



FIGURE 6-1 Basic parts of a cell.

of materials into and out of the nucleus, and also aids in the synthesis and storage of proteins. Rough endoplasmic reticulum contains ribosomes, which are the sites for protein synthesis (production). Smooth endoplasmic reticulum does not contain ribosomes and is not present in all cells. It assists with cholesterol synthesis, fat metabolism, and detoxification of drugs.

- ◆ **Lysosomes**—oval or round bodies found throughout the cytoplasm. These structures contain digestive enzymes that digest and destroy old cells, bacteria, and foreign materials, an important function of the body's immune system.

- ◆ **Pinocytic vesicles**—pocketlike folds in the cell membrane. These folds allow large molecules such as proteins and fats to enter the cell. When such molecules are inside the cell, the folds close to form vacuoles or bubbles in the cytoplasm.

Cell Reproduction

Most cells reproduce by dividing into two identical cells. This process is called **mitosis**, a form of asexual reproduction (see figure 6-2). Skin cells, blood forming cells, and intestinal tract cells reproduce continuously. Muscle cells only reproduce every few years, but muscle tissue can be