

# Artificial Organs Market Report by Type (Artificial Kidney, Artificial Heart, Artificial Pancreas, Cochlear Implants, and Others), and Region 2024-2032

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## Abstracts

The global artificial organs market size reached US\$ 20.6 Billion in 2023. Looking forward, IMARC Group expects the market to reach US\$ 40.6 Billion by 2032, exhibiting a growth rate (CAGR) of 7.6% during 2024-2032. The growing utilization of precise diagnostics, increasing adoption of advanced biomaterials, and technological advancements represent some of the key factors driving the market.

Biomaterials offer high conductivity, strength, bio-compatibility, and bio-degradability as compared to conventional metal, mineral, and synthetic-based materials. As a result, there is a rise in the adoption of advanced biomaterials in artificial organs, which currently represents one of the primary drivers contributing to the growth of the market. In addition to this, there is an increase in the utilization of biomaterials in medical devices, tissue engineering, drug and gene delivery, minimally invasive surgery (MIS), and biosensors. Apart from this, the growing demand for biomaterials in artificial organs due to the increasing number of organ failures and diseases among individuals across the globe is positively influencing the market.

Competitive analysis such as market structure, market share by key players, player positioning, top winning strategies, competitive dashboard, and company evaluation quadrant has been covered in the report. Also, detailed profiles of all major companies have been provided. The market structure is fragmented in nature with a large number of international and regional players operating in the industry. The volume of new entrants is moderate in the artificial organs industry on account of the low product differentiation and switching costs. However, stringent government policies and regulations and high investment costs hinder the entry of new entrants in the artificial organ market.

## What are Artificial Organs?

Artificial organs are engineered devices designed to be implanted in a human body as an alternative to the original organ. They are manufactured through various materials, such as metals, inanimate polymers, living cells, and plastic seeded with stem cells, that are obtained from the transplant recipient. They are widely available as kidney, lung, liver, heart, and artificial pancreas, and cochlear implants. They are highly suitable for the body as the immune system of the body does not reject the artificial organ. They do not require continuous tethering to a power supply or any other stationary resource to keep patients with serious organ failure. They assist in providing similar functions of a healthy organ or performing a specific function. They also aid in offering life support to prevent imminent death while waiting for a transplant. Besides this, it is beneficial in improving the life of a patient through cosmetic restoration, post-cancer surgery or an accident. As they save the life of individuals and aid in performing activities, the demand for artificial organs is rising across the globe.

## COVID-19 Impact:

The COVID-19 pandemic outbreak has caused severe problems for numerous industries and imposed unprecedented challenges on various countries. The artificial organ industry was not severely hampered by the pandemic as these are essential products. The production facilities or units of the industry were not shut down. Although, the manufacturing of artificial organs has been affected in the initial period of the pandemic on account of the supply chain disruptions from the raw materials industry. In line with this, there was a shortage of labor due to the fear of the widespread virus, which impacted the artificial organs market in the starting months of the COVID-19 pandemic. Apart from this, governing agencies of various countries have imposed stringent rules and regulations on on-road movement, which hampered the logistical and transportation industry. This has temporarily impacted the supply chain in the short term for the artificial organs industry. Moreover, there was a lower rate of transplant treatment and diagnostic across the globe that forced key players to descale their production capacity, and they faced some considerable financial losses during the pandemic. Besides this, there was a declined demand for artificial organs on account of the cross-border restrictions and bans on trade activities, such as imports and exports of goods and services around the world. Additionally, people were more focused on the treatment options related to the coronavirus as compared to implanting artificial organs in the body. However, after the reopening of lockdown measures, the demand for artificial organs is expected to increase in the coming years.

## Artificial Organs Market Trends:

At present, the increasing demand for artificial organs due to the decreasing number of organ donors around the world represents one of the major factors influencing the market positively. Additionally, the rising adoption of artificial organs due to the increasing number of organ failures and disabilities among individuals across the globe is contributing to the growth of the market. Apart from this, various technological advancements in medical devices, such as wearable technology, microchips technology, and non-invasive diagnostic techniques, are offering a positive market outlook. In addition to this, the increasing utilization of advanced biomaterials in artificial organs to provide high strength, conductivity, and bio-compatibility is offering lucrative growth opportunities to industry investors. Moreover, there is a rise in demand for artificial organs that are highly suitable to enhance the lives of individuals around the world. This, coupled with the growing number of lifestyle-related diseases among the masses due to the changing habits and lifestyles, is bolstering the growth of the market. In line with this, the rising preference for monitoring artificial organs by using precise diagnostics is impelling the growth of the market. Furthermore, key players are introducing artificial intelligence (AI) and embedded sensors in artificial organs, which is strengthening the growth of the market.

## Key Market Segmentation:

IMARC Group provides an analysis of the key trends in each sub-segment of the global artificial organs market report, along with forecasts at the global and regional level from 2024-2032. Our report has categorized the market based on type.

## Type Insights:

- Artificial Kidney
- Artificial Heart
- Artificial Pancreas
- Cochlear Implants
- Others

The report has provided a detailed breakup and analysis of the artificial organs market based on the type. This includes artificial kidney, artificial heart, artificial pancreas, cochlear implants, and others. According to the report, artificial kidney represented the largest segment as it acts as a replacement for traditional kidneys and dialysis systems. Moreover, technological advancements, such as emergence of artificial intelligence (AI)

and embedded sensors, in the artificial kidneys is propelling the growth of the market. In line with this, there is a rise in the demand for artificial kidney due to the increasing number of patients suffering from renal failure around the world. Besides this, the growing adoption of artificial kidney on account of the rising incidences of kidney diseases and low availability of kidney donors, is offering a favorable market outlook.

#### Regional Insights:

North America

Europe

Asia Pacific

Latin America

Middle East and Africa

The report has also provided a comprehensive analysis of all the major regional markets, which include North America, Europe, Asia Pacific, the Middle East and Africa, and Latin America. According to the report, North America was the largest market for artificial organs. Some of the factors driving the North America artificial organs market included the growing prevalence of organ failures and disabilities among the masses, rising adoption for the treatment of several cancers, and increasing number of diseases and low availability of organ donors. In addition to this, key players operating in the region are introducing miniature heart pump devices that provide smart patient management for enhanced patient experience, which is contributing to the growth of the market.

#### Competitive Landscape:

The report has also provided a comprehensive analysis of the competitive landscape in the global artificial organs market. Some of the companies covered in the report include:

Abiomed, Inc.

HeartWare International, Inc.

Edwards Lifesciences Corp

Boston Scientific Corporation

Cochlear Limited

Please note that this only represents a partial list of companies, and the complete list has been provided in the report.

#### Key Questions Answered in This Report

1. What was the size of the global artificial organs market in 2023?
2. What is the expected growth rate of the global artificial organs market during 2024-2032?
3. What are the key factors driving the global artificial organs market?
4. What has been the impact of COVID-19 on the global artificial organs market?
5. What is the breakup of the global artificial organs market based on the type?
6. What are the key regions in the global artificial organs market?
7. Who are the key players/companies in the global artificial organs market?

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