

Electroceuticals/Bioelectric Medicine Market- Growth, Trends, Covid-19 Impact, and Forecasts (2023 - 2028)

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Report description:

The electroceuticals/bioelectric medicine market is projected to register a CAGR of 7.8% during the forecast period (2022-2027).

The COVID-19 epidemic has had a significant impact on the market. Due to the high rate of infection and the lack of treatment, many countries were suffering and continue to burden their economies and health care systems. Elective procedures have been postponed indefinitely during the COVID-19 pandemic to provide capacity to deal with the emergency caseload and avoid exposing elective patients to COVID-19. Also, as per the article published in August 2021 titled "Impact of COVID-19 pandemic on cardiac electronic device implantations in Northwestern Greece", The coronavirus disease (COVID-19) pandemic seems to have a significant impact on cardiovascular-related hospital visits and admissions. During the first lockdown period, both de novo implantations and replacements decreased significantly, while there was no significant change during the second lockdown period.

Globally, the rising prevalence of chronic disorders is a major factor driving the market forward. For instance, as per the April 2021 report of the World Health Organization (WHO), non-communicable diseases (NCDs), also known as chronic diseases, are long-duration diseases and are the result of a combination of genetic, physiological, environmental, and behavioral factor. According to the article titled ' Prevalence of Non-Communicable Diseases Among Indians is 116 per 1,000 : Report' published in July 2021 Prevalence of non-communicable diseases in India is 11 per 1,000 population with hypertension, digestive diseases and diabetes leading the burden. Additionally, an increase in the geriatric population at risk of neurological and CVD diseases is expected to fuel market growth over the forecast period.

Bioelectronic Medicine promises to bring new insights into diagnosing and treating diseases and conditions as varied as cancer, rheumatoid arthritis, inflammatory bowel disease, obesity, diabetes, asthma, paralysis, blindness, bleeding, ischemia, and organ

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transplantation, cardiovascular disease, neurodegenerative diseases, and others. Building on a surge of progress in the past decade, the field is rapidly expanding. Technical innovations are making devices smaller and less invasive, with companies bringing new applications to market in the next several years, including for peripheral neuropathy, arthritis, chronic obstructive pulmonary disease, heart failure, and Type 1 diabetes.

Bioelectric Medicine is being developed by market participants as well. For example, GE Research's bioelectronic medicine team is using ultrasound to demonstrate potentially groundbreaking non-invasive methods to regulate dysfunction in the body's metabolic or inflammatory control systems. Bioelectronic medicine research traditionally relied on implanted devices to stimulate nerves and achieve therapeutic results. The GE Research team demonstrates the precise stimulation of nerve features directly within target organs using a non-invasive ultrasound technique. The preliminary findings of the GE Research team indicate that more investment and research into the use of ultrasound for peripheral neuromodulation is warranted and that increased collaboration between ultrasound device engineers and neuroscientists will be required. Hence, showing potential and simultaneously the need for investment in the biomedicine market.

Researchers are now looking into developing various bioelectronics-based therapeutic devices for tumor stimulation and neural modulation. This allows for the control of cancer signaling pathways, the restoration of healthy electrical impulse patterns, and the prevention of cancer progression. Recent advancements in bioelectric Medicine may prove to be a more natural and safe approach to cancer treatment than chemotherapy and surgery, both of which have numerous side effects. In today's world, patients with certain types of cancer are given electric field therapies in addition to chemotherapy to improve survival and safety. For instance, Bryne et al. showed that a high concentration of localized drugs could be forced deep inside the tumors using low direct current electric fields, referred to as "iontophoretic chemotherapy".

Also, per the article published in December 2020, "Core Concept: The rise of bioelectric medicine sparks interest among researchers, patients, and industry," the pharmaceutical industry is also on board. Johnson & Johnson's portfolio now includes several bioelectronic devices. This is likely to boost the market growth over the forecast period.

Thus the above mentioned factors are expected to drive the growth of the market during the forecast period.

Electroceuticals/Bioelectric Medicine Market Trends

The Arrhythmia Segment is Expected to Hold a Major Market Share in the Electroceuticals/Bioelectric Medicine Market

The Arrhythmia segment is expected to hold a major market share in the growth of the market during the forecast period. The rising prevalence of arrhythmia is the major factor driving market growth as per the article published in February 2021 titled "Global Epidemiology of Atrial Fibrillation: An Increasing Epidemic and Public Health Challenge," Atrial fibrillation is the most frequent cardiac arrhythmia. It has been estimated that 6-12 million people worldwide will suffer from this condition in the United States by 2050 and 17.9 million people in Europe by 2060. Atrial fibrillation is a major risk factor for ischemic stroke and provokes an important economic burden along with significant morbidity and mortality. Also, according to the National Center for Chronic Disease Prevention (CDC) and Health Promotion, Division for Heart Disease and Stroke Prevention facts updated on September 2021, it is estimated that 12.1 million people in the United States will have Atrial fibrillation (AFib) in 2030. According to the same source, more than 454,000 hospitalizations with AFib as the primary diagnosis happen yearly in the United States.

Furthermore, the products such as defibrillators and pacemakers are widely accepted by the population, which is also boosting the market growth. Additionally, growing technological advances and product approvals drive segment growth. For example, in July 2020, Abbott Laboratories received approval from the United States Food and Drug Administration for its Gallant line, which includes an implanted cardioverter-defibrillator and a cardiac resynchronization therapy defibrillator with Bluetooth technology. Advance pacemaker technology features such as remote data tracking devices, secure magnetic resonance imaging (MRI)

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devices, and data recording functionality enhance segment growth.

North America is Expected to Hold a significant share in the market and is expected to do the Same in the Forecast Period.

COVID-19 was temporally associated with an increase in out-of-hospital cardiac arrests. As per the article published in May 2021 on "Implantable Cardioverter-Defibrillator Shocks During COVID-19 Outbreak", Defibrillator shock episodes increased during the higher COVID-19 activity in New York City, New Orleans, and Boston. COVID-19 can affect the cardiovascular system, resulting in myocardial injury, intravascular thrombosis and arrhythmias. Individuals with an implantable cardioverter-defibrillator (ICD) are at increased risk for arrhythmic sudden cardiac arrest. Spikes in ICD shock rates also appeared to be temporally associated with the COVID-19 surge. However, the data released from Medtronic's survey on United States population demonstrating several struggles for those with chronic pain during the COVID-19 pandemic found that 44% of current chronic back and leg pain sufferers experienced care delays during the COVID-19 pandemic despite 87% reporting that their pain has not improved - or has even worsened since the pandemic began two years ago in March 2020. The survey also demonstrated that an overwhelming majority want more treatment options, yet awareness of spinal cord stimulation and targeted drug delivery options remains relatively low. That represents an opportunity to educate patients about the full range of options available to help alleviate their pain.

The rising geriatric population, increasing prevalence of chronic diseases, and demand for advanced quality healthcare are putting immense pressure on healthcare to meet the population's increasing demand. As per the United States Census Bureau's 2021 senior report, More than 54 million adults ages 65 and older live in the United States today, accounting for about 16.5% of the nation's population. The number of older adults living in the United States is growing. By 2050, the total number of adults ages 65 and older is projected to rise to 85.7 million, roughly 20% of the overall United States population.

There is an increasing prevalence of infectious and chronic diseases such as cancer, cardiovascular, diabetes, and many more. According to the Global Cancer Observatory (Globocan) Statistics 2020, there were 19.3 million new cases of cancer all over the world, accounting for both sexes in 2020, and the same source reported that the incidence of cancer was growing at a rapid pace in the world and estimated that the number of new cases of cancer in both sexes will reach to 30.2 million by 2040. Hence, this is huge potential for the bioelectric medicine market to quickly diagnose and treat diseases.

Furthermore, the presence of well-established market players such as Biotronik and Medtronic is also supporting the market growth in the region. Besides, favorable government support and regional product approvals also drive market growth. For instance, SetPoint Medical, a privately held clinical-stage bioelectronic medicine company dedicated to treating patients with chronic autoimmune diseases, has got a Breakthrough Device Designation from the United States and Drug Administration for the use of its novel bioelectronic device for patients with rheumatoid arthritis who have an incomplete response to or are intolerant to multiple biologic drugs.

Electroceuticals/Bioelectric Medicine Market Competitor Analysis

The electroceuticals/bioelectric medicine market is fragmented and competitive and consists of several major players. Some of the players operating in the market are SetPoint Medical, Sky Medical Technology, Cala Health, Boston Scientific Corporation, Abbott, Medtronic, Biotronik SE & Co. KG, Cochlear Ltd., Sonova, LivaNova PLC., ElectroCore Inc., NeuroPace, Inc., Koninklijke Philips N.V., NEVRO CORP., and WEINMANN Emergency Medical Technology GmbH + Co. KG.

Additional Benefits:

- The market estimate (ME) sheet in Excel format
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