A synapse, the gap between two nerve cells (neurons), allows chemical signals to be relayed from one neuron to another. The junction between a motor neuron and a muscle is referred to as a neuromuscular synapse. Neurons rely on the movement of ions (charged species especially K\(^+\), Ca\(^{2+}\), Cl\(^-\), Na\(^+\)) inducing a current, the so-called action potential responsible for electrical signalling. Signals are initiated when a neurotransmitter chemical (acetylcholine) binds to a specific receptor (acetylcholine receptor), triggering the opening of an ion channel. Information is transmitted along the neuron, employing a signaling system similar to Morse code.

Once a signal is released into the sarcolemma (a sheath surrounding the muscle), an action potential travels down the T-Tubuli (structure found between muscle fibers). This triggers a release of calcium ions into the sarcoplasmic reticulum which results in muscle contraction.

For more information, scan the QR code.