

The neurophysiology devices and equipment market contains sales of neurophysiology devices and equipment and related services. Frequent techniques under this market are Electroencephalography (EEG), electromyography/electroneurography (EMG/ENG) and therefore the recording of evoked potentials (EP). These equipment and techniques are helpful in handling different functions of the systema nervosum like medulla spinalis & peripheral nerve dysfunction brain alterations and nerve damage.

The global neurophysiology devices and equipment market was valued at about \$1.19 billion in 2018 and is predicted to grow to \$1.51 billion at a CAGR of 6.2% through 2022.

North America was the most important region within the neurophysiology devices and equipment market in 2018. This region is predicted to stay the most important during subsequent five years. The neurophysiology devices and equipment market in Asia Pacific is forecasted to register the very best CAGR during 2018-2023.

The major factor liable for the expansion of neurophysiology device and equipment market is that the increasing prevalence of neurological disorders, worldwide. Neurological disorders are identified together of the foremost prevalent disorders out of all the recurring ailments. There are quite 600 neurological disorders like brain tumour, epilepsy, paralysis agitans, Alzheimer's etc. In 2015, these disorders were ranked because the leading cause group of Disability Adjusted Life Years (DALYs), which is that the number of years lost thanks to ill-health, disability or early death. The increasing number of cases of neurological diseases and growing count of patients is resulting in the increasing demand for the devices utilized in the treatment of such disorders. as an example, as per the North American brain tumour Society, around 700,000 people within the region were

affected by Brain Tumors in 2015, which increased by around 78,000 people in 2016. Similarly, the Alzheimer's Association reported that between 2017 and 2025, number of Alzheimer cases are expected to rise by around 14% within the U.S. this is able to increase the demand for medical devices utilized in the treatment of neurological disorders, thus driving the Neurophysiology device and equipment market during the forecast period.

The marketplace for neurophysiology devices and equipment is restricted by the high cost of neurodiagnostic procedures. The treatments available for neurophysiological disorders are very expensive thanks to the advanced technology utilized in this equipment. High cost of procedure results in decrease in demand for these treatments due to low affordability, especially in low income countries, thus restraining the expansion of the market. for instance, a survey conducted in 2015 by NCBI highlighted that the supply of EEG and EMG was significantly correlated with higher income group countries. Out of the surveyed low-income countries, only the highest 20% could afford neurodiagnostic tests and in lower-middle-income countries quite 40% of the population were unable to afford this treatment, thus limiting the expansion of the market.

Companies within the neurophysiology devices and equipment market are investing in advancement of technology to extend the efficiency of those devices. There are many innovations within the brain monitoring devices, for instance, EEG monitoring, Brain Simulation therapies and Intraoperative Neurophysiological monitoring. New technological innovations are enabling the event of devices which are integrating or adopting processes like advanced neuroimaging techniques, somatic cell therapies, and molecular interventions and microbiome technologies. there's also a trend of portable and wearable device technology assisting in home-based monitor-

ing for ailments like epilepsy and apnea . for instance , Smart Monitor, in 2019 developed Smart Watches called Embrace to watch symptoms of epilepsy and instantly send alerts to the caregivers and relations of the patient, if any abnormal pattern is noticed in his body. This technology also helps in improving the security and treatment of users.

In the USA, American Association of Neurological Surgeons (AANS) and therefore the Congress of Neurological Surgeons (CNS) AANS/CNS regulate neurology devices including neurophysiology devices. There are two methods that manufacturers can use for premarket approval for neurophysiology devices.

the primary method consists of conducting clinical studies and submitting a premarket approval (PMA) application that has evidence providing reasonable assurance that the device is safe and effective. the opposite method involves submitting a 510(k)-notification demonstrating that the device is substantially like a tool already on the market (a predicate device) that doesn't require a PMA.

Major players within the market are Medtronic Plc, Nihon Kohden Corporation, Dr. Langer Medical GmbH, Natus Medical Incorporated and Inomed Medizintechnik.