Medical Bionic Implant/Artificial Organs Market Research Report – Forecast to 2023

Market Scenario

The global medical bionic implant/artificial organs market is expected to gain prominence over the forecast period (2018–2023). It is estimated that the medical bionic implant market is expected to register a CAGR of 7.0% during the forecast period of 2018–2023.

Bionic implants are artificially engineered devices that are implanted into a human to replace a natural organ. The main purpose of bionic implants is to provide life support to prevent imminent death while awaiting a transplant and improve a patient's ability to interact socially.

It is observed that the increasing cases of organ failure have increased the demand for replaceable organs, which is propelling the medical bionic implant/artificial organs market to a great extent. According to the statistics suggested by the National Kidney Foundation, in 2016 around 121,678 people were waiting for lifesaving organ transplants in the United States. It is also reported that in 2014, 17,107 kidney transplants took place in the U.S. The incidences of organ failure are found to be more common in the aging population, as it is more vulnerable towards health issues such as ophthalmic diseases, gastrointestinal problems, orthopedic diseases, cancer, and others.

Various other factors such as technological advancements, increasing accidents and injuries, improving regulatory framework, increasing government assistance, and increasing prevalence of eye diseases are continuously contributing to the growth of the global medical bionic implant/artificial organs market.

Despite these drivers, there are some issues associated with the medical bionic implant/artificial organs market. Lack of skilled professionals, the high cost of devices, fear of malfunction of devices, and poor healthcare system in low and middle-income countries may hamper the growth of the market to an extent.

Regional Market Summary

The Americas dominates the medical bionic implant/artificial organs market owing to the introduction of advanced medical bionic implants by major market players. On November 02, 2017, Second Sight Medical Products, Inc., a U.S. based company, received the U.S. FDA approval to initiate the Orion Cortical Visual Prosthesis System (Orion) feasibility clinical study. In 2013, the company won the FDA approval for the Argus II retinal prosthesis system.

Europe holds the second position in the medical bionic implant/artificial organs market. It is expected that the government support towards research and development expenditure and increasing cases of organ failure and related complications are likely to drive the European market.

Asia Pacific is the fastest growing medical bionic implant/artificial organs market owing to a huge patient pool, increasing demand for advanced treatments, and development in the healthcare technology. Healthcare expenditure is found to be improving in various Asia Pacific regions. According to the data suggested by Australian Institute of Health and Welfare during
the year 2015 to 2016, the total health expenditure was USD 170.4 billion, i.e., 3.6% higher than the expenditure during 2014 to 2015.

The Middle East and Africa holds the lowest share of the global market due to low development, lack of technical knowledge, and poor medical facilities.

Key Players
Some of key the players in the global medical bionic implant/artificial organs market are Aleva Neurotherapeutics SA (Switzerland), Biocontrol Medical (Israel), Biomet, Inc. (U.S.), Boston Scientific Corporation (U.S.), Cochlear Ltd. (Australia), Cyberonics, Inc. (U.S.), Ekso Bionics (U.S.), LivaNova PLC (U.K), Medtronic, Inc. (U.S.), NeuroPace, Inc. (U.S.), Orthofix International N.V. (The Netherlands), Ossur (Iceland), Second Sight Medical Products, Inc. (U.S.), and St. Jude Medical, Inc. (U.S.).

Research Methodology
Market Research Future research is conducted by industry experts who offer insight into industry structure, market segmentation, treatment assessment, Competitive Landscape (CL), penetration, as well as on emerging trends. Besides primary interviews (~ 80%) and secondary research (~ 20%), their analysis is based on their years of professional expertise in respective industries. Our analysts also predict where the market will be headed in the next five to ten years, by analyzing historical trends and current market positions. Furthermore, varying trends of segments and categories geographically presented are studied and are estimated based on the primary and secondary research.

- Primary Research
The extensive primary research was conducted to gain a deeper insight of the market and the industry performance. In this particular report, we have conducted primary surveys (interviews) with key level executives (VPs, CEOs, Marketing Directors, Business Development Managers, and many more) of major players who are active in the market. In addition to analyzing the current and historical trends, our analysts predict where the market is headed, over the next five to ten years.

- Secondary Research
Secondary research was mainly used to collect and identify information useful for an extensive, technical, market-oriented, and commercial study of the medical bionic implant market. It was also used to obtain key information about major players, market classification and segmentation according to industry trends, geographical markets and developments related to the market, and treatment perspectives. For this study, analysts have gathered information from various credible sources, such as annual reports, SEC filings, journals, white papers, corporate presentations, company websites, the international organization of chemical manufacturers, some paid databases, and many others.

Segmentation
The global medical bionic implant/artificial organs market is segmented by technology, product, fixation, and end-user.

By technology, the market is classified as mechanical bionics and electronic bionics.

By product, the market is classified as vision bionics, ear bionics, orthopedic bionics, heart bionics, neural/brain bionics, and others. Vision bionics are further segmented as bionic eye and others. Ear bionics are further segmented as cochlear implant, and Bone Anchored Hearing Aid (BAHA). Orthopedic bionics are further segmented as bionic hand, bionic leg, bionic finger, exoskeleton, and electrical bone growth stimulators. The sub-segments of bionic leg include bionic knee and bionic feet. The sub-segments of electrical bone growth stimulators include invasive bone growth stimulators and non-invasive bone growth stimulators. Heart bionics are further segmented as pacemaker, total artificial heart, ventricular assist device, and artificial heart valve. The sub-segments of pacemaker include implantable cardiac pacemaker and external pacemaker. The sub-segments of artificial heart valve include mechanical heart valve and tissue heart valve. Neural/brain bionics are further segmented as deep brain stimulators, vagus nerve stimulators, and spinal cord stimulators.

By fixation, the market is segmented into implantable and externally worn.

By end-user, the market is segmented into hospitals and clinics, research and academic institutes, and others.
Contents:

Intended Audience

- Medical Device Companies
- Research and Development (R&D) Companies
- Diagnostic Laboratories
- Government Research Institutes
- Academic Institutes and Universities

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