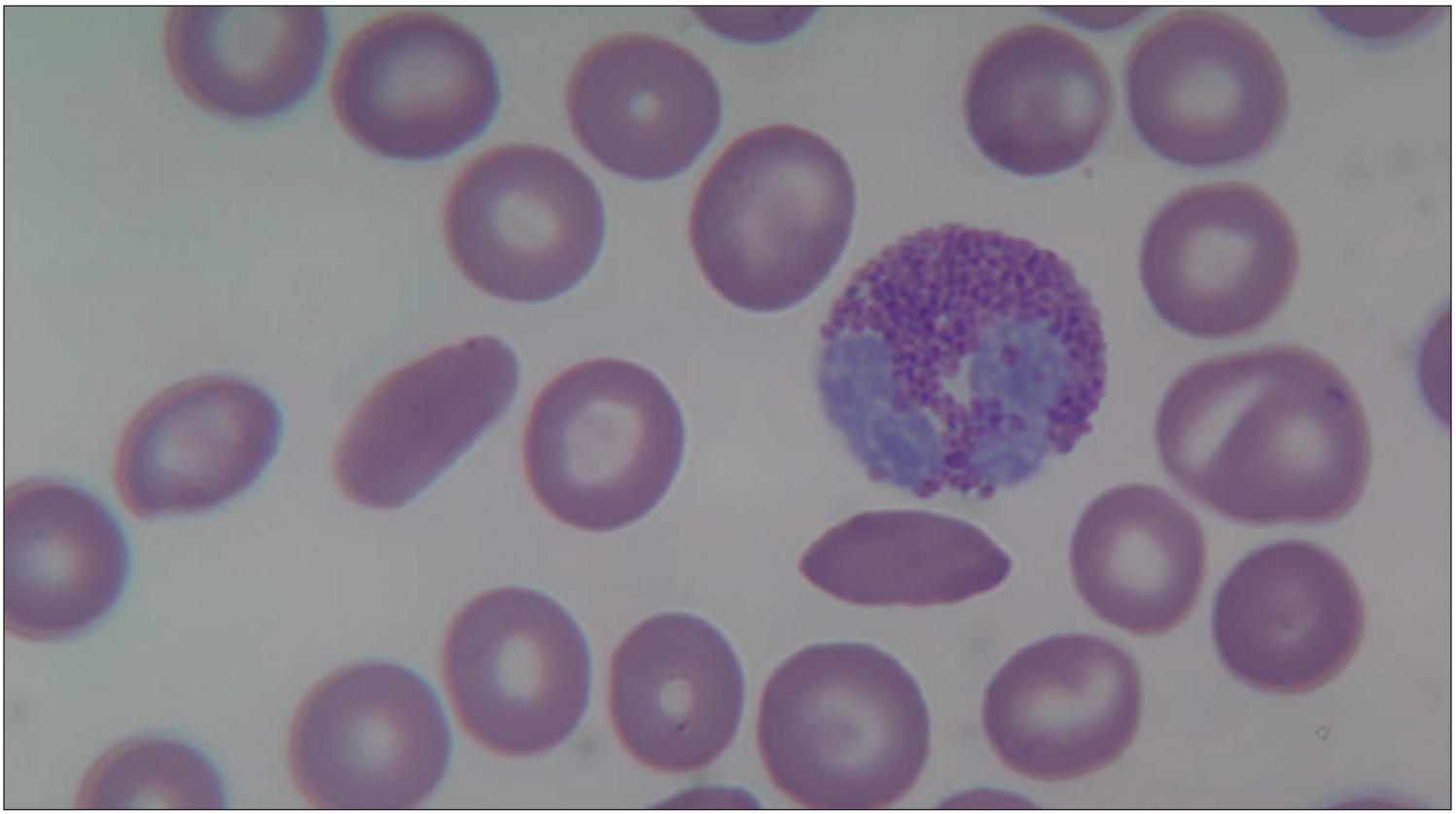


Smooth Muscle Cell

Myocyte

Smooth muscle cells are fusiform, or spindle shaped (tapering on both ends). Like other myocytes, or muscle cells, they contract and relax. Smooth muscle is nonstriated. It occurs in the walls of hollow organs such as the intestine and bladder.



Red Blood Cell

Erythrocyte

Erythrocytes are concave disks specialized for oxygen transport. The shape provides a large surface area for maximum diffusion. The cells flex to fit through capillaries. The lack of a nucleus and other organelles allows more space for oxygen-carrying hemoglobin.

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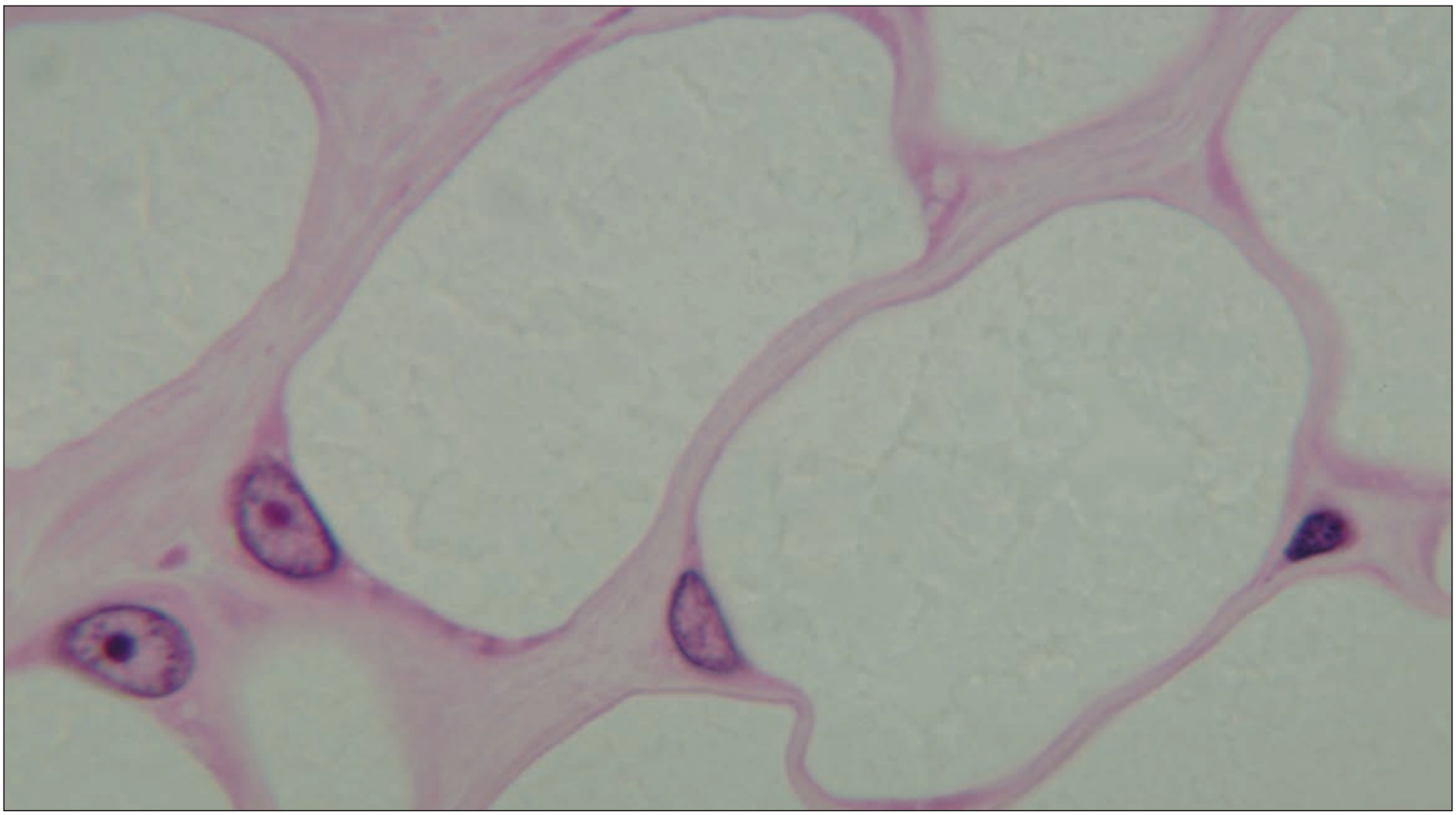

Fat Cell

Adipocyte

In adipocytes, most of the cytoplasm and structures of a typical cell are crowded to the edges by a droplet of fat (triglyceride). Adipocytes provide insulation and protection, and they store energy.

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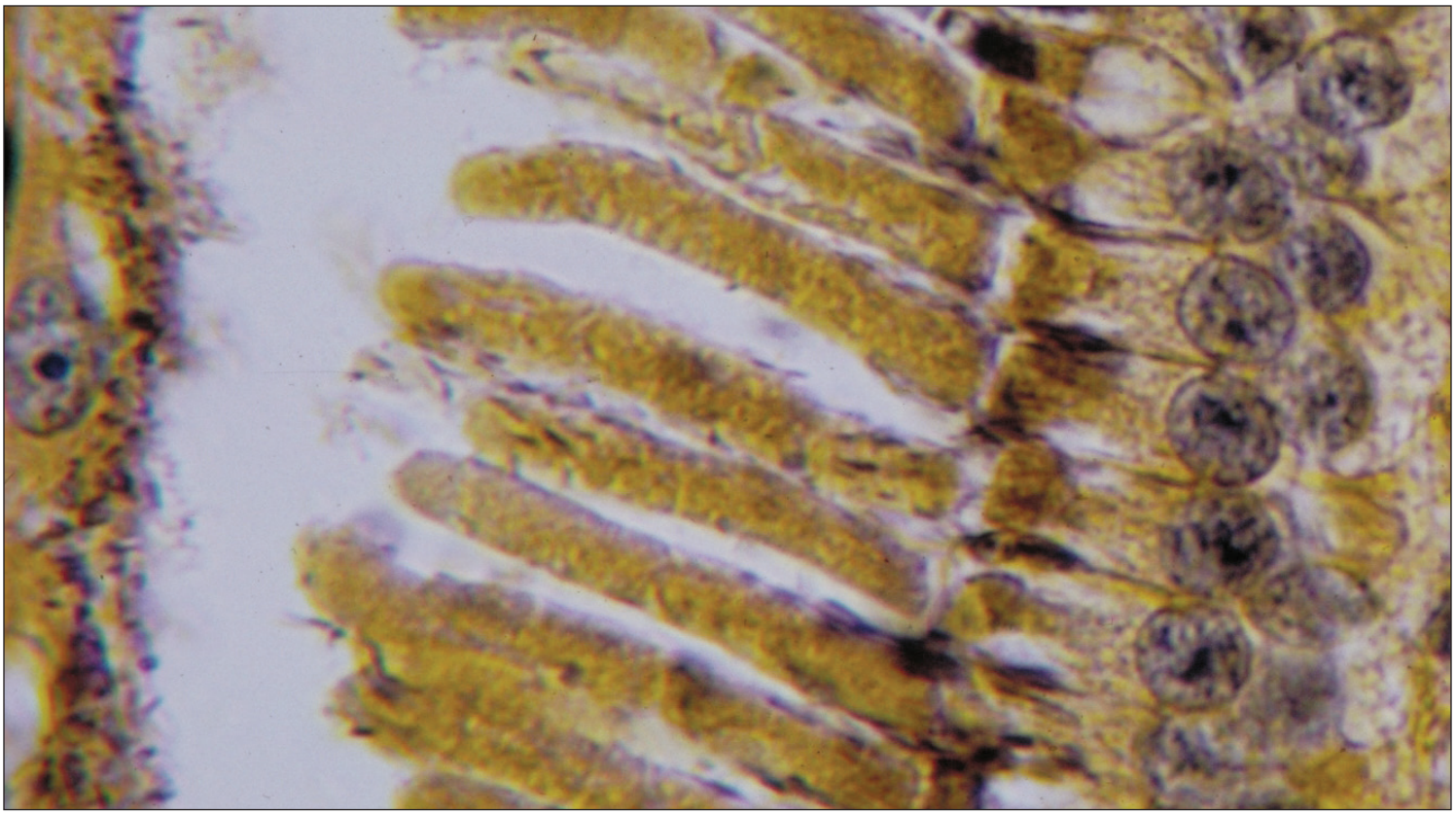

Photoreceptor Cells

Rods and Cones of the Retina

Photoreceptor cells such as rods and cones are highly specialized neurons. Together, rods and cones collect and process light energy, allowing an animal to distinguish light intensities and colors and to form visual images. Inner and outer segments of the cells perform different functions.

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