Medtronic
A Legacy of Innovation
The Medtronic Story
1949
1957
1960
1974
1987
1998
2002
2010
Innovating for life.

“The story of Medtronic is one of men and women who have dedicated their lives and careers to helping real people overcome pain and disability to lead more normal, happy lives. It’s a story I never tire of hearing or telling.”

— Medtronic co-founder Earl Bakken

By the time you finish reading this page, another 10 people somewhere in the world will have been helped by a Medtronic therapy. That's one person every 4 seconds.

What's even more amazing is that while today we are the global leader in medical technology, we began with two people simply trying to make a difference in the world.

This historical compilation is a celebration of our journey and a tribute to our employees. Over the years, Medtronic employees have stayed true to the spirit of our founders—demonstrating compassion, drive, and selfless dedication to improve the lives of others. As we celebrate the 50th anniversary of the Medtronic Mission in 2010, I'm proud to be leading our company into a new era—expanding our definition of innovation and the many ways in which we can alleviate pain, restore health, and extend life.

William A. Hawkins, Chairman and Chief Executive Officer

Over the past 60 years, we've transformed Medtronic from a tiny electrical repair shop in a Minneapolis garage to the world's leading medical technology company serving customers in more than 120 countries.

The common thread that links the company's activities over all those years is innovation. We continually push the boundaries of medical technology to fulfill our ambitious Mission. Beginning with our legendary advances in cardiac pacing, we gradually expanded our technological expertise to treat many of the world's most pressing chronic diseases, including heart and vascular disease, diabetes, neurological disorders, and spinal conditions.

Today, Medtronic is the global leader in medical technology, with innovative therapies that improve the lives of millions of people around the world each year. And now, a new era of innovation has begun. We're taking innovation beyond products and beyond the status quo—looking at ways to improve processes, partnerships, and how healthcare is delivered—to continually find more ways to help people live better, longer.

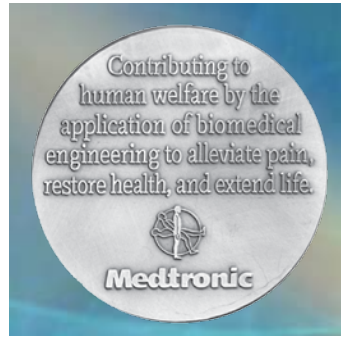
HUMBLE BEGINNINGS: Co-founder Palmer Hermundslie persuaded his parents to let him use their Minneapolis garage as Medtronic's first office.

The Medtronic Mission

In 1960, the board of directors asked co-founder Earl Bakken to develop a Mission that would provide strategic focus for the company's resources. Half a century later, not one word has changed, and the Mission continues to serve as both our ethical and business compass.

The Mission unites employees worldwide in a common goal: to "alleviate pain, restore health, and extend life" in partnership with the medical community. It's been instrumental in our success and continues to be the foundation upon which we build for the future. Our Mission is:

- To contribute to human welfare by application of biomedical engineering in the research, design, manufacture, and sale of instruments or appliances that alleviate pain, restore health, and extend life.
- To direct our growth in the areas of biomedical engineering where we display maximum strength and ability; to gather people and facilities that tend to augment these areas; to continuously build on these areas through education and knowledge assimilation; to avoid participation in areas where we cannot make unique and worthy contributions.
- To strive without reserve for the greatest possible reliability and quality in our products; to be the unsurpassed standard of comparison; and to be recognized as a company of dedication, honesty, integrity, and service.
- To make a fair profit on current operations to meet our obligations, sustain our growth, and reach our goals.
- To recognize the personal worth of employees by providing an employment framework that allows personal satisfaction in work accomplished, security, advancement opportunity, and means to share in the company's success.
- To maintain good citizenship as a company.



EVERYDAY REMINDER: Every new employee worldwide receives a Mission Medallion from senior executives as a reminder of the honor and responsibility we all have in fulfilling the Medtronic Mission.

THE INSPIRATION: Patients like Italian nurse Lina Tedesco have always been the driving force at Medtronic. When co-founder Earl Bakken would hand new employees a Mission Medallion, he would tell them, "You are here to restore people to full life."

A LEGACY OF INNOVATION BEGINS

1949–1970

INSPIRED INVENTIONS: By serving the medical community, co-founder Earl Bakken was using his engineering expertise to help humankind.

When an electrical engineering student volunteered to repair medical machinery, he began a journey that would lead to one of the world's most important medical breakthroughs.

CHANNELING A PASSION

When Medtronic co-founder Earl Bakken was an electrical engineering graduate student at the University of Minnesota, he spent much of his spare time at nearby University and Northwestern Hospitals. He served as an eager volunteer handyman, repairing malfunctioning medical equipment so he could learn how it worked. When Earl mentioned this to his brother-in-law, the enterprising Palmer Hermundslie recognized a business opportunity. So, in 1949, the two started a repair company focused on medical electronics, and called it Medtronic. Their office was the Hermundslies' 600-square-foot garage in northeast Minneapolis, Minnesota.

HISTORIC PARTNERSHIP

In addition to repairing medical equipment, Earl also built custom equipment for clients, including Dr. C. Walton Lillihei, a pioneering open-heart surgeon at the University of Minnesota Hospitals. Dr. Lillihei often treated infants with congenital heart defects, and used a pacemaker after surgery while the heart healed. At that time, pacemakers were bulky, AC-powered boxes that had to be wheeled on carts and plugged into outlets.

One night, an electrical storm caused a power outage and one of Dr. Lillihei's pediatric heart patients died. Despondent, the surgeon turned to Earl for a battery-powered alternative. Within four weeks, he delivered the world's first battery-operated external cardiac pacemaker.

Global Expansion

From a Minneapolis garage, Medtronic expanded into a second garage and then an apartment. By 1961, we moved to an official 15,000-square-foot headquarters in St. Anthony Village in Minneapolis. It was expanded five-fold within a decade, including adding a state-of-the-art clean room for assembling implantables. By 1970, we moved our U.S. manufacturing facilities to a plant in the Minneapolis suburb of Fridley. To serve a growing European business, Medtronic opened a round-the-clock service center in Amsterdam's Schiphol Airport in 1967. Soon after, a major manufacturing facility was added in Kerkrade, The Netherlands.

Historic Milestones

1949

- Medtronic founded to service electronic medical equipment.

1957

- Medtronic incorporates.
- Develops first wearable, external battery-operated pacemaker.

1959

- Debuts annual Holiday Program in which several patients tell employees how their Medtronic devices have restored their lives.
- First shares issued.

1960

- Signs exclusive contract to produce and market implantable pacemaker developed by Wilson Greatbatch and Dr. William Chardack.
- Mission developed.
- Sales force established with 14 reps serving U.S. and Canada.

TECHNOLOGY EVOLUTION

This innovative pacemaker was called a "miracle," and orders started coming in from around the world. While it was a significant breakthrough for treating short-term heart rate irregularities, the pacemaker's limited battery life constrained its uses. Physicians began requesting a more long-term, implantable pacemaker for patients with permanent cardiac conditions. So we developed a rudimentary semi-implantable pacemaker in 1959, but the battery still had to be replaced almost monthly, so we continued to work on a better solution.

The first successful U.S. attempt at designing a totally implantable pacemaker was reported by the New York team of Drs. William Chardack and Andrew Gage, and engineer Wilson Greatbatch. Medtronic's founders contacted them about a partnership, and soon we had exclusive rights to produce and market the Chardack-Greatbatch implantable pacemaker. By the end of that year, 1960, we had 50 orders for the device and were now considered the experts in cardiac electrical stimulation.

Sales steadily grew, but the cost of the device, $300 to $500, was prohibitive for many patients. A real breakthrough for sales was passage of Medicare legislation in 1965, which covered the cost of a pacemaker for elderly patients.

TRANSFERRING EXPERTISE INTO NEW AREAS

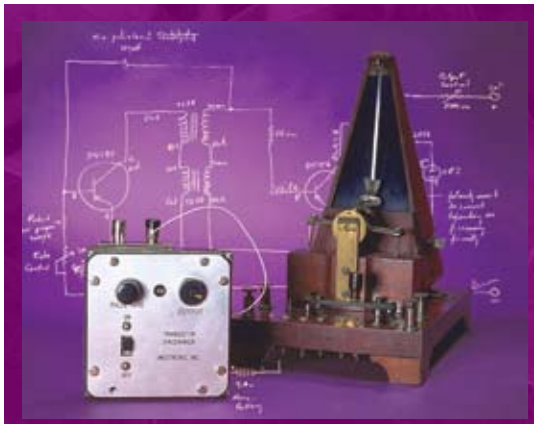
During this era, we developed several heart-related products, including a heart monitor and a generator that controlled bleeding during surgery. We also began transferring our electrical stimulation expertise to treat other conditions. In partnership with Case Western Reserve University, Medtronic tested stimulation of the spinal cord to suppress pain. By the end of the 1960s, we also were exploring the use of electrical stimulation to treat varicose veins and gastrointestinal conditions.

Leadership

For the first eight years, Medtronic was led by co-founders and brothers-in-law Earl Bakken and Palmer Hermundslie. Earl provided the engineering expertise while Palmer handled sales and business operations. Earl then became Chief Executive Officer and Chairman of the Board from the company's incorporation in 1957 until 1976.

ENTREPRENEUR TO EXECUTIVE: Co-founder Earl Bakken gradually transitioned from an introverted engineer to a passionate executive who helped Medtronic become a world leader in medical technology.

HISTORIC PARTNERSHIP: Dr. C. Walton Lillihei, a pioneering open-heart surgeon, requested that Medtronic develop a battery-operated pacemaker for his young patients to eliminate reliance on unpredictable AC power.



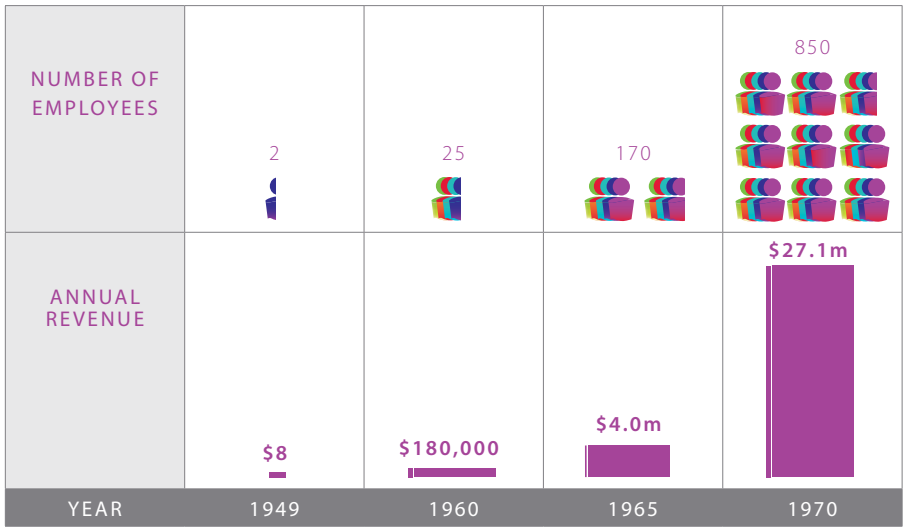
EARLY INGENUITY: The inspiration for the battery-operated external cardiac pacemaker (left) was the circuit for an electronic metronome that Earl Bakken saw in an issue of *Popular Electronics* magazine.

MOVING INSIDE: Medtronic gained exclusive rights to produce and market the Chardack-Greatbatch implantable pacemaker.

Financial Growth

Medtronic's first monthly gross was a mere $8 for repairing a centrifuge. By 1960, annual sales were $180,000, and two years later they reached $500,000. The profit picture, however, wasn't as promising. The combination of a new facility, increased marketing expenses, and significant research investment resulted in a $44,000 loss in 1962.

On the edge of bankruptcy, we battled back by obtaining a $100,000 bank installment promissory note, attracting money from a venture capitalist, and trimming staff. By 1963, the company was back on track financially and reported a $73,000 profit on revenues of $985,000. That year, we sold an average 100 pacemakers per month, with about 20% of total sales coming from foreign markets.



KEEPING THE COMPANY ALOFT: Co-founder Palmer Hermundslie, who oversaw the business side of Medtronic, often piloted his Beechcraft Bonanza to visit customers and make emergency pacemaker deliveries.

BRINGING ELECTRICITY TO LIFE: Our first logo reinforced our focus on electrical engineering for the medical community.

Historic Milestones

1960	1964	1967	1969	1970
■ Produces implantable cardiac pacemakers.	■ Stock listed on NASDAQ.	■ Develops demand pacemakers, which provide pulse only when needed.	■ Establishes international division.	■ Introduces first nuclear-powered cardiac pacemaker.

GEOGRAPHIC AND PRODUCT DIVERSITY

1971-1990

EUROPEAN EXPANSION: During this period, we added a major manufacturing facility in Tolochenaz, Switzerland.

Through internal development and selective acquisitions, Medtronic catapulted from a small pacing company into a diversified, worldwide medical technology leader.

EXPANDING INTO NEUROLOGICAL THERAPIES

By the time we reached our 25th anniversary in 1974, we were marketing products directly in more than 70 countries. The majority of worldwide sales, about 80%, were still in the cardiac pacing business, but we began aggressively applying our electrical stimulation expertise to develop neurological products. In 1975, the Neurological Division was officially established.

We continued our work on electrical neurostimulators to treat pain, and began pivotal work with French neurosurgeon Prof. Alim-Louis Benabid on deep brain stimulation to treat the devastating effects of movement disorders, such as essential tremor and Parkinson's disease.

BRANCHING OUT FROM THE HEART

In 1977, Medtronic moved into cardiovascular therapies. We established a Heart Valves Division and introduced the Medtronic-Hall mechanical heart valve. Named for Dr. Karl Victor Hall, the Norwegian surgeon who worked with us to develop it, this prosthetic valve had no welds, joints, or bends that could eventually weaken the valve's structure.

In addition to developing new cardiovascular therapies internally, we also acquired many technologies. These included tissue heart valves and cardiopulmonary equipment from Johnson & Johnson, coronary angioplasty catheters and guiding catheters from Versaflex Delivery Systems, and centrifugal blood pumps for heart surgery from Bio-Medicus.

Global Expansion

In the 1970s, Medtronic enjoyed 35% of the cardiac pacemaker market outside the United States and we continued to expand our global presence. We established a Latin American headquarters in Sao Paulo, Brazil, in 1971; a European headquarters in Paris in 1972; and an Asia/Pacific headquarters in Kawasaki, Japan, in 1975. We also opened manufacturing facilities in Puerto Rico, Argentina, Canada, and France. To serve both physicians and Medtronic sales organizations overseas, we opened Bakken Education Centers in India and Japan. In the States, we added new Minnesota facilities to house our growing Neurological and CardioVascular businesses.

Historic Milestones

1975

- Establishes Neurological Division.

1976

- Earl Bakken opens *The Bakken: A Library and Museum of Electricity in Life* in Minneapolis, Minnesota.

1977

- Establishes Heart Valve Division with introduction of mechanical prosthetic heart valve.
- Stock listed on New York Stock Exchange under ticker symbol MDT.
- Introduces longer-lasting lithium batteries in pacemakers.

1978

- Medtronic Foundation incorporates to advance the company's philanthropic activities.

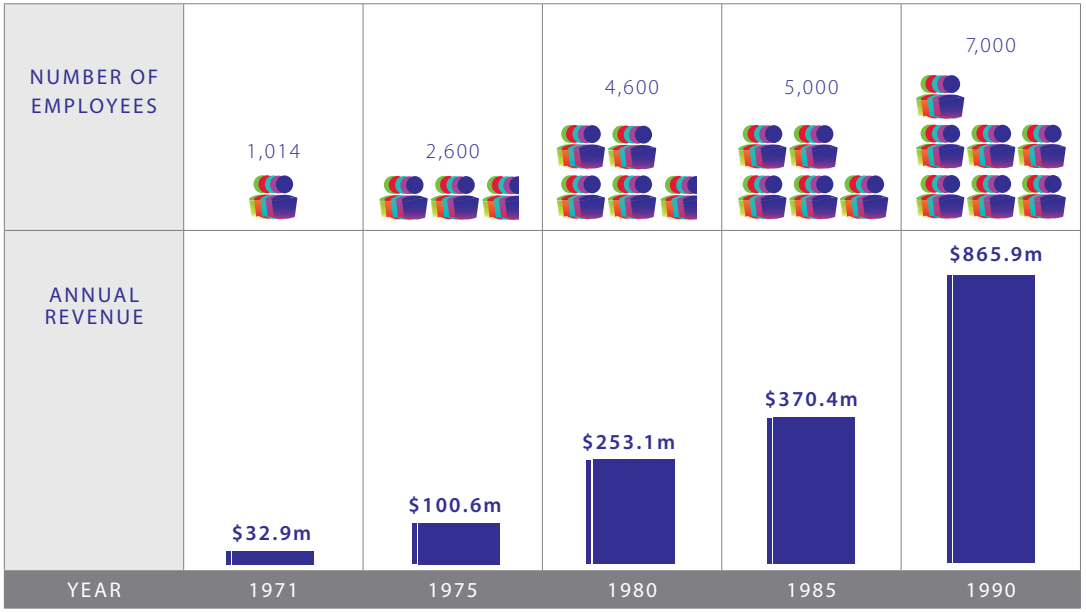
AN IMPORTANT PAIRING

In 1981, we introduced the world's first implantable, programmable drug pump to treat cancer pain. Unlike oral medications that affect the whole body, our implantable drug pump delivered medication at the dose that was needed, directly where it was needed—to the fluid-filled space around the spinal cord. It was an important first step in combining Medtronic devices with medication to provide targeted drug delivery.

Later, we introduced a steroid-tipped pacemaker lead. After the lead was implanted, the steroid medication helped reduce tissue inflammation to speed healing.

Financial Growth

In 1977, Medtronic went public, with our stock traded on the New York Stock Exchange. By 1985, we were listed among the Fortune 500 largest publicly held companies in America. Ironically, in the same year, we reported our first decline in sales and earnings in 23 years. Three key factors played a role: 1) Private insurers began paying a fixed fee for medical devices and surgeries, driving a decline in pacemaker implants, 2) New medical device companies took away market share, and 3) We issued our first major product recall. With a new CEO and a new strategic direction (see Win Wallin under Leadership on facing page), we were back on track and earnings nearly tripled within five years.



REWARDING INNOVATION: In 1979, we established the prestigious Bakken Society to honor significant contributions by scientists and engineers.

DRUG DELIVERY PIONEER: We developed the first implantable, programmable pump to deliver medication to the spinal cord to treat pain and the muscle tightness of spasticity.

BEST OF BOTH WORLDS: Medtronic's success has been the result of both internal innovations like the Medtronic-Hall mechanical heart valve (left), and technology acquisitions like the porcine (pig) tissue valve (right).

MEETING DEMAND: We increased staff by 40% from 1985 to 1990 to meet increasing demand for our products.

Leadership

In 1976, Medtronic reached outside for a president and chief executive officer, tapping Dale R. Olseth, president and chief executive of Tonka Corporation. The former investment banker, who had been on Medtronic's board since 1973, brought a toughness and discipline to operations that was necessary as we went public.

Olseth was succeeded by Winston R. (Win) Wallin in 1985. Wallin, a Medtronic board member and former vice chairman of the Pillsbury Company, came on at a financial low point, with earnings, stock price and market share all depressed. He emphasized product diversification as a panacea. Annual research spending doubled in Wallin's first three years, from $37 million to $75 million, representing 11% of revenue. In addition to driving product development, he also initiated several key acquisitions and brought on the first physician to serve in the company's executive leadership, Dr. Glen Nelson.

Historic Milestones

1979	1981	1984	1985	1986	1987	1990
■ Establishes The Bakken Society to honor significant contributions by scientists and engineers.	■ Introduces first implantable, programmable drug pump for cancer pain.	■ National Society of Professional Engineers names the cardiac pacemaker one of the 10 outstanding engineering products of the past half-century.	■ Joins the *Fortune* 500 list with sales of $370 million.	■ Acquires Dutch pacemaker manufacturer Vitatron.	■ Acquires cardiovascular division of Johnson & Johnson.	■ Acquires Bio-Medicus, the world's largest manufacturer of centrifugal blood pumps.

1991–TODAY

EASIER FOLLOW-UP: For patients who live in remote areas, like this boy from Australia's Outback, our wireless and Internet-based remote monitoring systems eliminate regular office visits.

With chronic disease escalating into a worldwide epidemic, we're developing therapies that provide lifelong solutions—to improve lives and reduce cost.

BROADENING OUR SCOPE

In the 1990s, we expanded our focus to address chronic disease, the leading cause of mortality worldwide and a significant financial burden on society. In addition to therapies for cardiovascular and heart disease, we added therapies to treat other long-term conditions like diabetes, movement disorders, and spinal conditions.

Many of our innovations were developed internally, but we also made and continue to make strategic acquisitions that can help us bring new therapies to the world faster or more cost effectively. Key acquisitions since 1991 include:

- AneuRx for stent grafts to treat aortic aneurysms
- Physio-Control for external automated defibrillators that treat sudden cardiac arrest
- Midas Rex for high-speed surgical drills
- Xomed for ear, nose, and throat surgical instruments
- Sofamor Danek and Kyphon for therapies to treat spinal conditions
- Arterial Vascular Engineering (AVE) for coronary artery stents
- MiniMed for insulin pumps to treat diabetes
- CryoCath and Ablation Frontiers for therapies to treat atrial fibrillation
- Invatec for stents and angioplasty balloons to treat peripheral vascular disease.

Global Expansion

The 1990s began with the building of a manufacturing facility and pacing research center in Japan. In 1991, our European headquarters was moved from Paris to Brussels, Belgium, and then to Tolochenaz, Switzerland six years later. In 2009, we moved our Asia/Pacific headquarters to Singapore. Anticipating growth in the 21st century, we built a new world headquarters in 2001 in Fridley, Minnesota, a suburb of Minneapolis. As of 2010, Medtronic operated more than 300 manufacturing facilities, sales offices, research centers, education centers, and administration facilities serving customers in more than 120 countries.

Historic Milestones

1996	1997	1998	1998	1999	2001
■ Acquires AneuRx, manufacturer of endovascular stent grafts.	■ Introduces instrument for immobilizing the beating heart during coronary bypass surgery. ■ Introduces first deep brain stimulator to treat symptoms of essential tremor.	■ Doubles in size after acquiring spinal leader Sofamor Danek, coronary stent manufacturer Arterial Vascular Engineering, world leader in external defibrillators Physio-Control, surgical perfusion manufacturer Avecor, and maker of high-speed surgical drills Midas Rex.	■ Named one of the "100 Best Companies To Work For in America" by *Fortune* magazine.	■ Celebrates 50th anniversary with new logo. ■ Introduces sacral nerve neurostimulator for urinary control. ■ Acquires Xomed, a leader in surgical ear, nose, and throat products.	■ Acquires diabetes leader MiniMed, urological company VidaMed, and gastroenterological manufacturer Endonetics.

A MORE HOLISTIC VIEW

Most of our medical devices treat an acute problem that requires immediate attention, such as heart failure or a ruptured aorta. Increasingly, we're using our expertise and vast experience to develop therapies that help patients earlier and later in the lifecycle of their condition.

For example, we're pairing our devices with information technology to make long-term follow-up easier and less costly—especially for patients who live in remote areas. Our remote monitoring systems send device data securely over the Internet to a patient's healthcare team, eliminating some routine in-office visits.

LESS INVASIVE TO THE HUMAN BODY

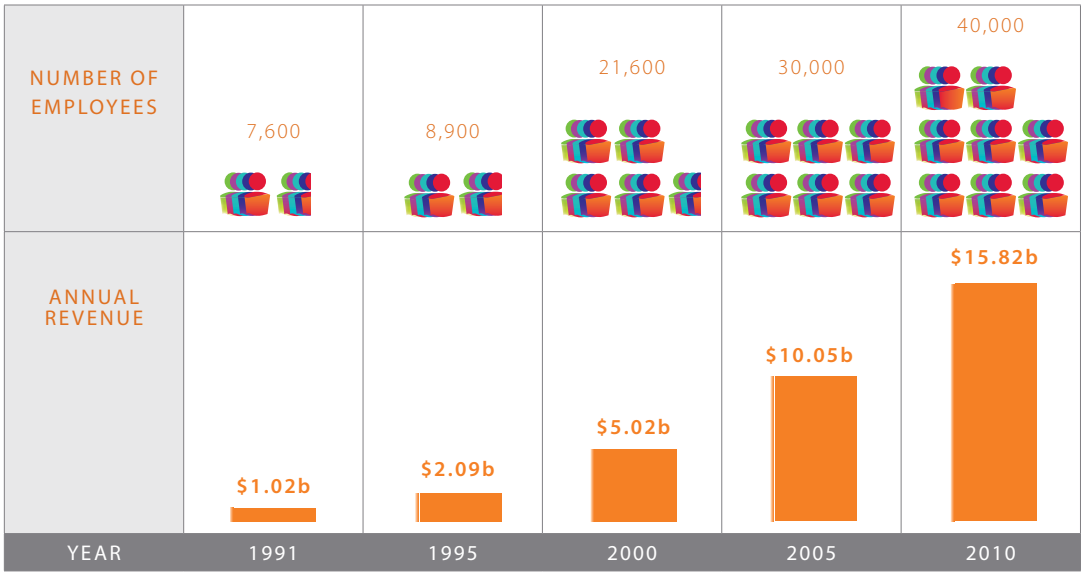
Another way we're helping reduce healthcare costs is by making our therapies less invasive. This leads to shorter surgery time, shorter hospital stays, and faster healing—making therapies easier on patients while reducing cost. One notable example is our transcatheter delivery of heart valves and stents. The devices are placed in a thin tube called a catheter, which is inserted through a small cut in the thigh, eliminating the need to open the chest to place our products.

AN ONGOING MISSION

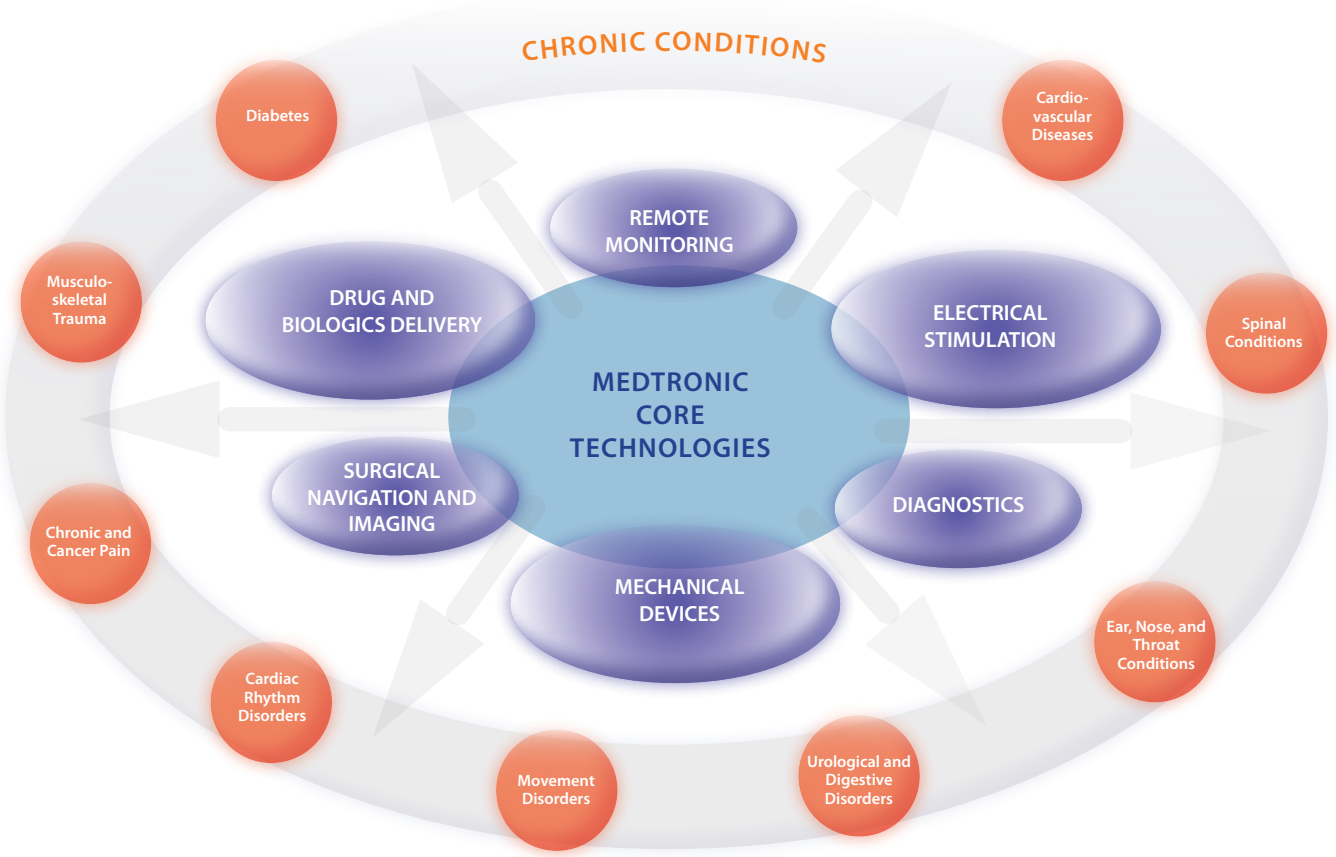
While Medtronic today touches many more areas of healthcare than we did back in 1949, our tenacity and passion are driven by the same philosophy that drove our co-founders: continually strive for more ways to help people live better, longer.

Financial Growth

Continuous introduction of innovative products moved us past the $1 billion mark in annual revenue in 1991. In the most recent two decades, Medtronic revenue has grown at an annual compound rate of 16%. As a nod to our financial strength, Medtronic received the number-one ranking on 100 Best Stocks to Own in America in 1997, 1999, and 2002.



Leveraging Our Core Technologies to Treat More Chronic Conditions



Leadership

William W. (Bill) George became President and CEO in 1991. The former president of Honeywell's space and aviation systems business continued the diversification strategy begun by Win Wallin. Under George's 10-year leadership, Medtronic's market capitalization grew from $1.1 billion to $60 billion, averaging 35% a year.

In 2001, Arthur D. (Art) Collins took over the top leadership role. He focused Medtronic on treating chronic diseases, a growing and costly epidemic. Collins also led us into a new era of converging technologies, leveraging information technologies like the Internet to improve how patients manage their conditions. During Collins' six-year tenure, revenues grew at an annual compound rate of 15%. William A. (Bill) Hawkins became our sixth Chairman and CEO in 2007. Under his leadership, Medtronic is taking innovation to a new level, beyond just products, to bring greater productivity and promise to the healthcare system.

Historic Milestones

2002

- Introduces remote monitoring to securely transfer data from select devices to doctors via the Internet.

2002

- Introduces first bone morphogenetic protein product to treat spinal degenerative disc disease.
- Introduces first deep brain stimulator to treat symptoms of Parkinson's disease.

2006

- Introduces first insulin pump with real-time continuous glucose monitoring.

2007

- Introduces first artificial disc for use in cervical spine.
- Acquires Kyphon, a leader in spinal technologies.

2008

- Introduces drug-eluting coronary stent.
- Acquires CryoCath Technologies, world leader in cryotherapy for cardiac arrhythmias.

2009

- Introduces first deep brain stimulator to treat obsessive-compulsive disorder (HDE approval).
- Acquires Ablation Frontiers, a company developing cardiac arrhythmia therapies.

2010

- Introduces first transcatheter heart valve.
- Acquires Invatec, a leader in stents and angioplasty balloons.

Innovation

One of Medtronic's greatest assets is our culture of innovation. This founding tenet helps attract the best and brightest minds, drive ongoing financial performance, and improve more and more lives each year.

PUSHING BOUNDARIES: Medtronic was the first to introduce an insulin pump combined with a real-time continuous glucose monitoring system that makes it easier for diabetes patients like PInkal Patel to manage their blood glucose levels. The next step will be developing a closed-loop system that delivers insulin automatically.

BOLD THINKERS

One key to our ongoing success in developing breakthrough technologies is hiring people who share our founders' passion for pushing boundaries. Medtronic employees are smart, inquisitive, and driven to excel. We look for ideas in unexpected places and push each other to go further.

R&D COMMITMENT

In the early days, Medtronic's research and development (R&D) was carried out on makeshift wooden tables, with notes and sketches drawn on paper bags. Beginning in the 1980s, Medtronic made a serious commitment to R&D, investing approximately 10% of sales annually to future efforts. The investment has paid off in performance: Medtronic ranked No. 1 in medical device patents issued from 1969 through 1998, *InformationWeek* magazine named Medtronic one of 500 Relentless Innovators in 2009, and in 2010 *MIT Technology Review* named Medtronic one of the 50 Most Innovative Companies for our work in deep brain stimulation therapy. Today, Medtronic's 9,000 scientists and engineers work from our 26 state-of-the-art research centers around the world.

SHARING IDEAS AND TECHNOLOGY PLATFORMS

Medtronic works hard to ensure our diverse employees and businesses share technology platforms and ideas to improve efficiency and speed innovation. An office of Science and Technology oversees key R&D activities that can be leveraged across the company, and collaboration tools, such as blogs and videoconferencing, allow employees in different countries and business units to communicate.

TAKING INNOVATION FURTHER

Medtronic recognizes that truly fulfilling our Mission requires thinking beyond products. We also look at how we can improve processes, break down barriers, and reduce healthcare costs—to continually find more ways to help people live better, longer.

Therapies that address many of the world's most pressing chronic diseases

Cardiac Rhythm Conditions

1 Slow Heart Rates (Bradycardia)*
2 Fast Heart Rates (Tachycardia)*
3 Heart Failure*
4 Asymptomatic, Irregular Heart Rates*
5 Atrial Fibrillation

Cardiovascular Diseases

6 Coronary Artery Disease
7 Peripheral Arterial Disease
8 Congenital Heart Disease
9 Rheumatic Heart Disease
10 Heart Valve Disease
11 Aortic Disease

Spinal Conditions and Musculoskeletal Trauma

12 Cervical Herniated Disc**
13 Scoliosis**
14 Degenerative Disc Disease**
15 Spinal Fracture**
16 Lumbar Spinal Stenosis**
17 Tibial Fractures**
18 Cranial and Pelvic Trauma**
19 Subdural Hematomas

Ear, Nose, and Throat Conditions

20 Sinus Diseases**
21 Thyroid Conditions
22 Otologic Disorders**
23 Sleep-Disordered Breathing
24 Tonsil and Adenoid Disorders
25 Ménière's Disease

Dental, Cranial and Oral Maxillofacial Conditions

26 Jawbone Deficiencies
27 Oral Maxillofacial Trauma
28 Craniofacial Defects

Neurological Conditions

29 Parkinson's Disease** and Essential Tremor**
30 Dystonia †**
31 Hydrocephalus**
32 Obsessive-Compulsive Disorder †
33 Severe Spasticity Associated with Cerebral Palsy, Stroke, Brain and Spinal Cord Injury, and Multiple Sclerosis
34 Brain Tumors and Other Lesions**
35 Chronic Pain, Cancer Pain, and Painful Neuropathy

Urological and Digestive Conditions

36 Overactive Bladder and Urinary Retention
37 Benign Prostatic Hyperplasia (BPH)
38 Severe Nausea and Vomiting Associated with Gastroparesis †

Diabetes

39 Diabetes

* *Remote Monitoring available with these cardiac devices*

** *Image-Guided Surgical Systems available with these therapies*

† *Approved under Humanitarian Device Exemption*

Industry Collaboration

Physicians and other industry partners are integral contributors to Medtronic's innovative therapies. They provide vision, insight, and deep physiological understanding that can only come from people who work closely with patients day in and day out.

INCREASINGLY IMPORTANT ROLE

From the early days, doctors were not only customers, they were colleagues who shared ideas, tested equipment, and provided valuable insight on how to make products better. As government regulations increased over the years, physicians began playing an even greater role in supporting Medtronic by conducting clinical trials.

ETHICAL FRAMEWORK FOR PARTNERSHIPS

Because physicians who work with Medtronic are also treating patients, there is the potential for conflicts of interest, both real and perceived. To ensure the integrity of the doctor-patient relationship, the collaboration between doctors and Medtronic is carefully managed and transparent. Medtronic was a staunch advocate of the Physician Payment Sunshine Act, a U.S. legislative bill that mandated disclosure of physician-industry financial relationships.

BEYOND PHYSICIANS

Over the years, we've expanded our network of partners, because innovation increasingly requires a vast ecosystem of interconnected players. They include regulators, hospitals, engineers, medical associations, advocacy groups, policymakers, and patients. Medtronic's expertise is bringing all these varied partners together, and translating their needs and knowledge into workable technologies using our biomechanical expertise.

SPEEDING INNOVATION: Close collaboration between Italian urologist Dr. Michele Spinelli (left) and Medtronic engineer Martin Gerber resulted in a better implant procedure for our neurostimulator to treat voiding dysfunctions.

Community Commitment

Being a good corporate citizen is embedded in Medtronic's DNA. Co-founder Earl Bakken chose to support the medical community so he could use his engineering talents to benefit humanity. Later, he ensured community commitment would be an enduring tenet by incorporating it into the Medtronic Mission.

REACHING OUT

We contribute to the communities we serve in many ways: donating products, providing grants, and encouraging employees to volunteer—whether that means leading projects, mentoring young scientists, or donating their own dollars to improve the lives of their neighbors.

Many of Medtronic's philanthropic endeavors are channeled through the Medtronic Foundation, established in 1978. Through the foundation, we share our resources and expertise in three focus areas:

- HEALTH to confront the global epidemic of chronic disease
- EDUCATION to inspire a new generation of innovators
- COMMUNITY to improve the vitality of an area by harnessing employee passion.

Just as partners play a key role in Medtronic's product development, they also play a key role in our community development efforts. The majority of Medtronic grants go toward organizations that educate and advocate for patients. These partnerships serve as another channel to help improve lives.

IMPROVING WITHIN

We recognize that being a good corporate citizen extends to our economic, environmental, and social performance. We regularly issue a sustainability report based on the Global Reporting Initiative framework. The report outlines Medtronic's many goals—promoting energy efficiency, eliminating waste, improving safety, encouraging a diverse workforce, etc.—and our performance against those ideals.

GLOBAL GIVING: More than 200 sick children from Africa, eastern Europe, and the Middle East travel to Switzerland annually to be cared for at Terre des Hommes, a nonprofit health organization that receives funding from the Medtronic Foundation.

RESOURCES

For information about products featured in this brochure, including benefit and risk information, please visit **www.medtronic.com**.

Earl Bakken's website
www.earlbakken.com

The Bakken Museum and Library of Electricity in Life
3537 Zenith Avenue South
Minneapolis, Minnesota 55416-4623
612.926.3878
www.thebakken.org

“Nothing I can say about Medtronic today makes me happier or more optimistic about the future than the fact that the Mission is deeply embedded as a permanent part of the culture.”

— Medtronic co-founder Earl Bakken

Medtronic

Worldwide Locations

World Headquarters
Medtronic, Inc.
710 Medtronic Parkway
Minneapolis, MN 55432
USA
Telephone: 763.514.4000
Fax: 763.514.4879

International Headquarters
Medtronic International, Ltd.
49 Changi South Avenue 2
Nasaco Tech Centre
Singapore 486056
Singapore
Telephone: 65.6436.5000
Fax: 65.6776.6335

Europe and Central Asia
Medtronic International Trading
Sàrl
Route du Molliau 31
Case Postale
CH-1131 Tolochenaz
Switzerland
Telephone: 41.21.802.7000
Fax: 41.21.802.7900

www.medtronic.com

MICHELSON TECHNOLOGY AT WORK

The LT-CAGE fusion device and LT-CAGE + INFUSE incorporate technology developed by Gary K Michelson, M.D.

UC201005747 EN © Medtronic, Inc. June 2010. All Rights Reserved. Printed in USA