Global Tissue Engineering Market: Information by Material (Nano-Fibrous Material, Biomimetic Material and others), Application (Orthopedics, Musculoskeletal and Spine, Cancer, Skin/Integumentary, Dental, Cardiology and others) and Region - Forecast till 2024

Market Overview

The Global Tissue Engineering Market is Expected to Register a CAGR of 17.84% to reach USD 53,424.00 Million by 2024.

Tissue engineering is scientific filed that mainly focuses on the development of tissue and organ by controlling biological or biochemical parameters in the laboratory. The main purpose of tissue engineering technique is to create functional 3D tissues combining scaffolds, cells and bioactive molecules. Rising popularity in numerous sectors such as neurology, burn treatment, and urological products are expected to fuel tissue engineering market growth over the forecast period. Growing cases of chronic diseases, road accidents, and trauma injuries are contributing to the growth in the development of tissue engineering solutions. In addition, the funding by the government for the ongoing research for tissue regeneration is a major driver for market growth.

Market Dynamics

Tissue engineering provides a solution that can either replace or repair damaged tissues. This tissue repaired solution includes transplants, surgical reconstruction, and mechanical devices. The growing geriatric population, increasing the incidence rate of chronic and infectious diseases, 3D bioprinting emerging as a novel tissue engineering strategy due to its cost efficiency, and increased focus of companies on tissue engineering-based therapies are the factors that are enhancing the market growth of the segment. However, lack of awareness regarding tissue engineering, lack of skilled professionals, and stringent regulatory policies are projected to restrain the growth of the market. The growing awareness of tissue engineering through social media and celebrity endorsements is expected to spur market growth during the forecast period.

Global Tissue Engineering Market Revenue, by Material, 2024 (USD Million)
Segmentation

Nano-fibrous materials are extremely soft materials with high surface-to-volume ratios, which serve as carriers for therapeutic agents such as growth factors, antibacterial agents, etc. They have found their largest application in wound care, as dressing materials. They mimic the extracellular matrix (ECM) acting as artificial ECM forming scaffolds for tissue formation. However, the biomimetic material segment is projected to exhibit the highest CAGR of 22.8% from 2019 to 2024. Cost-effectiveness of nano-fibrous materials and their efficiency fuel the growth of the market.

Key Players

The prominent players in the global tissue engineering market are Stryker (US), Allergan (US), Medtronic (Ireland), Zimmer (US), Baxter International (US), Integra LifeSciences (US), Organovo Holdings Inc (US), Cook Medical (US), DePuy Synthes (US), Acelity (US).

The players operating in the global tissue engineering market are focusing on product launches, along with expanding their global footprints by entering untapped markets.

Global Tissue Engineering Market Share, by Region, 2018 (%)

Sources: MRFR Analysis

Regional Analysis

The Americas accounted for the largest market share in 2018, with a market value of USD 8,003.23 million; the market is expected to register a CAGR of 17.17% during the forecast period. Europe was the second-largest market in 2018, valued at USD 6,186.20 Million; the market is projected to exhibit a CAGR of 18.19%. However, the market in Asia-Pacific is expected to register the highest CAGR of 18.43%. North America holds the largest tissue engineering market and is witnessing the fastest growth in the market. Some of the key factors leading to the growth of the tissue engineering market are increasing the number of clinical trials to evaluate the therapeutic potential of products, the rising prevalence of chronic diseases, and growing public awareness related to the therapeutic potency of therapy.

Europe is anticipated to account for the second-largest market share during the forecast period. Tissue engineering is widely used for skin replacement, temporary wound cover for burns, and also used in the treatment of diabetic leg and foot ulcers. These are also used to induce bone and connective tissue growth, guide long bone regeneration, and replace damaged knee cartilage. Factors responsible for market growth in this region are high availability of funds for R&D activities and rising support of the government for the life science domain.

Market Segmentation

Global Tissue Engineering Market, by Material
- Nano-Fibrous Material
- Biomimetic Material
- Composite Material
Nano-Composite Material

Global Tissue Engineering Market, by Application
- Orthopedics, Musculoskeletal, and Spine
- Cancer
- Skin/Integumentary
- Dental
- Cardiology
- Urology
- Neurology
- Cord Blood & Cell Banking
- GI & Gynecology

Global Tissue Engineering Market, by Region
- North America
  - US
  - Canada
  - Mexico
- Europe
  - Germany
  - UK
  - France
  - Spain
  - Italy
  - Rest of Europe
- Asia-Pacific
  - China
  - India
  - Japan
  - Australia & New Zealand
  - Southeast Asia
  - Rest of Asia-Pacific
- Rest of the World
  - Middle East
  - Africa
  - South America

Available Additional Customizations

Intended Audience
- Tissue Engineering Manufacturers
- Personal Care Industry
- Retailers, Distributors, and Wholesalers
- Governments, Associations, and Industrial Bodies
- Investors and Trade Experts
The global tissue engineering market is expected to reach USD $53,424.00 million in 2024.

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