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our bodies. Because of **neuroplasticity**, the brain is able to grow an unlimited amount of gray matter in response to our continuous learning. That's why the brain appears all wrinkled and folded into itself. Those folds and wrinkles represent a person's capacity to do complex thinking and problem solving. It's the only place on the body where wrinkles are a good thing.

Learning happens as the neurons communicate with each other much like runners in a relay race. Think of the information being learned as the baton that the relay runners pass along to each other. Within the neuron, the baton takes the form of electrical impulses and chemical interactions. We call this process "firing." These impulses travel along the long *axon*, which is an extension of the neuron until it connects with another neuron. They exchange information through the short, fingerlike extensions called **dendrites**. The dendrites contain receptors that extend out beyond the body of the neuron to pick up messages from other neurons. The more dendrites we have, the more information that the neurons can pick up and

**Figure 3.3** Picture of Neuron with Axon and Dendrites

