Medtronic in Europe and the Emerging Markets
About Medtronic

Medtronic is the global leader in medical technology, alleviating pain, restoring health and extending life for millions of people around the world.

Medtronic provides medical professionals with products and therapies to help improve the lives of several million patients every year. These products treat heart and vascular disease, neurological disorders, chronic pain, spinal disorders, diabetes, urologic and digestive system disorders, and eye, ear, nose and throat disorders.

Founded in 1949, Medtronic now serves physicians, clinicians and patients in more than 120 countries. The company is headquartered in Minneapolis, Minnesota, and has research, manufacturing, education and sales facilities around the world.

The Medtronic Mission, written nearly 50 years ago, continues to serve as the company’s foundation. It acts as a compass when important business decisions are made, and it provides daily guidance and motivation to employees as they work to better serve patients around the world.
Medtronic Europe and Emerging Markets

First established in Europe in 1967, Medtronic operations have since expanded throughout Europe and the Emerging Markets region (Africa, Middle East, India and Latin America).

Medtronic’s Headquarters for Europe and the Emerging Markets region are in Tolochenaz, on the shores of Lake Geneva, Switzerland. The site is also home to the Swiss Manufacturing Operations, the world’s most highly automated manufacturing plant for pacemakers, implantable defibrillators and neurostimulators, as well as the Medtronic Therapy and Procedure Training Center - Europe.

Medtronic has four other major European facilities: a Vascular Manufacturing and Research and Development facility in Galway, Ireland; the Bakken Research Center in Maastricht, The Netherlands; the European Operations Center for distribution and shared services in Heerlen, The Netherlands; and the Center for Subcutaneous Diagnostics and Monitoring business in Arnhem, The Netherlands.
Europe and Emerging Markets Headquarters
Tolochenaz, Switzerland

Located in the heart of Europe, Switzerland has a reputation for quality and precision technology, advanced centers of scientific research and a humanitarian tradition, consistent with Medtronic’s own Mission.

Bakken Research Center
Maastricht, The Netherlands

The Bakken Research Center (BRC) in Maastricht has primary responsibility for Medtronic’s Research and development, clinical, regulatory and scientific support activities in the region.

European Operations Center
Heerlen, The Netherlands

Located in the south of The Netherlands, Heerlen hosts Medtronic’s European distribution and shared services center.

Subcutaneous Diagnostics and Monitoring
Arnhem, The Netherlands

In Arnhem, Medtronic has established a Cardiac Rhythm Disease Management business focusing on the development of Subcutaneous Diagnostics and Monitoring devices to help diagnose and treat cardiac disease.
Medtronic is committed to providing leading edge education to medical professionals, since training and education is key to ensuring safe, appropriate and efficient use of the company’s highly innovative devices and therapies.

The Medtronic Therapy and Procedure Training Center – Europe provides world-class facilities, faculty and programs for medical professionals. The center is equipped with virtual cath labs, echocardiography stations, virtual follow-up clinics as well as labs for simulations in neurosurgery and cardiac surgery, utilizing advanced techniques for data processing and imagery.

Thousands of physicians and medical professionals visit the Medtronic Therapy and Procedure Training Center – Europe each year to participate in continuing education courses in the fields of implantable devices such as pacemakers, defibrillators and stents; in minimally invasive techniques for spine, cardiovascular, or ear, nose and throat surgery; as well as the follow-up of patients with insulin pumps, pacemakers and neurostimulators.
Quality and transparency

Medtronic’s reputation for legal, moral, and ethical behavior is one of the company’s most valuable assets. This reputation has been built upon a policy of strict compliance with the law and the conduct of the business with the highest standards of moral and ethical behavior. Medtronic’s Mission Statement and its Code of Business Conduct provide the guidance essential to the successful global operation of Medtronic. Together, they reflect Medtronic’s shared values and commitment to the highest standards.

Striving without reserve for the greatest possible reliability and quality in products, Medtronic is at the forefront of efficacy, safety and quality standards. Working with healthcare authorities and agencies in a timely and transparent manner enables Medtronic to demonstrate the value and performance of its products and therapies.
A story of progress

In 1949, Earl Bakken, an electrical engineering student, and his brother-in-law Palmer Hermundslie, founded Medtronic in Minneapolis to repair medical equipment for local hospitals. By working closely with physician customers – a key element of Medtronic’s success today as it was back then – Earl Bakken and Palmer Hermundslie went on to design and build new medical devices. In 1957, Earl Bakken developed the first wearable external battery-powered cardiac pacemaker, and created an entirely new industry. By 1960, Medtronic products were used in the USA, Australia, Canada, Europe and Latin America.

Before the pacemaker, the only treatment for failing hearts was marginally effective drug therapy. Today, biomedical engineering is helping to create revolutionary new therapies to change the course of human disease.

The combination of research and development plus strategic mergers and acquisitions has enabled Medtronic to continually improve and expand its product lines and to enter new markets. From what was originally a ‘one-product enterprise’, Medtronic has evolved into a global leader, with an array of technologies and products designed to alleviate pain, restore health and extend life.
Medtronic in the Community

An essential part of Medtronic’s Mission is “to maintain good citizenship as a company”. Both Medtronic and the Medtronic Foundation support a number of worthy initiatives that contribute to the vitality of local communities and improve the health of people in Europe and the Emerging Markets.

By partnering with organizations in the areas of health, education and community welfare, Medtronic is committed to finding innovative ways to help local partners increase their impact.

Dr. C. Walton Lillehei, a pioneer in open heart surgery at the University of Minnesota Medical School, with a child who received one of the early Medtronic external pacemakers.
CARDIAC RHYTHM DISEASE MANAGEMENT

Irregular Heart Rates
Implantable pacemakers that regulate slow heart rates, and implantable defibrillators to regulate fast heart rates that can lead to sudden cardiac arrest.

Heart Failure
Implantable cardiac resynchronization systems that resynchronize the heartbeat and improve blood-pumping ability.

Unexplained Syncope
Insertable loop recorders that diagnose heart-related causes of recurrent, unexplained fainting.

Remote Device Monitoring
Secure phone- and Internet-based systems for transmitting device data to healthcare professionals.

CARDIAC SURGERY

Heart Valve Disease
Implantable bioprosthetic tissue and mechanical valves and prosthetic rings or bands to replace or repair damaged valves.

Coronary Vascular Disease
Perfusion systems for arrested-heart surgery and heart stabilization systems for beating-heart surgery to bypass blocked arteries.

Atrial Fibrillation
Radio frequency ablation systems that inhibit abnormal electrical activity.

VASCULAR

Coronary Vascular Disease
Diagnostic and guiding catheters; angioplasty balloons and implantable stents to widen blocked arteries that have reduced blood supply to the heart, including drug-eluting stents that prevent restenosis.

Peripheral Vascular Disease
Catheters and implantable stents that treat blood vessel and duct blockages in other parts of the body; implantable neurostimulation systems to treat related pain.

Aortic Disease
Implantable endovascular stent grafts that provide support for a weakened and ballooning aortic artery, which runs through the chest and abdomen and distributes blood from the heart to the rest of the body.
In more ways than ever

NEUROLOGICAL

Parkinson’s Disease, Essential Tremor and Dystonia
Implantable deep brain stimulation systems to reduce the motor symptoms of the movement disorders.

Hydrocephalus
Implantable shunts that divert excess fluid in the brain to other parts of the body, where it can be reabsorbed.

Spasticity
Implantable infusion systems that deliver medication directly to the intrathecal space to loosen tight, stiff muscles.

Chronic Pain
Implantable neurostimulation systems and infusion systems that deliver electrical pulses and drugs, respectively, to specific areas of the body - usually around the spine - to block pain sensations.

Cranial and Spinal Surgery
Surgical drills, cranial closure products and endoscopes that make it easier to perform surgery.

Fecal Incontinence and Constipation
Implantable neurostimulation system targeting the sacral nerves to control bowel function.

UROLOGY

Overactive Bladder and Urinary Retention
Implantable neurostimulation system targeting the sacral nerves to control bladder function.

Benign Prostatic Hyperplasia (BPH)
Radio frequency ablation system that delivers treatment directly to the prostate to reduce excess tissue and improve urine flow.

DIABETES

External and implantable insulin pumps, real-time continuous glucose monitoring systems and therapy management software that help diabetes patients improve blood sugar control.

SPINAL

Spinal Deformities
Fusion systems that correct and stabilize abnormal spinal curves, such as those associated with scoliosis.

Herniated Disc
Minimal Access Spinal Technologies (MAST) to remove damaged disc material and help alleviate pain from nerve pressure.

Degenerative Disc Disease
Cervical and lumbar disc prostheses, spinal fusion systems, MAST procedures and bone graft substitutes or bone morphogenetic proteins used to remove diseased discs, promote fusion of vertebrae and help alleviate pain.

Acute Tibial Fractures
Bone morphogenetic proteins that heal certain types of fractured shin bones.

NAVIGATION

Image guided surgery and intra-operative imaging solutions that enable minimally invasive therapy for neurosurgical, spinal, orthopedic and ear, nose and throat disorders.

E A R , N O S E A N D T H R O A T

Ménière’s Disease
Portable external device that delivers low-pressure air pulses to the inner ear to alleviate severe vertigo.

Ear Infections
Surgical tools and implantable devices to remove and replace excess or diseased tissue.

Sinus Infections
Surgical tools to unblock clogged or obstructed sinuses.

Thyroid Disease
Equipment that monitors nerves during complicated, high-risk thyroid surgery to avoid nerve damage.

G A S T R O E N T E R O L O G Y

Acid Reflux
Diagnostic test that uses a wireless capsule to monitor pH levels in the esophagus.

Gastroparesis
Implantable gastric stimulation system to minimize the chronic nausea and vomiting associated with slow-moving stomach muscles.
Heart Failure

Imagine feeling weak all the time, day in and day out, too tired to do the simplest things such as brushing your teeth or making a cup of coffee. That only begins to describe the life of a heart failure patient. In Western Europe alone, there are already over five million heart failure patients, a number expected to rise to 10 million by 2030, as the population ages. Heart failure is also responsible for more hospitalizations than all forms of cancer combined. It is the most frequent cause of hospitalization in people over 65. Medtronic’s cardiac resynchronization therapy devices and implantable defibrillators, as well as the related monitoring and diagnostic features, can save the lives of many heart failure patients and help them experience a significant improvement in their quality of life.

Silke Tamburini had suffered from heart failure for several years before cardiac resynchronization therapy positively transformed her life. Getting out of bed, showering, riding her bike and even speaking have become everyday activities again. Today Silke can say, “It is such a wonderful feeling that now I can do all of the ordinary activities of life. It is as if nothing ever happened.”
Heart Valve Disease

Every year in Western Europe, one in every thousand people will undergo cardiac surgery. This may be a coronary bypass, valve replacement, heart transplant or complex heart repair in young children. Cardiac surgeries have a proven ability to restore full life, alleviate pain and extend the life of patients.

At eight years old Antonio Camões Sobral was diagnosed with acute polyarticular rheumatism. He was then told he had rheumatic valvulopathy with a severe valve lesion. The prognosis was poor. Motivated by his own experience of illness, Antonio studied medicine and became a cardiologist. At 43, he had surgery to replace the irreparable mitral valve with a Medtronic implantable heart valve. More than a decade after surgery, Antonio says “My life after surgery changed dramatically. Thanks to this valve, I’m still alive. I can look to the future.”

“My life after surgery has changed dramatically. Thanks to this valve, I’m still alive. Once again, I can look to the future.”

Antonio Camões Sobral, Portugal

Vascular Disease

Vascular disease affects millions of people. The costs - both in human suffering and medical care – are enormous. Medtronic offers innovative solutions to many patients suffering from coronary artery disease, which affects the vessels that supply oxygen to the heart; peripheral vascular disease, which refers to plaque build up in arteries and abdominal and thoracic aortic aneurysms, which occur when the aortic wall becomes weakened by plaque build up, “ballooning” to form an aneurysm.

Annelies Reinders and her husband both suffered a myocardial infarction within one year. After initially suspecting an esophagus inflammation, the doctors diagnosed Annelies with a coronary artery disease and she received a Medtronic drug eluting coronary stent. More than a year after implant, Annelies is back to full life: “Now I feel great again. I almost never think about what happened to me.”

“Now I feel great again. I almost never think about what happened to me.”

Annelies Reinders, The Netherlands
“Thanks to my drug delivery pump, life is like a game of table tennis: a victory, day after day.”

Elena Manzi, Italy

Pain

Defined as pain that persists or recurs for more than six months, chronic pain affects over 70 million people in Western Europe. It can be caused by a variety of injuries and diseases, including nerve damage and cancer, and most commonly affects the lower back and legs, but also affects many patients suffering from angina pectoris or peripheral vascular disease. Left untreated or under-treated, chronic pain can destroy a person's life. Beyond the physical disability that often results, it can lead to difficulty holding a job, low self-esteem, strained relationships and depression. But many patients can be treated effectively and safely with Medtronic neuromodulation therapies.

Elena Manzi suffered chronic pain associated with spasticity. Due to her condition, all daily activities were constantly accompanied by pain. Since she was implanted with a Medtronic drug delivery pump, Elena can dedicate herself to her passion for table tennis again: “Thanks to my drug delivery pump, life is like a game of table tennis: a victory, day after day.”
Parkinson’s Disease

When you think of Parkinson’s disease, the first thing that may come to mind is the uncontrolled shaking. But other symptoms can be much worse. Routine daily activities such as bathing, dressing or eating may become difficult or impossible without assistance from others. The average age at onset is 60, but ‘young onset’ may occur as early as 20. Patients often describe themselves as prisoners within their own bodies. The Medtronic Parkinson’s control therapy offers hope to many patients. An implantable device delivers electrical stimulation to precisely targeted areas of the brain.

Parkinson’s is a long-term disease, as Catherine Tailliandier will testify. Well over twenty years ago, she raised her left arm and saw it shaking - immediately recognizing a symptom of Parkinson’s disease. Medtronic’s deep brain stimulation therapy has been a breakthrough for Catherine and she is meeting the challenges of the disease, saying: “There is no comparison to how I lived before the surgery. I do not consider myself as ill anymore.”

“There is no comparison to how I lived before the surgery. I do not consider myself as ill anymore.”

Catherine Tailliandier, France

Bladder and bowel control

Bladder and bowel control problems have a major impact upon people’s day-to-day personal and working lives. In Western Europe alone, nearly 30 million people suffer from an underactive or overactive bladder. Medtronic’s implantable sacral neuromodulation system influences the bladder or bowel function by applying mild electrical stimulation to the sacral nerves. These are the nerves which affect the bladder, bowel and pelvic organs.

After giving birth to her second child, Gunilla Jacobsson suffered fecal incontinence, a debilitating disease that significantly impacted her quality of life. After being implanted with a neurostimulation system for the treatment of fecal incontinence, Gunilla enjoys life again: “Now I can work full time again and fully enjoy my life and family.”

“Now I can work full time again and fully enjoy my life and family.”

Gunilla Jacobsson, Sweden
I had the implant on a Thursday and left the hospital by Saturday – finally pain free.

Adrian Marti, Switzerland

Spinal Disorders

The spine is a complex structure that, when injured, requires advanced treatment solutions. Spinal conditions range from scoliosis to injury to degenerative disc disease, and Medtronic is at the forefront of developing technologies that not only treat the condition, but also help reduce hospital stays and speed recovery times.

Being part of a Swiss mountain rescue team was a dream come true for Adrian Marti, but sitting in a helicopter looking down for 15 years took a toll on his body. He had recurring back and neck pain, then one arm became partially paralyzed. After the implant of Medtronic’s artificial disc that maintains spinal motion, Adrian is back to his activity – to save the lives of people in the Swiss Alps. “I had the implant on a Thursday and left the hospital by Saturday – finally pain free,” Adrian said.

“I had the implant on a Thursday and left the hospital by Saturday – finally pain free.”

Adrian Marti, Switzerland

Spasticity

Spasticity is a condition that causes stiff, tight muscles, especially in the arms and legs, making movements jerky or uncontrollable. Everyday activities like walking, eating, dressing or bathing can become time consuming and difficult for individuals with spasticity, as well as for their caregivers. Depending upon the severity of the spasticity, individuals and their healthcare professionals can design a treatment program consisting of one or more of the following: physical and occupational therapy, oral medications, injections into spastic muscles, drug administered by an implantable drug infusion system, orthopedic surgery and neurosurgery.

When Claudia Tecglen’s parents were told that Claudia’s spasticity was extreme, and the best thing they could do for her is buy her a special wheelchair, they moved heaven and earth to find a better solution. A Medtronic implantable drug delivery pump gave Claudia more autonomy and happiness: “I now celebrate two birthdays: the day that I was born and the day that I received my drug delivery pump!”

“I now celebrate two birthdays: the day that I was born and the day that I received my drug delivery pump.”

Claudia Tecglen, Spain
Diabetes

Diabetes is the body’s inability to produce or properly use insulin. It can be devastating. Complications can lead to heart disease, blindness, kidney failure, amputation, and in many cases death. More than 150 million people around the world have diabetes, and that number is expected to soar to 300 million by 2025. In Western Europe alone, there are about 18 million diabetes patients. The key to preventing diabetes complications is keeping blood sugar levels within a normal range. For many patients, insulin delivery with an insulin pump is the most effective way to maintain this type of control. In addition, Medtronic’s continuous glucose monitoring systems allow patients to have a better overview of their glucose levels and prevent potentially dangerous low or high sugar levels.

Diagnosed with diabetes at the age of 12, Niti Ranjan took control of her diabetes thanks to a Medtronic insulin pump. With her insulin pump, Niti could undertake the project of her life, which once had looked close to impossible – having a baby. "I had fought the fight against diabetes and won. The victory becomes even sweeter every time I see my daughter smile!"

Niti Ranjan, India
Mission

• 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.

Alleviate pain
Restore health
Extend life