

Hydrogel Based Drug Delivery System Market Trends and Analysis by Application, and Segment Forecast to 2029

*The Business Research Company's
Hydrogel Based Drug Delivery System
Global Market Report 2025 – Market Size,
Trends, And Global Forecast 2025-2034*

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/EINPresswire.com/ -- What Is The
Estimated Industry Size Of Hydrogel
Based Drug Delivery System Market?

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The market for hydrogel-based drug delivery systems has significantly expanded in the past few years. This market is projected to increase from \$6.82 billion in 2024 to \$7.56 billion in 2025,



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demonstrating a compound annual growth rate (CAGR) of 10.8%. Factors that contributed to the growth observed during the historic period include the increasing emphasis on targeted therapies, a surge in research and development undertakings, a rise in its application in regenerative medicine, an expanding role in wound care management, and a growing consciousness about biocompatible materials.

The market for hydrogel-based drug delivery systems is projected to witness significant expansion in the coming

years, expecting to soar to \$11.22 billion in 2029 with a compound annual growth rate (CAGR) of 10.4%. Factors contributing to the projected growth in the forecast period include the escalating demand for personalized medicines, increased spending in biotech and pharma research, the rising use of stimuli-responsive hydrogels, emphasis on minimizing systemic side effects, and enhanced government sponsorship for regenerative medicine. The forecast period also emphasizes trends such as the enhancement in stimuli-responsive hydrogels, innovation in smart, wearable drug delivery contrivances, the amalgamation of nanotech with hydrogels, development in biodegradable and biocompatible substances, and advances in targeted and

localized delivery systems.

Download a free sample of the hydrogel based drug delivery system market report:

<https://www.thebusinessresearchcompany.com/sample.aspx?id=27311&type=smp>

What Are The Major Factors Driving The Hydrogel Based Drug Delivery System Global Market Growth?

The increasing number of burn incidents is anticipated to boost the advancement of the [hydrogel-based drug delivery system market](#). Burn incidents refer to medical cases where patients experience damage to the skin or deeper tissues due to heat, chemicals, electricity, or radiation. The occurrence of burn incidents is escalating due to an increase in household accidents linked to mishandling of hot liquids or cooking gadgets, leading to skin injuries. This underscores the importance of improved safety awareness in daily routines. Hydrogel-based drug delivery systems aid burn recovery by upholding a moist, protective ambiance that promotes quicker healing and reduces pain. It also delivers medications in a controlled, sustained method, enhancing tissue repair and preventing infection. For example, according to the International Burn Injury Database (iBID), a US-based entity, burn and scald cases among children surged by 45% in the first half of 2023 compared with the same duration in 2022. Simultaneously, incidents involving hot water bottles in adults and the elderly increased by 19%. As such, the climbing prevalence of burn incidents is fueling the progression of the hydrogel-based drug delivery system market.

Who Are The Leading Companies In The Hydrogel Based Drug Delivery System Market?

Major players in the Hydrogel Based Drug Delivery System Global Market Report 2025 include:

- Cardinal Health Inc.
- Johnson & Johnson
- Merck KGaA
- UPM Biomedicals Oy
- The Lubrizol Corporation
- Smith & Nephew plc
- Paul Hartmann AG
- Ashland Global Holdings Inc.
- ConvaTec Group PLC
- Integra LifeSciences Holdings Corporation

What Are The Future Trends Of The Hydrogel Based Drug Delivery System Market?

Prominent firms in the hydrogel-based drug delivery market are concentrating on producing advanced offerings such as injectable hydrogels which heighten targeted delivery and facilitate prolonged, managed drug release. Injectable hydrogels, soft substances comprised mainly from water, are dispensed into the body using minimally invasive methods, directly administering drugs to the desired location, which amplifies their efficacy and diminishes potential side effects.

To illustrate, in October 2024, UPM Biomedicals Oy, a biotech corporation based in Finland, unveiled Fibgel, the first nanocellulose hydrogel injectable in the world, exclusively designed for implantable medical devices that are permanent. This ground breaking hydrogel originates from renewable Finnish birch wood cellulose and water, presenting a safe, sustainable, and non-animal substitute to conventional synthetic and animal-sourced hydrogels. Fibgel has adjustable mechanical qualities and superior biocompatibility, ensuring managed and extended drug release right at the needed location. Its capacity to thin when under stress facilitates easy administration via minimally invasive techniques, enhancing patient comfort and speeding up recovery time.

What Are The Primary Segments Covered In The Global Hydrogel Based Drug Delivery System Market Report?

The hydrogel based drug delivery system market covered in this report is segmented

- 1) By Type Of Hydrogel: Natural Hydrogels, Synthetic Hydrogels, Hybrid Hydrogels
- 2) By Drug Type: Small Molecules, Large Molecules, Peptides, Proteins
- 3) By Route Of Administration: Topical, Injectable, Oral, Transdermal, Ocular
- 4) By Application: Cardiology, Oncology, Immunology, Pain Management, Other Applications
- 5) By End-User: Hospitals, Clinics, Research Institutes, Other End-Users

Subsegments:

- 1) By Natural Hydrogels: Alginate, Chitosan, Collagen, Gelatin, Hyaluronic Acid, Fibrin
- 2) By Synthetic Hydrogels: Polyethylene Glycol (PEG), Polyvinyl Alcohol (PVA), Polyacrylamide (PAAm), Pluronic, Poly(N-isopropylacrylamide) (PNIPAM)
- 3) By Hybrid Hydrogels: Natural-Synthetic Polymer Blends, Interpenetrating Polymer Networks (IPNs), Composite Hydrogels (e.g., polymer-ceramic composites), Nanocomposite Hydrogels

View the full hydrogel based drug delivery system market report:

<https://www.thebusinessresearchcompany.com/report/hydrogel-based-drug-delivery-system-global-market-report>

Which Region Is Forecasted To Grow The Fastest In The Hydrogel Based Drug Delivery System Industry?

In 2024, North America dominated the [global market for hydrogel-based drug delivery systems](#). It is predicted that the fastest-growing region in this market by 2025 will be Asia-Pacific. The report provides coverage for various regions including Asia-Pacific, Western Europe, Eastern Europe, North America, South America, the Middle East, and Africa.

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