

Japan Artificial Organs & Bionic Implants Market - Growth, Trends and Forecasts (2023 - 2028)

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Report description:

The Japan artificial organs & bionic implants market is expected to register a CAGR of 7.5% over the forecast period.

The COVID-19 virus has impacted the global healthcare system and has significantly impacted the artificial organs and the bionics market. For instance, an article published by the journal Surgery Today in October 2021 reported that the COVID-19 pandemic has influenced Japan's transplantation surgical procedures and has affected transplantation activity significantly. The article also said that the COVID-19 pandemic suspended transplantation surgeries in Japan among 48% of the transplantation centers, including 78% of the kidney transplantation centers, and reduced the number of organ donations to 61%. Thus the pandemic slowed down organ transplantation surgeries in Japan.

Also, this market's growth was initially hampered by strict lockdowns, as lockdowns led to certain restrictions and scarcity of many goods. Still, with the increased clinical studies and the resumption of other services, the studied market witnessed significant growth. The factors driving the development of the studied market are increased incidence of disabilities and organ failures, rising geriatric population in Japan, high incidence of road accidents leading to amputations, and scarcity of donor organs.

The increasing number of organ failure cases in the geriatric population in Japan causes an increased demand for artificial organs. The growing prevalence of many chronic diseases in the aging population, like cholesterol, heart diseases, and chronic kidney disorder, poses a harmful effect on the organs, thereby increasing demand for organ transplantation. For instance, an article published by the Journal of Personalized Medicine in January 2022 reported that the estimated prevalence of CKD in Japan is 13%. Chronic kidney disorder leads to lifelong dialysis in many cases, which demands increasing organ transplantation, thus driving the growth of the studied market.

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Similarly, the Statistical Handbook of Japan 2022 reported that in 2021, the senior population (65 years old and over) in Japan was 36.21 million, constituting 28.9% of the total population. Thus, the rising geriatric population is driving the growth of the studied market. With increasing aging, the immune system weakens, which causes an increased risk of chronic diseases that damage healthy functioning organs and demand for artificial organs, thereby driving the growth of the studied market.

Furthermore, the scarcity of organ donors in Japan caused by a high number of road accidents also drives increased demand for artificial organs. For instance, in October 2022, Japan Organ Transplant Network reported that as of September 2022, 15,573 people registered for organ transplantation, and only 82 people were available for this donation; that is, five donors per 1000 recipients are public, a still significant number of people will have to face scarcity of organs. Thus, this data demands an increasing need for artificial organ transplantation, thereby increasing the demand for artificial organs, thus driving the growth of the studied market.

Also, the news published by Japan Times on January 2022 reported that more than 300,000 people got injured in road accidents in 2021. Most of these accidents led to amputations. Thus, a high number of road accidents reported in the country lead to amputation, leading to increasing demand for artificial organs, thereby fueling the growth of the studied market in the country.

Thus, due to the increased incidence of disabilities and organ failures with the rising geriatric population and high incidence of road accidents, the market is expected to witness significant growth over the forecast period. However, expensive procedures and the risk of compatibility issues and malfunctions may slow down the development of the studied market.

Japan Artificial Organs & Bionic Implants Market Trends

Artificial Heart Organ by Organ is Expected to Witness a Significant Growth Over the Forecast Period.

The artificial heart organ segment is expected to witness significant growth over the forecast period, owing to the increasing geriatric population in the country and the rising incidence of heart diseases, thereby increasing demand for artificial hearts, thus driving the growth of the studied market.

The elderly population is susceptible to various chronic ailments, including kidney diseases, cardiovascular disorders, and neurological conditions. With growing age, the probability of suffering from organ failures escalates significantly. For instance, in 2021 Organization for Economic Corporation and Development reported that Japan is experiencing the fastest aging of its population and is expected to reach 80 people aged 65 and above per 100 people by 2060. Thus increasing aging is associated with an increased risk of cardiovascular diseases leading to impaired heart functioning among the geriatric population. This further generates the demand for artificial hearts, thereby driving the growth of this segment.

Further, technological developments and the development of artificial heart models are driving the growth of this segment. For instance, in June 2022, the University of Tokyo reported that they had developed a personal heart model from medical data to make a rational diagnosis based on the mechanism of disease. Thus, such developments and studies provide better results, driving the segment's growth.

Similarly, increasing clinical studies performed in Japan for the artificial heart also drive the segment's growth. For instance, in September 2022, the Abiomed Impella heart pump reported successful results in a Japan study. The analysis examined 293 consecutive Impella-supported AMICS patients in the J-PVAD Registry. The results also showed 81% survival at 30 days. The impella heart pump is the artificial heart pump that helps to maintain blood flow during high-risk protected percutaneous coronary interventions. Thus, such developments and clinical studies are driving the segment's growth.

Thus, due to the increasing geriatric population in the country and the rising incidence of heart diseases, the segment is expected

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to witness significant growth over the forecast period.

Orthopedic Bionic Segment by Bionic Segment is Expected to Witness High Growth Over the Forecast Period.

The orthopedic bionics segment is expected to witness high growth over the forecast period due to the increasing cases of road casualties, physical disability, trauma, the presence of diseases that may lead to limb impairment, and technological advancements.

The OECD 2022 report, stated that 305,196 people got injured in road accidents in Japan in the year 2021. Thus, a such high number of road accidents may increase the risk of bone damage, thereby increasing orthopedic bionics. Similarly, the rising cases of disability are also rising the demand for orthopedics bionics and contributing to the growth of this segment. For instance, in April 2022, news published by Japan Times reported 2.5% of Japan's population reported physical disability cases. Of this total disability, a high number of people may have orthopedic disabilities, thereby increasing the demand for orthopedic bionics and contributing to the growth of this segment.

Furthermore, increasing research and development in Japan for the development of orthopedic bionics are also contributing to the growth of this segment. For instance, an article published by the journal, Materials in April 2021, reported that a joint study conducted at the Institute of Engineering, Okayama University, Japan, and an institute in Korea stated the progress of the development of nylon bionic cancellous bone fabricated by selective laser sintering. The study conducted used the novel cancellous bone structure design method that aimed at ensuring the mechanical compatibility between the bionic bone and human bone using computer-aided design (CAD) and finite element analysis technology. Thus, such studies are leading to the development of new orthopedic bionics that is contributing to the growth of this segment.

Thus, the high number of road accidents and physical disabilities, along with research and developments is contributing to the growth of this segment over the forecast period.

Japan Artificial Organs & Bionic Implants Market Competitor Analysis

Japan's artificial organs and bionics market are moderately consolidated because of the presence of a few medium and small market players. Some of the major players in the market are Abiomed, Inc., Asahi Kasei Medical Co. Ltd., Baxter International, Inc., Berlin Heart GmbH, Boston Scientific Corporation, Cochlear Limited, Cyberonics Inc., Carl Bennet AB (Getinge AB), Medtronic PLC, Ossur hf., Heartware International, Inc. and Zimmer Biomet Holdings, Inc.

Additional Benefits:

- The market estimate (ME) sheet in Excel format
- 3 months of analyst support

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