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Orthopedic Implants

US Industry Study with Forecasts for **2012 & 2017**

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INDUSTRY STRUCTURE

1 Orthopedic Implant Market Share, 2007 149

The key reconstructive joint replacement segment will benefit from an older and more physically active population, which will increase the prevalence of degenerative and injured joints.

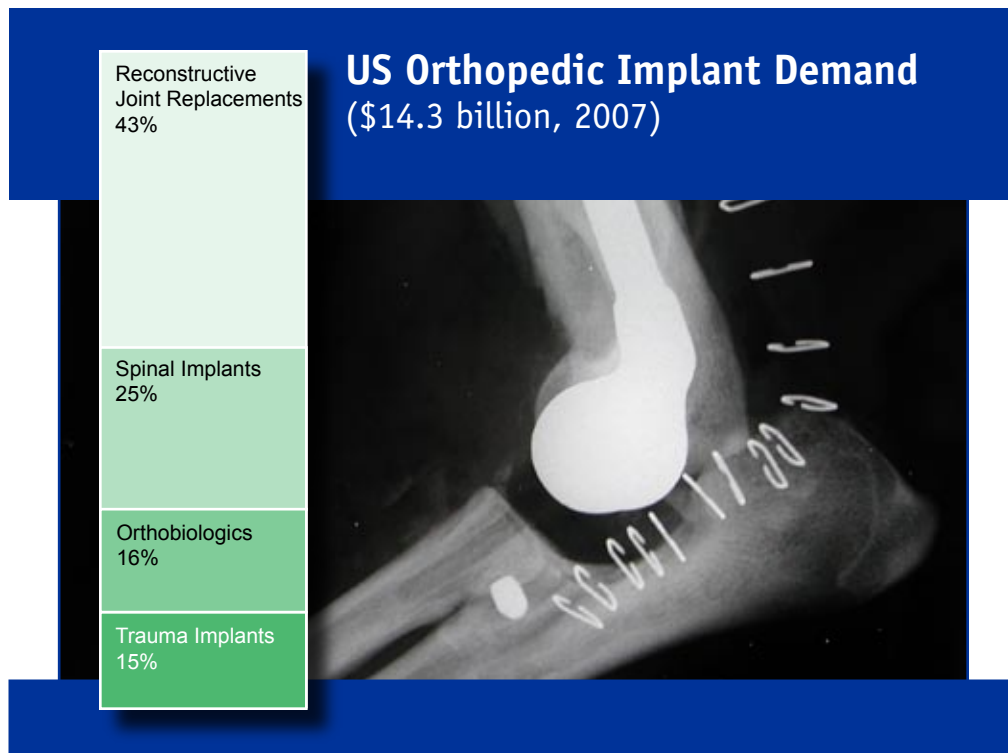
Joint replacement to remain largest segment

US demand for orthopedic implants will increase 8.9 percent annually to nearly \$22 billion in 2012, with all major segments providing strong growth opportunities. The market for reconstructive joint replacements, which is forecast to reach \$9 billion in 2012, will gain upward momentum from an aging population and the widespread prevalence of physically active lifestyles. These trends will expand the number of persons suffering from degenerative and injured joints.

Knees and hips, which are highly vulnerable to degeneration caused by arthritic conditions, will continue to account for the vast majority of reconstructive joint replacements. Continuing advances in materials and design will improve the safety and performance features of knee and hip implants and encourage their expanding use in the treatment of severe arthritis. Among other reconstructive joint replacements, shoulder systems will post the strongest demand and realize the best growth opportunities based on advantages over alternative therapies in the reduction of pain and restoration of mobility.

Spinal implants, orthobiologics to be fastest growing

Advances in product technologies and related surgical techniques, coupled with an increasing prevalence of chronic back



conditions, will create strong growth opportunities for spinal implants. Demand for these products is forecast to rise more than eleven percent annually. Fixation devices and artificial discs used in spinal fusion and motion preservation surgeries, especially procedures for the repair of vertebrae and replacement of degenerative discs, will account for the largest share of the market and best growth opportunities. Due to outcome advantages over alternative drug and physical therapies, surgery is emerging as the preferred treatment option for many spinal cord injuries and abnormalities. This trend reflects the increasing availability of high value-added devices such as fusion cages and artificial discs.

As breakthroughs in biotechnology and nanotechnology lead to the commercialization of new and improved products, orthobiologics will realize strong growth opportunities. Demand for these products is forecast to grow 9.1 percent annually to 2012. Growth factors, grafts and synthetic materials for the replacement and fortification of diseased and damaged bone are among the orthobiologics expected to fare especially well in the marketplace, benefitting from new product introductions and expanding applications in the support of spinal and trauma procedures. Bone cement, viscosupplementation substances and artificial tissue implants are also well-positioned to capture strong growth in demand.

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Sample Text, Table & Chart

PRODUCTS

Hip Replacement Implants

Most of the same factors that influence the market for also drive the market for hip implants. The increasing prevalence of osteoarthritis and osteoporosis conditions in the aging population expand the number of patients requiring total or partial hip implants. Advances in product design and technology will make reconstructive procedures more adaptable to younger individuals. In contrast to degenerative hips, injured and degenerative hips are typically less likely to be replaced with alternative treatments and require replacement in a higher percentage of cases. For this reason, demand for reconstructive hip implants is projected to increase at a faster pace than knee systems, rising 8.3 percent in 2012.

**SAMPLE
TEXT**

Reconstructive procedures replace degenerative hip joint with total prosthetic implants. The hip joint consists of the acetabulum and the femoral head. The acetabulum is a cup-shaped bone which attaches to the pelvis. The femoral head is a ball-shaped structure located on top of the femur (thigh bone). This "ball and socket" structure controls a wide range of mobile activity, including sitting, standing and walking.

In total hip replacement surgery, an artificial socket composed of high-density plastic, plastic-lined metal or ceramic replaces the acetabulum. The femoral head is replaced by a metal or ceramic ball-shaped implant. A metal stem, which attaches to the femoral head replacement, is inserted inside the femur bone, connecting the artificial hip to the leg.

Similar to knee prosthesis, hip replacement systems can be implanted through cemented, cementless or hybrid techniques. Cemented implants enable a shorter patient recovery period, but are prone to loosening, which reduces overall longevity. Cementless hip replacement systems allow natural bone to grow around the artificial components,

TABLE III-4

RECONSTRUCTIVE HIP REPLACEMENT DEMAND BY TYPE (million dollars)

Item	1997	2002	2007	2012	2017
Hip Replacement Procedures (000)	2,500	3,100	3,800	4,600	5,500
000\$ implants/procedure	1,200	1,500	1,800	2,200	2,700
Reconstructive Hip Replacements					
Metal-on-Plastic Implants					
Metal-on-Metal Implants					
Ceramic Implants					
% hips					
Reconstructive Joint Replacements	2,500	3,100	3,800	4,600	5,500

**SAMPLE
TABLE**

CHART V-1

ORTHOPEDIC IMPLANT MARKET SHARE, 2007 (\$14.3 billion)



**SAMPLE
CHART**

Sample Profile, Table & Forecast

TABLE IV-4
PHYSICIANS' OFFICE ORTHOPEDIC IMPLANT DEMAND
 (million dollars)

Item	1997	2002	2007	2012	2017
Number of Physicians (000)					30
\$ implants/physicians					11
Phys' Office Ortho Implant Demand					50
Orthobiologics					70
Trauma Implants					80
% physicians' offices					1.1
Orthopedic Implant Markets	4				00

**SAMPLE
PROFILE**

COMPANY PROFILES

Osteotech Incorporated
 51 James Way
 Eatontown, NJ 07724
 732-542-2800
<http://www.o>

Revenues: \$
 US Revenues
 Employment

Key Products: ...na implants

Osteotech develops, manufactures and markets biologic and biomaterial products, and device systems for use in musculoskeletal surgical applications. The Company operates through five segments: Demineralized Bone Matrix, Hybrid/Synthetic, Traditional Tissue, Spinal Allograft and Client Services.

Osteotech participates in the US orthopedics implant industry through all five segments. Through these segments, the Company is involved in the processing of human bone and tissue for transplant applications, as well as the production of other biomaterials and devices for spinal, trauma and total joint revision procedures, among others. Osteotech conducts manufacturing and biomaterial processing activities at a 73,000-square-foot facility in Eatontown, New Jersey.

The Demineralized Bone Matrix segment, which recorded revenues of \$66 million in 2007, processes and markets demineralized bone matrix (DBM) products under the GRAFTON brand name. The segment's demineralization process yields allograft bone tissue with osteoinductive and osteoconductive capabilities from cortical bone. GRAFTON products are available in a number of forms, including gel,

200

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“Based on the ongoing expansion and diversification of patient activity, demand for orthopedic implants in physicians’ offices will increase 9.7 percent annually to \$890 million in 2012. Similar to the outpatient segment, growth opportunities will remain divided between internal fixation devices for fracture repair and hyaluronic acid for viscosupplement therapy. Physicians’ offices will emerge as an attractive niche market for these products. More importantly ...”
 --Section IV, pg. 143

OTHER STUDIES

Cardiac Implants

The US cardiac implant industry is analyzed in this study. It presents historical demand data (1997, 2002, 2007) and forecasts for 2012 and 2017 by type (e.g., defibrillators, pacemakers, drug-eluting and other coronary stents, heart valves, vascular and related grafts, vena cava filters, ventricular-assist devices, implantable heart monitors), and market (e.g., hospitals, outpatient facilities, physicians' offices). The study also considers market environment factors, evaluates company market share and profiles industry competitors.

#2398.....09/2008..... \$4500

Cosmetic Surgery Products

This study analyzes the US cosmetic surgery product industry. It presents historical demand data (1997, 2002, 2007) and forecasts for 2012 and 2017 by raw material (e.g., microbial extracts, collagen, polymers); product (e.g., hair removal lasers, botulinum toxin, tissue fillers, breast implants, wound care disposables); and procedure (e.g., surgical reshaping, lifts and tucks, liposuction, laser treatments). The study also considers market environment factors, details industry structure and market share, and profiles industry participants.

#2389.....08/2008..... \$4600

Dental Products & Materials

US demand for dental products will rise 4.5% per year through 2012, aided by favorable population trends and continued interest in cosmetic dentistry. More concern about overall good health will provide added opportunities for mouthwash/dental rinses, sealants, fluoride treatments and other products. This study analyzes the US dental product and material industry, with forecasts for 2012 and 2017 by product and raw material. It also evaluates company market share and profiles leading industry competitors.

#2313.....03/2008..... \$4500

Drug Delivery Systems

US demand for drug delivery systems will grow 10% annually through 2012. Oral types will remain the largest drug delivery category while parenteral, inhalation and implantable systems grow the fastest. Parenteral formulations will eventually surpass oral dosages as the largest product group. This study analyzes the \$80.2 billion US drug delivery system industry, with forecasts for 2012 and 2017 by material, type and application. It also evaluates company market share and profiles leading industry players.

#2294.....03/2008..... \$4500

Implantable Medical Devices

US medical implant demand will rise 9.3% yearly through 2011. Cardiac implants will remain the top-selling group, led by stents and defibrillators. Bone cement, tissue and spinal implants will pace gains in the orthopedic segment. Other fast-growing types include neurological stimulators, cochlear devices and gastric bands. This study analyzes the \$27.9 billion US medical implant industry, with forecasts for 2011 and 2016 by material and product. It also evaluates market share and profiles major players.

#2255.....10/2007..... \$4500

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