Orthopedic Biomaterial Market Research Report - Forecast to 2023

Orthopedic Biomaterial Market Information: By Type (Metal, Non-Metal), by Application (Joint Replacement, Tissue Fixation, Fracture Fixation Devices, Spine Implants), and End-User (Hospitals and Clinics and Specialty Centers) – Global Forecast Till 2023

Market Scenario

Orthopedic biomaterials are synthetic or organic materials. They are used for internal fracture fixation. Orthopedic biomaterials are commonly used in orthopedics, surgical implants, prosthetics, and various medical tools and devices.

The global orthopedic biomaterial market is majorly driven by the increasing older population leading to increase in the patient population, increasing surgeries, the various government supports, and growing awareness among young population towards health.

According to the United Nations, approximately over 962 million people were aged over 60 and above globally in 2017. The United Nations has also estimated that by 2050, the number of older population is likely to reach 425 million. This increasing aging population is likely to boost the growth of the global orthopedic biomaterial market.

Factors such as rigorous clinical and regulatory processes are likely to hamper the growth of the orthopedic biomaterial market.

Global orthopedic biomaterial market is expected to grow at a CAGR of 10.5% during the forecast period.

Figure: Global Orthopedic Biomaterial Market, by Region, 2016 (%)
Intended Audience
- Pharmaceutical Manufacturers and Suppliers
- Medical Research Laboratories
- Research and Development (R&D) Companies
- Market Research and Consulting Service Providers
- Potential Investors

Research Methodology:


Segments

The global orthopedic biomaterials market is segmented on the basis of types of material, application, and end-user.

On the basis of types of material, the market is segmented into metals and non-metals. The metals are further sub-segmented into titanium alloy, stainless steel, cobalt alloy, and others. Non-metals are further sub-segmented into polymeric, natural biomaterials, ceramic, and others. Ceramics are sub-segmented into alumina, zirconium dioxide, calcium phosphate, carbon, and others. Polymeric materials are sub-segmented into polyester, silicone, polyethylene, polymethylmethacrylate (PMMA), and others. Natural biomaterials are sub-segmented into chitin and chitosan, collagen, and others.

On the basis of application, the market is segmented into joint replacement, spine implants, fracture fixation devices, tissue fixation, viscosupplementation, and others. Joint replacement is sub-segmented into shoulder and elbow replacement, hip replacement, knee replacement, and others. Tissue fixation is sub-segmented into suture anchors, interference screws, and others. The fracture fixation devices are sub-segmented into screws, plates for bones, rods, and others.

On the basis of end-user, the market is segmented into hospitals, clinics, and others.

Regional Analysis

The North American orthopedic biomaterial market is a growing market in the Americas region. On a regional basis, the Americas region is segmented into North America and South America. North America is segmented into the U.S. and Canada. The increasing prevalence of different orthopedic surgeries, along with the increasing older population eventually leading to an increase in patient population is likely to drive the market. Additionally, increasing awareness of biodegradable products among the people, growing healthcare expenditure, and the rising demand for technologically advanced treatments and products along with rising the government support are likely to enhance the growth of the orthopedic biomaterial market in North America. For instance, according to the American Joint Replacement Registry, around 1,61,040 joint replacement procedures took place in the U.S. in 2016.
Europe is the second largest market and holds a strong share in the global orthopedic biomaterial market. The European market is expected to grow during the forecast period owing to the availability of innovative treatment facilities and rising research activities in orthopedic biomaterials for nanotechnology. Furthermore, increasing cases in orthopedic surgeries along with the rising population awareness regarding health is driving the growth of the orthopedic biomaterial market.

Asia Pacific is expected to be the fastest growing market. The increasing prevalence of chronic diseases is the major driver of market growth. China is the fastest growing region owing to an increasing population leading to rising patient population. Rising awareness about health and availability of new treatment methods drive the market in this region. Rising healthcare expenditure and the rise in the standard of living are driving the growth of the orthopedic biomaterial market in the Asia Pacific region.

The Middle East and Africa is expected to show the least growth in the market due to some major factors such as lack of awareness, limited access, and availability of treatment facilities. In the Middle East, the United Arab Emirates is the largest market, owing to the rising healthcare expenditure and the overall growth of the healthcare scenario also drives the market.

Key Players

Some of the key players in the orthopedic biomaterial market are CoorsTek Inc., CERADYNE, Straumann, Stryker, Kyocera Corporation, Materion Corporation, 3M ESPE, Nobel Biocare Services AG, Morgan Advanced Materials, and DePuy Synthes.