

Orthopedic Biomaterials Market Report by Material Type (Ceramics and Bioactive Glasses, Polymers, Calcium Phosphate Cement, Metal, Composites), Application (Orthopedic Implants, Joint Replacement/Reconstruction, Orthobiologics, Viscosupplementation, Bio-Resorbable Tissue Fixation), and Region 2023-2028

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# **Abstracts**

The global orthopedic biomaterials market size reached US\$ 16.3 Billion in 2022. Looking forward, IMARC Group expects the market to reach US\$ 29.7 Billion by 2028, exhibiting a growth rate (CAGR) of 10.5% during 2022-2028. The rising geriatric population, rapid product innovations, significant growth in the healthcare industry, the implementation of various government initiatives, and extensive research and development (R&D) activities are some of the key factors driving the market. Orthopedic biomaterials are substances used in orthopedic surgery to replace or repair damaged bone or joint tissues. They are either synthetic or natural and are designed to mimic the properties of bone and joint tissues. Ceramics and bioactive glasses, polymers, calcium phosphate cement, metal, and composites are some of the common types of materials. Orthopedic biomaterials are widely used for joint replacement surgeries, such as hip, knee, and shoulder replacements, fracture fixations, spinal implants, bone grafting, and soft tissue repair. They exhibit high strength, ductility, fracture toughness, hardness, corrosion resistance, formability, and biocompatibility. Orthopedic Biomaterials Market Trends:

The rising geriatric population across the globe prone to the risk of various musculoskeletal disorders, such as osteoarthritis, osteoporosis, and fractures is one of the key factors propelling the market growth. In line with this, the increasing prevalence of orthopedic conditions and injuries, such as sports injuries, degenerative joint



diseases, and traumatic fractures, is favoring the market growth. Moreover, the growing awareness about orthopedic disorders and the availability of advanced treatment solutions is acting as another growth-inducing factor. Apart from this, the introduction of advanced biomaterials that offer enhanced biocompatibility, durability, mechanical strength, and integration with natural tissues, improving the success rates and longevity of orthopedic implants, is providing an impetus to the market growth. Additionally, the utilization of biodegradable materials that are derived from natural sources and are used in orthopedics to promote tissue regeneration and healing is contributing to the market growth. Furthermore, the increasing demand for minimally invasive (MI) surgeries due to their advantages, such as smaller incisions, faster recovery, reduced pain, and shorter hospital stays, is positively impacting the market growth. Other factors, including rising expenditure capacities of consumers, extensive research and development (R&D) activities, growing investments in healthcare infrastructure and services, and the implementation of various government initiatives that encourage healthcare providers and patients to opt for orthopedic biomaterials and procedures, are supporting the market growth.

Key Market Segmentation:

IMARC Group provides an analysis of the key trends in each segment of the global orthopedic biomaterials market, along with forecasts at the global, regional, and country levels from 2023-2028. Our report has categorized the market based on material type and application.

Material Type Insights:

Ceramics and Bioactive Glasses

Polymers

Calcium Phosphate Cement

Metal

Composites

The report has provided a detailed breakup and analysis of the orthopedic biomaterials market based on the material type. This includes ceramics and bioactive glasses, polymers, calcium phosphate cement, metal, and composites. According to the report, ceramics and bioactive glasses represented the largest segment.

Application Insights:

Orthopedic Implants

Joint Replacement/Reconstruction

Orthobiologics

Viscosupplementation

Bio-Resorbable Tissue Fixation

The report has provided a detailed breakup and analysis of the orthopedic biomaterials market based on the application. This includes orthopedic implants, joint



replacement/reconstruction, orthobiologics, viscosupplementation, and bio-resorbable tissue fixation. According to the report, orthopedic implants represented the largest segment.

Regional Insights:

North America

**United States** 

Canada

Asia Pacific

China

Japan

India

South Korea

Australia

Indonesia

Others

Europe

Germany

France

United Kingdom

Italy

Spain

Russia

Others

Latin America

Brazil

Mexico

Others

Middle East and Africa

The report has also provided a comprehensive analysis of all the major regional markets, which include North America (the United States and Canada); Asia Pacific (China, Japan, India, South Korea, Australia, Indonesia, and others); Europe (Germany, France, the United Kingdom, Italy, Spain, Russia, and others); Latin America (Brazil, Mexico, and others); and the Middle East and Africa. According to the report, North America was the largest market for orthopedic biomaterials. Some of the factors driving the North America orthopedic biomaterials market included the rising geriatric population, various technological advancements, and growing expenditure capacities of consumers.

Competitive Landscape:

The report has also provided a comprehensive analysis of the competitive landscape in



the global orthopedic biomaterials market. Detailed profiles of all major companies have been provided. Some of the companies covered include Arthrex Inc., Berkeley Advanced Biomaterials, CAM Bioceramics B.V., Collagen Matrix Inc., CoorsTek Inc., Evonik Industries AG (RAG-Stiftung), Exactech Inc., Globus Medical Inc., Invibio Ltd. (Victrex plc), Koninklijke DSM N.V., Medical Devices Business Services Inc., Stryker Corporation, Zimmer Biomet, etc. Kindly 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:

How has the global orthopedic biomaterials market performed so far, and how will it perform in the coming years?

What are the drivers, restraints, and opportunities in the global orthopedic biomaterials market?

What is the impact of each driver, restraint, and opportunity on the global orthopedic biomaterials market?

What are the key regional markets?

Which countries represent the most attractive orthopedic biomaterials market?

What is the breakup of the market based on the material type?

Which is the most attractive material type in the orthopedic biomaterials market?

What is the breakup of the market based on the application?

Which is the most attractive application in the orthopedic biomaterials market?

What is the competitive structure of the global orthopedic biomaterials market?

Who are the key players/companies in the global orthopedic biomaterials market?



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