Vagal Nerve Stimulation (VNS) Market Information: By Product (Implantable VNS Devices and External VNS Devices), By Application (Depression, Epilepsy, Migraine, And Others), By End Users (Hospitals, Ambulatory Surgical Centers, And Others) - Global Forecast Till 2023

Market Scenario

Vagal nerve stimulation or vagus nerve stimulation (VNS) is a treatment method that involves delivering electrical impulses to the vagus nerve. Vegas nerve acts as a translator between gut and brain. Gut uses the vagus nerve like a walkie-talkie and translates signals via electric impulses, which called action potentials. VNS treatment is used for certain types of intractable epilepsy, depression, and others. In most common cases, overstimulation of the vagus nerve causes fainting. Vagus nerve stimulation is a procedure, which involves implantation of a device that stimulates the vagus nerve with electrical impulses. This device is normally implanted under the skin below the patient’s clavicle. Lead wires from the generator are excavated up to the patient’s neck and wrapped around the left vagus nerve at the carotid sheath, where it delivers electrical impulses to the nerve. After successfully implanted, the generator sends electric impulses to the vagus nerve at a regular intervals.

Vagal nerve stimulation (VNS), may offer hope for patients who don’t improve with conventional depression treatment. A small battery-powered device like a pacemaker is inserted under the skin in the neck, from where it emits pulses of weak electrical current to stimulate part of the vagus nerve.

Increasing prevalence of neurological disorders, increasing investment of biotechnology and pharmaceutical industries in R&D, and rising need for the better treatment methods drives the growth of the market. Moreover, favorable reimbursement policies, increased application and significant investments in development of new technologies for the treatment of epilepsy, and other cardiac indications will fuel the market growth during the forecast period.

According to the WHO estimates, neurological disorders are responsible for 4.5%-11% of all illnesses including low or high income economies. This is far higher as compared to the number of respiratory ailments, gastrointestinal disorders, or cancers, and the burden is expected to increase further over the coming years.

However, higher cost of these treatment procedure may hamper the market growth during the corresponding period. As per Epilepsy Foundation, VNS therapy currently costs approximately USD 30,000, which includes the implant and surgical procedure and it is not affordable to the patients living in low income economies.

The global vagal nerve stimulation or vagus nerve stimulation market is expected to grow at a CAGR of ~ 8.68% during the forecast period 2017-2023.
Key Players

Some of key the players in the market are LivaNova PLC (UK), EnteroMedics Inc. (US), ElectroCore Medical LLC (US), Boston Scientific Corporation (US), Cyberonics, Inc. (US), NeuroMetrix, Inc. (US), ImThera Medical (US), and Inspire Medical Systems, Inc. (US)

Segmentations

The global vagal nerve stimulation market has been segmented on the basis of products, application, and end user.

On the basis of products, the market is segmented into implantable VNS devices and external VNS devices.

On the basis of application, the market is segmented into depression, epilepsy, migraine, and others.

On the basis of end user, the market is segmented into hospitals, ambulatory surgical centers, and others.

Research Methodology
Regional Analysis

The Americas dominates the global vagal nerve stimulation market owing to well-developed technology, increasing prevalence neurological disorders, high healthcare spending, and increasing government support for research & development. Furthermore, increasing R&D activities and the presence of major companies have fuelled the growth of the market in this region.

Europe holds the second position in the global vagal nerve stimulation market. It is expected that the government support for research & development and availability of funds for research will drive the market in Europe region over the review period.

Asia Pacific is the fastest growing vagal nerve stimulation market owing to the presence of rapidly developing healthcare technology, huge patient population, and high healthcare expenditure. Moreover, increasing new opportunities in countries like China, India, Japan, and South Korea will make this as emerging and the fastest growing market across the globe. Furthermore, increasing demand for quality devices in the healthcare will lead to the use of advanced equipment, which, in turn, will increase the growth of the VNS devices in the region.

On the other hand, the Middle East & Africa holds the least share of the market due to limited availability of medical facilities, less availability of funds, and poor political conditions in Africa.

Intended Audience

- Pharmaceutical Companies
- Medical Devices Companies
- Research and Development (R&D) Companies
- Government Research Institute
- Academic Institutes and Universities

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