A cochlear implant (CI) is a surgically implanted electronic device that provides a sense of sound to a person who is profoundly deaf or severely hard of hearing. The cochlear implant is often referred to as a bionic ear.

A cochlear implant will not cure deafness or hearing impairment, but is a prosthetic substitute for hearing. Some recipients find them very effective, others somewhat effective and some feel worse overall with the implant than without.[24] For people already functional in spoken language who lose their hearing, cochlear implants can be a great help in restoring functional comprehension of speech, especially if they have only lost their hearing for a short time.

Some effects of implantation are irreversible; while the device promises to provide new sound information for a recipient, the implantation process inevitably results in damage to nerve cells within the cochlea, which often results in a permanent loss of most residual natural hearing. While recent improvements in implant technology, and implantation techniques, promise to minimize such damage, the risk and extent of damage still varies.

In addition, while the device can help the recipient better hear and understand sounds in their environment, it is not as good as the quality of sound processed by a natural cochlea. The main problem is with the age of recipient. While cochlear implants restore physical ability to hear, this does not mean the brain can learn to process and distinguish speech if the recipient has passed the critical period of adolescence. As a result, those born deaf who receive an implant as an adult can only distinguish simple sounds, such as a ringing phone vs a doorbell, while others who receive implant early can clearly understand speech. The success rate depends on a variety of factors, most critically the age of recipient but also the technology used and the condition of the recipient's cochlear.

Find out more on Cochlear Implants here http://en.wikipedia.org/wiki/Cochlear_implant