

# Thought-Controlled PROSTHETICS



In 2016, nine-year-old Josh Clifford was fitted with a bionic hand in Scotland.

Prosthetics are artificial limbs. People get them when an arm or leg is removed. Prosthetic limbs used to have limited movement. New bionic limbs are small machines. They are connected to the user's brain. People can move them with their thoughts. These thought-controlled limbs let people move more naturally.

The human brain is complex. It has 86 billion **neurons**. It is difficult to connect a brain to a machine. But scientists are making progress. The company Open makes thought-controlled prosthetic feet. The University of Pittsburgh Medical Center (UPMC) has a bionics project. It helps **paralyzed** people move artificial arms with just their thoughts.

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**neuron:** a nerve cell that carries messages throughout the body

**paralyzed:** when an animal or human is unable to move