

China Artificial Organs & Bionic Implants Market - Growth, Trends, Covid-19 Impact, and Forecasts (2023 - 2028)

Market Report | 2023-01-23 | 75 pages | Mordor Intelligence

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Report description:

The China artificial organs and bionic implants market is expected to register a CAGR of 11.7% during the forecast period.

Key Highlights

The outbreak of the pandemic impacted the market. The increasing number of organ failures due to COVID-19 increased the demand for artificial organs in China. For instance, according to a study published by National Center for Biotechnology Information (NCBI) in January 2022, in China, around 11.0% of COVID-19 patients exhibited short-term deterioration and later died of multiple organ dysfunction syndromes (MODS), including heart failure, acute renal injury, and shock. Therefore, such instances indicate that during the initial days of the pandemic, the demand for artificial organs was high in China.

However, during the pandemic, the market for bionic implants was negatively impacted by the decline in accident and traffic injury cases. For instance, according to research published in ScienceDirect in July 2021, the overall number of traffic injuries in Suzhou, China, from January to May 2020, decreased due to the effects of COVID-19. However, with the ease of the lockdowns and restrictions, the market gained momentum and is expected to continue the upward trend over the forecast period.

The increased incidence of disabilities and organ failures with the rising geriatric population and technological advancements leading to enhanced applications are the major drivers for the market.

According to the study, diabetic foot ulcers are the leading cause of chronic wounds in hospitalized patients in China, occurring in as many as 8.1% of those with diabetes each year. The study also stated that the annual incidence of diabetic foot ulcers in China was as high as 8.1% in patients with diabetes, which ranked first among the causes of chronic wounds in hospitalized patients.

The recurrence rate of foot ulcers in patients above 50 years with healed diabetic foot ulcers was as high as 31.6% within one year. Therefore, owing to increasing cases of disabilities, the demand for bionic implants is anticipated to increase in China, which may propel the market growth.

The increasing number of accident cases in China and organ failures are also the major drivers for the market. According to the

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May 2022 World Health Rankings report, the accident rate in China in 2021 was 15.09%. Similarly, as per the February 2022 NCBI study, approximately 132.3 million people in China suffered from chronic kidney disease, and 2.8 million people received kidney transplantation in 2021. Such a high burden of accidents and chronic diseases is driving the market growth in the country. Therefore, the increasing number of accident cases leading to disabilities and organ failures in China is expected to surge the demand for bionic implants. Thus, the market is expected to show significant growth over the forecast period. However, the high cost of the procedures and fear of device malfunction and its consequences will likely hinder market growth over the forecast period.

China Artificial Organs & Bionic Implants Market Trends

Orthopedic Bionic Segment is Expected to Witness Significant Growth Over the Forecast Period

Orthopedic bionics are intended to help physically disabled people regain motor function. Bionic limbs replace prosthetic limbs, which have been the standard for over a century. Despite remarkable innovations that led to lighter devices and better designs, prosthetic limbs did not provide the necessary functional restoration that bionic devices now provide. The bionic limb is connected to the patient's neuromuscular system to control the limb bending, flexing, and grasping using the brain.

The increasing number of amputations due to chronic wounds is one of the major factors driving the segment's growth. For instance, as per the Multidisciplinary Digital Publishing Institute (MDPI) study published in July 2022, around 45.0% of diabetic patients in China suffered from diabetic foot ulcers, and the amputation rate from diabetic leg ulcers ranged from 18.0% to 28.0% in 2021. Therefore, such a high prevalence of chronic wounds and amputation rate from chronic wounds in the country are anticipated to drive the demand for orthopedic bionics, thereby propelling segment growth.

In addition, increasing new product launches and approvals in China are also expected to surge segment growth. For instance, in March 2022, Suzhou MicroPort Orthopedics Scientific (Group) Co. Ltd. announced that it received registration certificates from the National Medical Products Administration (NMPA) for two independently developed knee system products, SoSuperior+™ and MedalOne™ to market in China.

Therefore, such innovative product launches by key players and an increasing number of cases of amputations due to chronic wounds are anticipated to propel the demand for orthopedic bionics. Thus, the orthopedic bionics segment is expected to project considerable growth over the forecast period.

Artificial Kidney Segment is Expected to Witness Considerable Growth Over the Forecast Period

An artificial kidney, also known as hemodialysis, is the process of filtering or removing waste products accumulated in the blood of patients whose kidneys are functioning at a low level. The blood from the patient's body is pumped into the dialysis unit (which contains a cellophane tube surrounded by a liquid that has the same composition as the plasma in the blood, except for waste products), and the blood is purified. The dialysis tubing's cellophane tubing acts as a semipermeable membrane, allowing nitrogenous waste to pass through the tubing and into the dialysis fluid.

The increasing number of kidney diseases in China is one of the major factors propelling the segment's growth. For instance, as per the study published by NCBI in October 2022, chronic kidney disease (CKD) is a significant health problem characterized by its high incidence, high mortality rate, and multiple complications in China. The study also reported that chronic kidney disease increased mortality risk, reduced life expectancy, and increased medical costs in China in 2021.

Similarly, according to the National Institutes of Health (NIH) study published in June 2021, the prevalence of kidney disease treated with dialysis has risen in China and is predicted to increase further through 2025. Furthermore, according to the British Medical Journal (BMJ), 2021, there is a high demand for artificial kidneys in China as many people suffer from chronic kidney

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disease and advanced chronic kidney disease. An artificial kidney is one of the essential requirements for diagnosing kidney diseases. Therefore, increasing cases of kidney diseases in China is anticipated to propel the segment growth during the forecast period.

China Artificial Organs & Bionic Implants Market Competitor Analysis

The China artificial organs and bionic implants market is moderately competitive with several major players. Some of the strategies implemented include agreements, collaborative models, business expansion, and product development. The competitive landscape includes an analysis of a few international as well as local companies which hold market shares and are well known including Ossur, Boston Scientific Corporation, Otto Bock Holding GmbH & Co. KG, Medtronic plc, and Zimmer Biomet, among others.

Additional Benefits:

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

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