

Sleep Apnea Implant Device: Freedom to sleep, No mask No hose

▪ **What is Sleep Apnea?**

Obstructive Sleep Apnea (OSA) is a very common and serious condition that affects millions of patients worldwide. It occurs when the muscles in the airway relax during sleep resulting in airway narrowing depriving the reach of oxygen to the brain.

It can result in high blood pressure, strokes, heart failure and heart attacks, poor performance in everyday activities and many more dangerous side effects.

▪ **Sleep Apnea Implant Device:**

The implant device provides therapy through the stimulation of neurons (neurostimulation) and is designed to deliver stimulation to tongue muscles by controlling the upper airway flow and therefore reducing and eliminating sleep apnea. It is surgically implanted system performed by ENT surgeon.

▪ **Use Case:**

This fully implantable device is designed mainly to treat patients with moderate or severe OSA who are unable to have a continuous positive airway pressure. This means that no masks, hoses, or any other mouthpieces are connected to the patient while sleeping.

▪ **Main Elements:**

- OSA patients
- Doctors and ENT surgeons

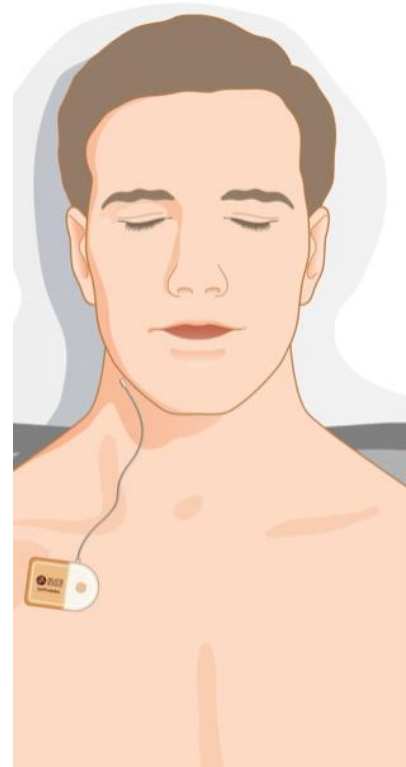
▪ **System Components:**

Internal (Implanted):

- Rechargeable battery-powered computer that is responsible for generating neuro stimulation pulses.
- A cable that carries those pulses to the hypoglossal nerve

External:

- A remote control that allows patients to start, stop or pause the therapy (neurostimulation)





This system looks and operates much like a cardiac pacemaker but however it doesn't have action on the heart but to the hypoglossal nerve in the neck, we can call it "pacemaker for the tongue" with the goal of keeping the airway wide and open during sleep.