

# The World Market for Pain Management Drugs and Devices

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## **Abstracts**

The World Market for Pain Management Drugs and Devices encompasses a wide variety of products that treat and ease pain. The field of pain management is currently experiencing a busy and interesting period; and as a result, the range of therapeutic options available to physicians and other clinicians has expanded. Solutions to pain disorders are still elusive but continued human and animal studies will help to further identify the biochemical and neurophysiological factors that influence pain. The future of pain management will likely involve multidisciplinary departments dedicated to finding treatments that manage pain. The need is great worldwide for management of pain and there are still many facets of pain management that need to be explored.

Faced with intensifying competition and increasingly price sensitive markets, manufacturers in the area of pain management therapeutics are trying to differentiate their products to avoid price competition and to increase profits. However, there are a number of issues and trends that have a direct influence on this market and the manufacturer's ability to successfully operate in the market. A keen awareness of all facets of the industry including barriers will enable manufacturers to effectively challenge these issues and formulate plans to reduce or eliminate barriers in the treatment of pain.

The driving forces for this market include growth and aging of the global population, new products and technology, and increasing interest in multidisciplinary approaches to pain management.

This report, The World Market for Pain Management Drugs and Devices, provides market estimates and forecasts for the following therapeutic categories:



Burn Pain

Cancer Pain

Dental/Facial Pain

Migraine Headache Pain

Musculoskeletal Pain

Neuropathic Pain

Obstetrical Pain

Pediatric Pain

Surgical and Trauma Pain

This report details the various categories of top prescription pain management drugs, describes U.S., European, Japanese and other markets in each of the specific pain areas. The report also covers drug delivery methods, pain management devices, and alternate treatment modalities that are influencing the market. It further identifies major market factors, which are discussed, and a total market summary is presented.

The information and analysis presented in this report are based on extensive interviews with senior management of top companies and conference participants (business and clinical) in the pain management market. Background information was obtained from a comprehensive search of published literature and reports obtained from various government, business, medical trade, and international journals. Key information from published literature was used to conduct interviews with over 45 industry executives and product managers to validate and obtain expert opinion on current and future trends in the pain management market. Interviews were also used to confirm and/or adjust market size estimates, as well as in formulating market projections.

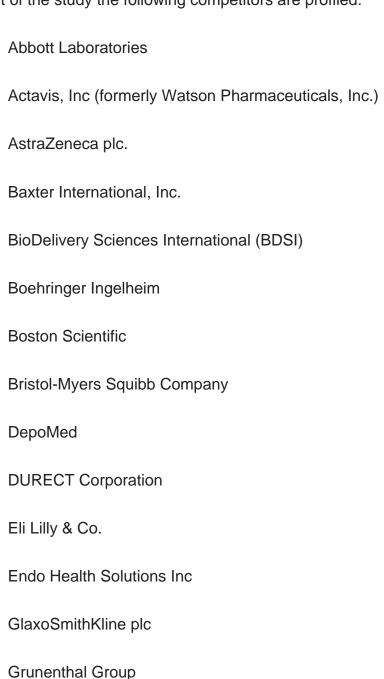
All market data pertain to the world market at the manufacturers' level. Data are expressed in current U.S. dollars. The base year for data was 2012. Historical data is provided for 2010 and 2011, and forecast data are provided for each of the years 2012 through 2017. Historical, base year, and forecast data are provided for each market



segment. Market shares are provided for each market segment for the 2012 base year.

Top product revenues are considered for the report in each subsegment according to treatment use. Top products in each category represent approximately 80% of the total revenues for each subsegment. The total market reflects the total revenues of all top products in all of the individual categories, representing approximately 80%-90% of the total prescription pain management pharmaceuticals and pain management devices.

As part of the study the following competitors are profiled:



Medtronic, Inc.



Merck & Co.
Novartis
Pain Therapeutics, Inc
Pfizer, Inc
Purdue Pharma
QRx Pharma
Sanofi
St. Jude Medical, Inc
TEVA Pharmaceuticals Industries, Ltd
The Medicines Company
Valeant Pharmaceuticals International, Inc.
Zogenix, Inc.



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Merck & Co.

**Novartis** 

Pain Therapeutics, Inc

Pfizer, Inc

Purdue Pharma

**QRx Pharma** 

Sanofi

St. Jude Medical, Inc

TEVA Pharmaceuticals Industries, Ltd

The Medicines Company

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## **About**

Once the nociceptive signal arrives in the CNS, it is processed within thedorsal horn of the spinal cord. This processing includes releasing neurotransmittersfrom the PAN into the synaptic cleft and binding neurotransmitters to receptors onnearby cell bodies and dendrites of cells that may be located elsewhere in the dorsalhorn. Some of these PAN neurotransmitters produce activation when bound toreceptors whereas other inhibits activation of nearby cells. Cells excited by PANinput release other neurotransmitters, which increases the complexity of theneurochemical communication occurring within the dorsal horn. The effects of thecomplex neurotransmitter release can facilitate or inhibit transmission of nociceptivestimuli.

Most projection cells send axons to the brain on the opposite side of the body. They receive excitatory and inhibitory messages, the net sum of which determines whether the PSN message will be transmitted to the brain.

Interneurons can be either excitatory or inhibitory. They communicate withother lamina II cells, located within one or two spinal segments, and with dendritesfrom cells located in laminae I, III, IV, and V. The concept of excitatory andinhibitory interneurons is important because it helps to explain why some nonpharmacologictherapies are effective. Although the exact mechanisms have not beendetermined, it is known that simulation of large sensory fibers can have an inhibitoryeffect on cells that project nociceptive signals to the brain. TENS and massage are examples of methods by which smaller, less rapidly conducting fibers can beactivated by non-noxious stimuli. All of these methods are known to inhibit transmission of nociceptive stimuli.



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