

Therapeutic Hypothermia Systems Market to Hit US\$ 482.43 Mn by 2032, Persistence Market Research

Global therapeutic hypothermia systems market driven by rising surgeries, cardiac cases, and advanced cooling technologies improving neurological recovery

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/EINPresswire.com/ -- The global [therapeutic hypothermia systems market](#) is poised for substantial

growth, with projections indicating a market size of US\$ 326.41 million in 2025, reaching US\$ 482.43 million by 2032. This growth represents a compound annual growth rate (CAGR) of 5.7% during the forecast period of 2025-2032. The rise in cardiovascular conditions such as myocardial infarction (MI) and cardiac arrest, the growing number of surgical procedures, and the increasing utilization of minimally invasive cooling methods are key drivers of this expansion.

Therapeutic hypothermia (TH), also referred to as targeted temperature management (TTM) or induced hypothermia, involves lowering a patient's body temperature to mitigate tissue damage and promote neurological recovery. This procedure is particularly beneficial for patients suffering from global cerebral ischemia, traumatic neurological injuries, and for neonates with hypoxic-ischemic encephalopathy (HIE). The growing adoption of surface cooling systems, including cooling blankets, pads, ice packs, and endovascular cooling devices, further supports market growth.

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Key Industry Highlights

The therapeutic hypothermia systems market has been witnessing dynamic shifts with significant advancements in cooling technologies. The cooling devices segment is expected to



dominate the market, holding an estimated 60% share in 2025. The demand for cooling devices is driven by their affordability, ease of use, and effectiveness in clinical settings. Non-invasive cooling devices, including surface cooling blankets and head caps, offer simplicity in application and increased patient comfort, making them widely applicable in emergency rooms, surgical theaters, and intensive care units (ICUs).

Furthermore, the neurology segment is expected to hold the largest market share at 45% in 2025. The increasing prevalence of neurological disorders such as ischemic stroke, traumatic brain injury (TBI), and neonatal HIE are major contributors to the demand for therapeutic hypothermia. The cardiology segment is poised to experience the fastest growth over the forecast period, fueled by the rising number of cardiac arrest cases globally.

Market Dynamics

Driver: Surge in Surgical Procedures

A significant rise in global surgical procedures—exceeding 310 million annually—has emerged as a key driver for the therapeutic hypothermia systems market. This increase includes approximately 40-50 million surgeries in the U.S. and 20 million in Europe. With modern therapeutic hypothermia systems incorporating advanced closed-loop feedback control and real-time temperature monitoring, clinicians can now maintain optimal body temperature during and post-surgery. This precision ensures safer patient outcomes, reducing complications such as hypothermia-induced bleeding, infections, and prolonged recovery times.

The advent of non-invasive cooling technologies, including cooling pads and blankets, has further simplified the implementation of TH protocols in clinical settings. These devices are easy to apply, cost-effective, and fully compatible with sterile surgical environments. Additionally, AI-powered hypothermia systems, capable of personalizing cooling algorithms based on individual patient data, are enhancing the accuracy and efficiency of the treatment.

Restraint: Side Effects and High Costs

Despite the clear benefits, therapeutic hypothermia systems are not without their challenges. Common side effects include shivering, electrolyte imbalances, and skin injuries resulting from cooling devices. In some cases, TH is linked with rewarming injuries, cardiovascular issues such as arrhythmias, and immune system impairments that elevate the risk of infections. In fact, up to 67% of patients treated with TH after cardiac arrest experience infections such as pneumonia or bloodstream infections.

The implementation of TH systems also incurs high costs. Specialized equipment, maintenance, and the need for skilled personnel add to the financial burden. Additionally, servo-controlled cooling systems, which offer precise temperature regulation, can be expensive, limiting their adoption in resource-constrained settings. While technological advancements aim to mitigate

these challenges, the affordability and accessibility of TH remain significant barriers in many regions.

Opportunity: Expanding Market in Emerging Countries

Emerging countries offer immense growth potential for the therapeutic hypothermia systems market. Rising birth rates, an increasing incidence of neonatal HIE, and expanding healthcare infrastructure are creating new opportunities for TH systems, particularly in low- and middle-income countries (LMICs). Over 90% of global neonatal deaths occur in these regions, highlighting the urgent need for cost-effective interventions like TH that can reduce mortality and prevent long-term disabilities.

Low-cost cooling devices such as ice packs, phase change material mattresses, and simplified servo-controlled systems have proven effective in resource-limited settings. Additionally, partnerships between global health organizations, NGOs, and local governments are facilitating the transfer of technology, training, and equipment subsidies to improve access to TH systems in underserved areas.

Category-wise Analysis

Product Type Insights

The cooling devices segment is expected to dominate the market, accounting for approximately 60% of the market share by 2025. Non-invasive devices such as surface cooling blankets, pads, and cooling helmets are cost-effective, easy to use, and can be deployed in various clinical settings, including emergency rooms and ICUs. Companies such as Pluss Advanced Technologies (India) have pioneered low-cost solutions like MiraCradle, a cooling device that has been successfully utilized in more than 125 hospitals, demonstrating the feasibility of TH even in resource-limited settings.

The cooling catheter segment is projected to experience the fastest growth, driven by the increasing need for precise core temperature control in critically ill patients. Endovascular cooling catheters, which circulate chilled fluids through large veins, offer an invasive yet highly effective method of maintaining body temperature during critical care, especially in cardiac arrest, stroke, and major surgeries.

Indication Insights

The neurology segment is expected to capture the largest market share, driven by the growing prevalence of neurological conditions such as ischemic stroke and traumatic brain injury. The proven efficacy of TH in improving neurological outcomes and reducing neuronal damage has led to its widespread adoption in neurology departments globally. In the U.S., stroke accounts for one in six cardiovascular deaths, with ischemic stroke being the most common type, making

therapeutic hypothermia a critical intervention in these cases.

In the cardiology segment, the demand for TH is set to grow rapidly, driven by an increasing incidence of cardiac arrest. The global prevalence of heart disease continues to rise, with approximately 640 million people suffering from heart and circulatory diseases worldwide. The integration of TH protocols in cardiac arrest management is enhancing patient survival rates and neurological recovery, contributing to the growing market in this sector.

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Regional Insights

North America

North America is expected to dominate the therapeutic hypothermia systems market, with a projected market share of 45% in 2025. The high prevalence of cardiovascular and neurological diseases, combined with advanced healthcare infrastructure, positions North America as a key market leader. The U.S., in particular, experiences a high incidence of stroke and cardiac arrest, driving the demand for therapeutic hypothermia interventions. Major players such as Medtronic, Philips Healthcare, and ZOLL Medical are actively contributing to the market's growth through product innovations and strategic partnerships.

Asia Pacific

The Asia Pacific region is witnessing rapid growth in the therapeutic hypothermia systems market, driven by increasing rates of cardiovascular and neurological disorders in countries like China and India. The region's aging population and rising healthcare spending are also fueling demand for advanced cooling devices. India's REVIVE system, a low-cost cooling device developed by Sensivision Health Technologies, demonstrates the region's potential for cost-effective, AI-enabled therapeutic hypothermia solutions.

China is projected to lead the region in market growth, supported by the increasing number of tertiary care facilities and advancements in healthcare infrastructure. The integration of artificial intelligence (AI) into therapeutic hypothermia systems is further enhancing treatment precision, leading to better patient outcomes.

Europe

Europe is projected to see steady growth in the therapeutic hypothermia systems market, driven by increasing awareness, technological advancements, and a rising incidence of cardiovascular and neurological diseases. Germany is expected to be a key player within Europe, where hospitals are increasingly adopting cooling catheters for post-cardiac arrest care due to their

precision in temperature control. The European Union's funding for research projects under programs like Horizon Europe is also bolstering the development of advanced hypothermia technologies.

Competitive Landscape

Key industry developments include new product launches, collaborations, and acquisitions aimed at enhancing the precision and affordability of therapeutic hypothermia systems.

Key Players:

Asahi Kasei Corporation
Audax Management Company, LLC.
Becton, Dickinson and Company
EM-MED Sp. z o.o. Sp. K.
Gentherm Incorporated
International Biomedical Ltd.
Phoenix Medical Systems Pvt. Ltd.
Shenzhen Comen Medical Instruments Co., Ltd.
Stryker Corporation
Terumo Corporation

Recent Developments

In May 2025, TEQCool AB introduced its patented non-invasive intranasal brain cooling system, offering a novel approach to reducing brain metabolism. This innovation is expanding the potential applications of therapeutic hypothermia, targeting not only traditional indications but also a broader range of brain-related conditions.

In January 2024, SourceMark partnered with Gentherm Medical to distribute the Gelli-Roll, a reusable gel pad that facilitates both warming and cooling, further diversifying the range of TH solutions available in the market.

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Market Segmentation

By Product Type

Cooling Devices
Cooling Catheters
Cooling Packs

By Application

Neurology

Cardiology

Neonatal Care

By End-user

Hospitals

Specialty Clinics

ASCs

By Region

North America

Europe

Asia Pacific

South Asia and Oceania

Latin America

Middle East and Africa

Future Outlook

The therapeutic hypothermia systems market is expected to continue its growth trajectory through 2032. Advances in cooling technologies, increasing demand for precision therapies, and growing healthcare access in emerging economies will drive this growth. The integration of AI and machine learning in hypothermia devices will further enhance treatment precision, contributing to better patient outcomes and broader adoption in clinical settings. As the market expands, innovations in cost-effective solutions and personalized therapies will help overcome current barriers, making therapeutic hypothermia more accessible globally.

Read Related Reports:

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