

# **Bone Graft Substitutes: Market Research Report**

https://marketpublishers.com/r/B16498FD96CEN.html

Date: January 2019

Pages: 211

Price: US\$ 5,600.00 (Single User License)

ID: B16498FD96CEN

## **Abstracts**

This report analyzes the worldwide markets for Bone Graft Substitutes in US\$ Million. The US market is additionally analyzed by the following Segments: Demineralized Bone Matrix, Bone Morphogenetic Protein, Stem Cell Based Bone Grafts, and Synthetic Bone Grafts.

The report provides separate comprehensive analytics for the US, Canada, Japan, Europe, Asia-Pacific, Latin America and Rest of World. Annual estimates and forecasts are provided for the period 2016 through 2024.

Also, a five-year historic analysis is provided for these markets. Market data and analytics are derived from primary and secondary research.

Company profiles are primarily based on public domain information including company URLs. The report profiles 42 companies including many key and niche players such as -

AlloSource

Baxter International, Inc.

**DePuy Synthes Companies** 

Exactech, Inc.

SeaSpine Holdings Corporation

LifeNet Health, Inc.



## **Contents**

### 1. INTRODUCTION, METHODOLOGY & PRODUCT DEFINITIONS

#### 2. INDUSTRY OVERVIEW

Bone Grafts - A Prelude

Outlook

Developing Markets Hold Lucrative Potential for Bone Graft Substitutes Rise in Volume of Orthopedic Procedures Boosts Prospects

**Table 1.** Global Orthopedic Surgical Procedure Volume (2010-2020) (in million) (includes corresponding Graph/Chart)

**Table 2.** Global Orthopedic Market by Segment (2017): Percentage Breakdown of Value Sales for Extremities, Hips, Knees, Orthobiologics, Spine, Trauma and Others (includes corresponding Graph/Chart)

Bone Grafting – An Important Procedure for Healing Fractures

**Table 3.** Fractures by Age Group (2017): Percentage Share Breakdown of Number of Fractures by Age Group (includes corresponding Graph/Chart)

What Drives Physicians' Choice of Bone Grafts?

Challenges for Different Bone Grafts

Patient Safety Emerges as a Top Priority

Unmet Clinical Needs to Foster R&D Engine

Advanced Allografts Encroach the Use of Autografts in Surgical Procedures

Rise in Popularity of Synthetic Bone Graft Substitutes

Bone Morphogenetic Protein – Safety Concerns Impact Growth Prospects

Stem Cell Based Bone Grafts: Promising Growth Ahead

DBM: Strong Growth but Tough Competition

Demineralized Bone Matrix (DBM) Allografts Offered by Select Companies

#### 3. GROWTH DRIVERS, ISSUES & TRENDS

A Review of Major Factors Affecting Growth



Increasing Incidence of Degenerative Intervertebral Disc Diseases

**Table 4.** % of Women Affected by Osteoporosis (includes corresponding Graph/Chart)

Rising Prevalence of Arthritis and Other Orthopedic Disorders
Growing Number of Revision Orthopedic Surgeries
Rise in Spinal Fusions in Private Healthcare
Foot and Extremity Reconstruction – Promising Market for Bone Grafts
Spine Fusion – The Largest Application Market for Bone Graft Substitutes
Dental Bone Grafting – A High Potential Market

**Table 5.** Dental Implants Penetration Worldwide (2015) - Number of Dental Implants Placed Per 10,000 Persons in Select Countries (includes corresponding Graph/Chart)

Adoption of Dental Implants – Breakdown by Number of Implants in Select Countries

**Table 6.** Dental Tissue & Bone Regeneration Materials Market (2017): Percentage Share Breakdown by Segment for Allografts, Synthetics, and Xenografts (includes corresponding Graph/Chart)

Increasing Visibility of Orthobiological Products to Spur Grafting Options Technological Advancements Drive Bone Grafts Market A Glance at Few Recent Innovations/Research Efforts in Bone Grafts Sea Coral Offers Perfect Biomaterial for Bone Grafts Indian Scientists at Synthera Develop Innovative Bone Graft Substitutes NJIT Receives Grant to Commercialize New Bone Graft Substitute Technology Consortium to Develop SmartBonePep Bio-hybrid Composite Bone Graft QMUL Researchers Develop Inductigraft Synthetic Bone Grafts Researchers Develop Aerograft Dental Bone Graft Material for Dental Procedures Precision Machined Allografts Gain Surgeon Preference Disease Transmission through Bone Grafts – A Major Safety Concern Lack of Standards in Bone Graft Substitute Market Reimbursement Issues Continue to Haunt Bone Grafts Market Regional Regulations & Religious Beliefs Hamper Bone Graft Substitutes Market Synthetic Bone Grafts – Solution for Halal Bone Graft Implantation Bone Glue – A Potential Threat to the Bone Graft Market



Alliances with Organ Procurement Organizations: A Shot in the Arm

Limited Availability of Donor Tissues

Competition Intensifies from Alternative Tissue Repair Therapies

Substitute Technologies Threaten to Replace Spinal Fusions

Bone Grafts Termed as Tissues Suffer From Inconsistent Patient Outcomes

New Ways of Fixing Broken Bones

BoneCure Sleeve – Heading Towards the Human Market

Bioactive Glass – Suitable for Weight Bearing Portion

Review of Demographic Drivers

Aging Population: A Strong Demographic Driver

**Table 7.** Global Aging Population in Select Regions/Countries: Population of 60+ Individuals in '000s and as a Percentage of Total Population for 2015 & 2050 (includes corresponding Graph/Chart)

Rise in Global Obesity Epidemic Boosts Market Growth
Facts & Statistics on the Rising Obesity Levels: Important Opportunity Indicators

**Table 8.** World Obesity Prevalence (2015 & 2022): Percentage of Obese Population for Leading Ten Countries (includes corresponding Graph/Chart)

#### 4. PRODUCT OVERVIEW

Bone Grafts: A Definition

Bone Grafts: A Peek into their Mechanism of Action

Types of Bone Grafts

Scoring of Osteoconduction, Osteoinduction, and Osteogenesis Properties of Bone

Grafts by Type

Autografts

Standard Allografts

Machined Bone Allografts

**Demineralized Bone Matrix** 

Bone Morphogenetic Proteins (BMPs)

Basic Functions of TGF-Beta

Synthetic Bone Grafts

Collagen-based Matrices

Ceramic: A Material of Choice



Hydroxyapatite: A Major Calcium Phosphate Based Ceramic

Calcium Sulfate

Polymer Based Bone Grafts

Coral: A Valuable Synthetic Graft Material

Application of Bone Grafts

Spinal Fusion

Trauma & Reconstructive Surgeries

Trauma

Reconstructive Surgeries

Joint Revision Arthroplasty

Oral, Periodontal, and Cranio-Maxillofacial

Tissue Recovery & Processing: A Review

Tissue Banks

**Tissue Processing** 

Tissue Distribution

An Illustration of the Tissue Recovering, Processing, & Distribution Network

#### **5. REGULATORY ENVIRONMENT**

Regulatory Issues

FDA Classification of Bone Products

Human Cells, Tissues and Cellular and Tissue-Based Products (HCT/Ps)

National Organ Transplant Act (NOTA)

**Good Tissue Practices** 

Tissue Banking Regulation

FDA Regulations on Xenograft

DBM-based Products in US

Synthetic Bone Graft Substitutes

#### 6. COMPETITIVE LANDSCAPE

Bone Graft Products of Select Players

6.1 Focus on Select Players

AlloSource (USA)

Baxter International, Inc. (USA)

DePuy Synthes Companies (USA)

Exactech, Inc. (USA)

SeaSpine Holdings Corporation (USA)

LifeNet Health, Inc. (USA)

Bone Graft Substitutes: Market Research Report



Medtronic plc (Ireland)

NovaBone Products LLC (USA)

NuVasive, Inc. (USA)

Orthofix International N V (Curação)

RTI Surgical, Inc. (USA)

Smith & Nephew Plc (UK)

Stryker Corporation (USA)

Wright Medical Group N. V. (Netherlands)

Xtant Medical Holdings, Inc. (USA)

Zimmer Biomet Holdings, Inc. (USA)

6.2 Product Innovations/Introductions

AlloSource and Stryker Unveil the ProChondrixCR Cryopreserved Osteochondral Allograft

LifeNet Health launches AngioGraft Aortoiliac Artery

Royal Biologics Launches MAXX-FuseLine of Allografts

NovaBone launches NovaBone IRM and IRM MacroPOR Biologically Active Bone Graft Substitutes

Leader Biomedical Group DBM, cleaned with eCOO Clean Technology

Antibe Therapeutics Launches PentOS OI Max for Dental Biologics Market

Zimmer Biomet Introduces PrimaGen Advanced Allograft

Citagenix Launches PentOS OI Putty Bone Graft Substitute

AlloSource Introduces ProChondrix Cartilage Restoration Matrix

6.3 Recent Industry Activity

Bonesupport Enters into Agreement with Collagen Matrix

DePuy Synthes Enters into Agreement with Prosidyan to Promote the FIBERGRAFT Family of Products in the US

Medtronic Receives FDA Approval of Infuse(TM) Bone Graft in New Spine Surgery Indications

**Exactech Completes Merger with TPG Capital** 

Molecular Matrix Receives FDA Clearance for Osteo-PTM Synthetic Bone Graft Substitute

RTI Surgical to Acquire Zyga Technology

SeaSpine Receives FDA 510(k) Clearance for OsteoBallast Demineralized Bone Matrix in Resorbable Mesh

BONESUPPORT Signs Agreement for Bio-Ceramic Bone Substitute Products in the Italian Market

Prosidyan Receives FDA 510(k) Clearance for FIBERGRAFT BG Matrix – Bone Graft Substitute for Postero-lateral Spinal Fusion

DSM Enters into Partnership with Cerapedics to Develop and Manufacture Next



Generation of Peptide Enhanced Bone Graft

Artoss Announces Availability of NanoBone Bone Graft Products through DAPA
Bonesupport Enters into Commercialization Agreement for the French Market
BoneSupport Extends Distribution agreement with Zimmer Biomet for Cerament TM
Bone Void Filler

Kuros Biosciences Acquires Xpand Biotechnology AllowSource Receives Patent for ProChondrix Cartilage Restoration Matrix MiMedx Group Takes Over Stability Biologics

#### 7. GLOBAL MARKET PERSPECTIVE

**Table 9.** World Recent Past, Current and Future Analysis for Bone Graft Substitutes by Geographic Region/Country - US, Canada, Japan, Europe, Asia-Pacific (excluding Japan), Latin America and Rest of World Markets Independently Analyzed with Annual Revenue Figures in US\$ Million for Years 2016 through 2024 (includes corresponding Graph/Chart)

**Table 10.** World Historic Review for Bone Graft Substitutes by Geographic Region/Country - US, Canada, Japan, Europe, Asia-Pacific (excluding Japan), Latin America and Rest of World Markets Independently Analyzed with Annual Revenue Figures in US\$ Million for Years 2011 through 2015 (includes corresponding Graph/Chart)

**Table 11.** World 14-Year Perspective for Bone Graft Substitutes by Geographic Region/Country - Percentage Breakdown of Revenues for US, Canada, Japan, Europe, Asia-Pacific (excluding Japan), Latin America and Rest of World Markets for Years 2011, 2018 & 2024 (includes corresponding Graph/Chart)

#### 8. REGIONAL MARKET PERSPECTIVE

8.1 The United States

A. Market Analysis

US-The Largest Market for Bone Graft Substitutes

Aging Population: A Weighty Demographic Growth Factor

**Table 12.** North American Elderly Population by Age Group (1975-2050) (includes corresponding Graph/Chart)



**Table 13.** US Population Breakdown by Age Group (2017) (includes corresponding Graph/Chart)

Rising Incidence of Degenerative Intervertebral Disc Diseases Back Pain Arthritis

**Table 14.** % of Population Diagnosed with Arthritis by Age Group (includes corresponding Graph/Chart)

Osteoporosis

**Table 15.** Breakdown of Osteoporotic Fractures by Site in the US (includes corresponding Graph/Chart)

Rise in Revision Orthopedic Surgeries Bodes Well for Bone Graft Substitutes Market Synthetic Bone Grafts to Drive Growth

Stem Cell Bone Grafts: A Promising Segment in BGS Market Spinal Surgery Market: Opportunity for Bone Grafts Market

**Table 16.** US Spinal Fusion Surgery Market: Percentage Breakdown of Procedure Volume by Age Group (includes corresponding Graph/Chart)

Dental Bone Graft Substitutes Market: An Overview

**Table 17.** Dental Implants Market in the US - Incidence of Dental Implant Procedures in '000s for the Years 2016, 2020 & 2025 (includes corresponding Graph/Chart)

Orthopedic Biomaterials Market – An Overview
Orthobiologics Market – Overview
Regulatory Challenges Limit Growth in the Bone Graft Substitutes
Competitive Scenario

**Table 18.** US Market for Bone Graft Substitutes (2017E): Percentage Market Share



Breakdown of Leading Suppliers (includes corresponding Graph/Chart)

B. Market Analytics

**Table 19.** US Recent Past, Current and Future Analysis for Bone Graft Substitutes by Product Segment - Demineralized Bone Matrix (DBM), Bone Morphogenetic Protein (BMP), Stem Cell Based Grafts, and Synthetic Bone Grafts Markets Independently Analyzed with Annual Revenue Figures in US\$ Million for Years 2016 through 2024 (includes corresponding Graph/Chart)

**Table 20.** US Historic Review for Bone Graft Substitutes by Product Segment - Demineralized Bone Matrix (DBM), Bone Morphogenetic Protein (BMP), Stem Cell Based Grafts, and Synthetic Bone Grafts Markets Independently Analyzed with Annual Revenue Figures in US\$ Million for Years 2011 through 2015 (includes corresponding Graph/Chart)

**Table 21.** US 14-Year Perspective for Bone Graft Substitutes by Product Segment - Percentage Breakdown of Revenues for Demineralized Bone Matrix (DBM), Bone Morphogenetic Protein (BMP), Stem Cell Based Grafts, and Synthetic Bone Grafts Markets for Years 2011, 2018 & 2024 (includes corresponding Graph/Chart)

8.2 Canada Market Analysis

**Table 22.** Canadian Recent Past, Current and Future Analysis for Bone Graft Substitutes Market Analyzed with Annual Revenue Figures in US\$ Million for Years 2016 through 2024 (includes corresponding Graph/Chart)

**Table 23.** Canadian Historic Review for Bone Graft Substitutes Market Analyzed with Annual Revenue Figures in US\$ Million for Years 2011 through 2015 (includes corresponding Graph/Chart)

8.3 JapanA. Market AnalysisCurrent and Future AnalysisDental Bone Graft Substitutes MarketB. Market Analytics



**Table 24.** Japanese Recent Past, Current and Future Analysis for Bone Graft Substitutes Market Analyzed with Annual Revenue Figures in US\$ Million for Years 2016 through 2024 (includes corresponding Graph/Chart)

**Table 25.** Japanese Historic Review for Bone Graft Substitutes Market Analyzed with Annual Revenue Figures in US\$ Million for Years 2011 through 2015 (includes corresponding Graph/Chart)

8.4 Europe

A. Market Analysis

European Market for Bone Graft Substitutes: An Overview

**Table 26.** European Bone Graft Substitutes Market (2017): Percentage Share Breakdown of Value Sales for Synthetic, Allograft, and DBM (includes corresponding Graph/Chart)

Synthetic Bone Graft Drives the BGS Market Bone Morphogenetic Protein (BMP) Market Dental Biomaterials Market in Europe: An Insight B. Market Analytics

**Table 27.** European Recent Past, Current and Future Analysis for Bone Graft Substitutes by Geographic Region/Country - France, Germany, Italy, UK, Spain and Rest of Europe Markets Independently Analyzed with Annual Revenue Figures in US\$ Million for Years 2016 through 2024 (includes corresponding Graph/Chart)

**Table 28.** European Historic Review for Bone Graft Substitutes by Geographic Region/Country - France, Germany, Italy, UK, Spain and Rest of Europe Markets Independently Analyzed with Annual Revenue Figures in US\$ Million for Years 2011 through 2015 (includes corresponding Graph/Chart)

**Table 29.** European 14-Year Perspective for Bone Graft Substitutes by Geographic Region/Country - Percentage Breakdown of Revenues for France, Germany, Italy, UK, Spain and Rest of Europe Markets for Years 2011, 2018 & 2024 (includes corresponding Graph/Chart)



8.5 Asia-PacificA. Market AnalysisCurrent and Future AnalysisDental Bone Graft Substitutes Market in Asia-Pacific – An Overview

**Table 30.** Leading Players in the Dental Bone Graft Substitutes Market in Asia-Pacific (2015E): Percentage Share Breakdown of Sales for Geistlich and Others (includes corresponding Graph/Chart)

**Table 31.** Over 65 Years Individuals as % of Total Population in Select Asian Countries (2015) (includes corresponding Graph/Chart)

Focus on Select Regional Markets Australia

**Table 32.** Dental Bone Graft Substitutes Market in Australia (2020P): Percentage Share Breakdown of Volume Sales by Segment - Demineralized Allografts, Mineralized Allografts, Synthetic Grafts, and Xenografts (includes corresponding Graph/Chart)

China
India
Current and Future Analysis
Malaysia
South Korea

**Table 33.** Dental Bone Graft Substitutes Market in South Korea (2015E): Percentage Share Breakdown of Volume Sales by Material - Allograft, Synthetic Graft and Xenograft (includes corresponding Graph/Chart)

Singapore

B. Market Analytics

**Table 34.** Asia-Pacific Recent Past, Current and Future Analysis for Bone Graft Substitutes by Geographic Region/Country - China, India and Rest of Asia-Pacific Markets Independently Analyzed with Annual Revenue Figures in US\$ Million for Years



2016 through 2024 (includes corresponding Graph/Chart)

**Table 35.** Asia-Pacific Historic Review for Bone Graft Substitutes by Geographic Region/Country - China, India and Rest of Asia-Pacific Markets Independently Analyzed with Annual Revenue Figures in US\$ Million for Years 2011 through 2015 (includes corresponding Graph/Chart)

**Table 36.** Asia-Pacific 14-Year Perspective for Bone Graft Substitutes by Geographic Region/ Country - Percentage Breakdown of Revenues for China, India and Rest of Asia-Pacific Markets for Years 2011, 2018 & 2024 (includes corresponding Graph/Chart)

8.6 Latin AmericaA. Market AnalysisCurrent and Future AnalysisDental Bone Graft Substitutes Market

**Table 37.** Percentage of People with Edentulous Jaws by in Brazil (2000, 2010 & 2015) (includes corresponding Graph/Chart)

Brazilian Orthopedic Devices Market B. Market Analytics

**Table 38.** Latin American Recent Past, Current and Future Analysis for Bone Graft Substitutes by Geographic Region/Country - Brazil and Rest of Latin America Markets Independently Analyzed with Annual Revenue Figures in US\$ Million for Years 2016 through 2024 (includes corresponding Graph/Chart)

**Table 39.** Latin American Historic Review for Bone Graft Substitutes by Geographic Region/ Country - Brazil and Rest of Latin America Markets Independently Analyzed with Annual Revenue Figures in US\$ Million for Years 2011 through 2015 (includes corresponding Graph/Chart)

**Table 40.** Latin American 14-Year Perspective for Bone Graft Substitutes by Geographic Region/Country - Percentage Breakdown of Revenues for Brazil and Rest of Latin America Markets for Years 2011, 2018 & 2024 (includes corresponding Graph/Chart)



8.7 Rest of World

A. Market Analysis

**Current and Future Analysis** 

B. Market Analytics

**Table 41.** Rest of World Recent Past, Current and Future Analysis for Bone Graft Substitutes Market Analyzed with Annual Revenue Figures in US\$ Million for Years 2016 through 2024 (includes corresponding Graph/Chart)

**Table 42.** Rest of World Historic Review for Bone Graft Substitutes Market Analyzed with Annual Revenue Figures in US\$ Million for Years 2011 through 2015 (includes corresponding Graph/Chart)

#### 9. COMPANY PROFILES

Total Companies Profiled: 57 (including Divisions/Subsidiaries - 60)

The United States (38)

Canada (1)

Europe (17)

France (2)

Germany (2)

The United Kingdom (4)

Rest of Europe (9)

Asia-Pacific (Excluding Japan) (3)

Africa (1)



## I would like to order

Product name: Bone Graft Substitutes: Market Research Report

Product link: https://marketpublishers.com/r/B16498FD96CEN.html

Price: US\$ 5,600.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer

Service:

info@marketpublishers.com

## **Payment**

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <a href="https://marketpublishers.com/r/B16498FD96CEN.html">https://marketpublishers.com/r/B16498FD96CEN.html</a>