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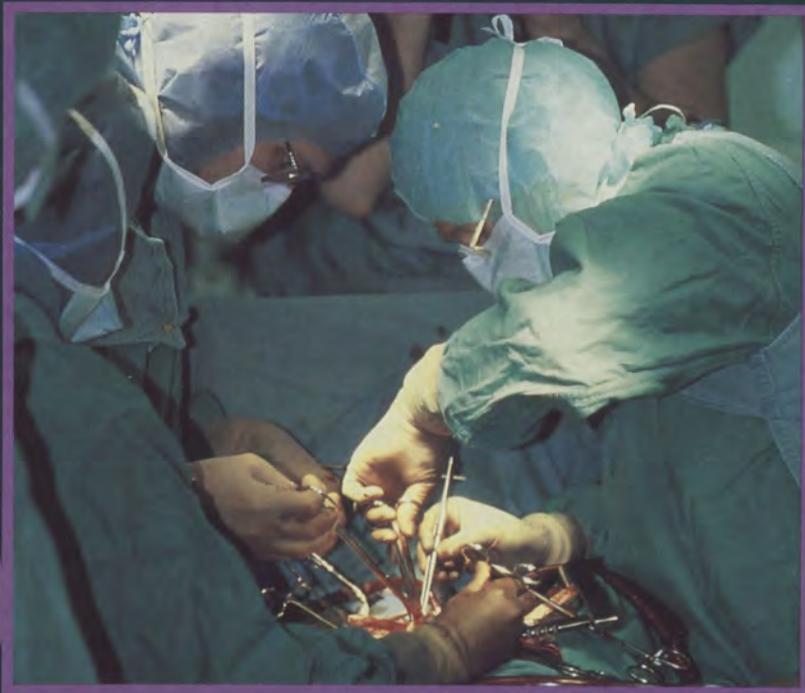
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Choose Canada

For World-Class Health Products and Services



Government
of Canada

Gouvernement
du Canada

Canada

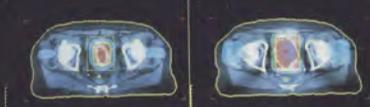


RNT module



Mr. E.B.

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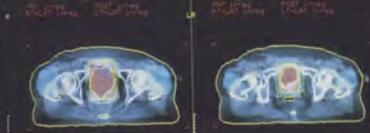


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CT 52K Fallens #1

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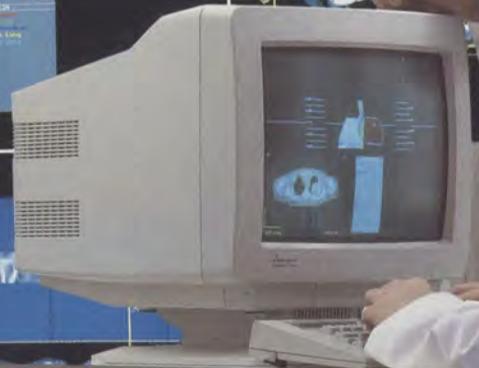


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VIRTUAL SIMULATION



In 1921, two Canadians, Drs. Frederick Banting and Charles Best discovered insulin. Since then, Canada has been a leader in providing outstanding health care products, services and research world-wide. And with good reason.

We have the expertise. Canadian firms offer a complete range of highly professional health care services. These range from consulting on health care policy and delivery systems, through basic clinical care, to comprehensive hospital management.

We have the technology. Our high-quality medical products – from orthodontic braces to nuclear therapy equipment – are recognized and used around the world.

We have the research. Canada's health products and services industry is supported by a solid R&D infrastructure.

We have the system. Our health care system is second to none.

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Canada: the picture of health

Canada's superior health care system provides an ideal environment for the development of high-quality products and services.

By any measure, Canada's health care system is one of the best in the world. Canadian residents have universal access to quality medical care. Everyone, regardless of financial status, can expect to be cared for by highly trained health personnel. Hospitals and clinics are among the best equipped in the world.

The quality of Canada's health care system is reflected in the excellent health most Canadians enjoy. Life expectancy for children born in 1990 is 77 years, among the highest in the world. And Canada has achieved one of the lowest infant mortality rates of any country – seven deaths per 1000 live births.

Canadians themselves rate the system highly. In fact, more than 90% consider that their health care system makes Canada one of the most desirable places to live. Public support is broad-based – over the past four decades, consumers, health care providers and governments have shaped a health care system that works for everyone.



The World Economic Forum and a leading international management school ranked Canada first in the world for quality and availability of health care.

The World Competitiveness Report 1991



once-a-day
PRAX
celecoxib

INSIDE THE EAR

Pediazole

INFANT COLIC
SOOTHES
INFANTS

A strong foundation

Publicly financed and decentralized, Canada's health care system is delivered by 12 provincial/territorial governments, each operating according to national guidelines. This ensures that national standards are met while also allowing for flexibility in serving the special needs of individual regions.

It's cost-effective. Canada currently uses only 2.5% of its total health expenditures on administration. Some countries with privately operated schemes spend three times that amount.

It's simple. When Canadians need medical care, they visit the doctor, clinic or hospital of their choice. Doctors bill the government; patients don't pay directly for medical services and do not need to fill out any forms.

Canadians get the best of both worlds. The public system pays for all necessary hospital and medical services. Many Canadians are also covered by employer/employee funded health insurance systems which offer programs to supply the rest – including eyeglasses, dental care and other medical care, and drugs used outside of hospitals.





I: Health services: a major growth industry

The health services sector is rapidly becoming one of Canada's major growth industries. Every year, an increasing range of high-quality, professional and competitive services becomes available for export abroad.

Canadian "know-how" in health services covers the spectrum – from establishing health insurance schemes, to managing a hospital, to developing and installing hospital accounting systems.

A major strength of Canada's health services industry is the wealth of expertise available in both the public and private sectors. By combining the best from each, the industry can tailor its resources to meet the special needs of its international clients.



Just tell us what your needs are and we'll fill them... whether it's developing a comprehensive health care policy, designing and implementing a health care delivery system, or establishing or managing individual care, research or laboratory facilities.

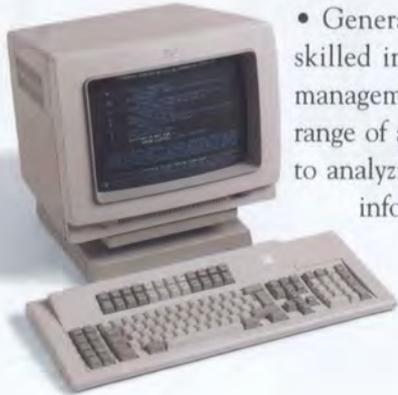


What we offer

Canada has proven and potential export capability in every major health service area.

Hospital management

- An extensive array of services, from comprehensive hospital management to customized service packages in specialized areas such as radiology and pharmacology.
- Our private firms work with publicly funded institutions – health facilities, hospital associations and universities – guaranteeing efficient and effective service delivery.
- General and specialized consulting services are highly skilled in helping health care administrators solve their management problems. Canadian firms offer an extensive range of advisory services – from human resource planning to analyzing hospital efficiency levels to developing health information systems and related software.



Industry flash:
In Quebec, a small private firm joins forces with one of the province's universities to oversee the management of a hospital in Hungary.



Long-term care

• Our firms are out in front meeting the global challenges of long-term health and residential care for the aging and infirm. Canadian expertise and modern management approaches are recognized internationally and are particularly attractive to countries privatizing their chronic care facilities.

Health insurance systems

• Canada's health insurance system is held up as a model for the rest of the world. We want to share our expertise, including the sophisticated organizational tools and infrastructure that support our scheme.

Other expertise

Canada is a world leader in other health care service areas:

- basic clinical services, including dental care
- health services to remote regions
- public health training
- occupational health and safety
- treatment of hospital waste
- emergency and ambulatory services
- search and rescue operations
- medical laboratories
- design and construction of health care facilities



Industry flash:

Canada's largest long-term care company runs more than 150 nursing and retirement centres in the United States.

The same firm operates a number of hospitals and nursing centres in Great Britain.



II: Technologies for better health

Canada has pioneered an impressive array of medical products and techniques over the years.

1950 – at Toronto General Hospital, Dr. W. Bigelow develops the first heart pacemaker

1951 – the world's first Cobalt 60 cancer therapy unit is installed at Victoria Hospital in London, Ontario

1962 – Canada opens the world's first coronary intensive care unit

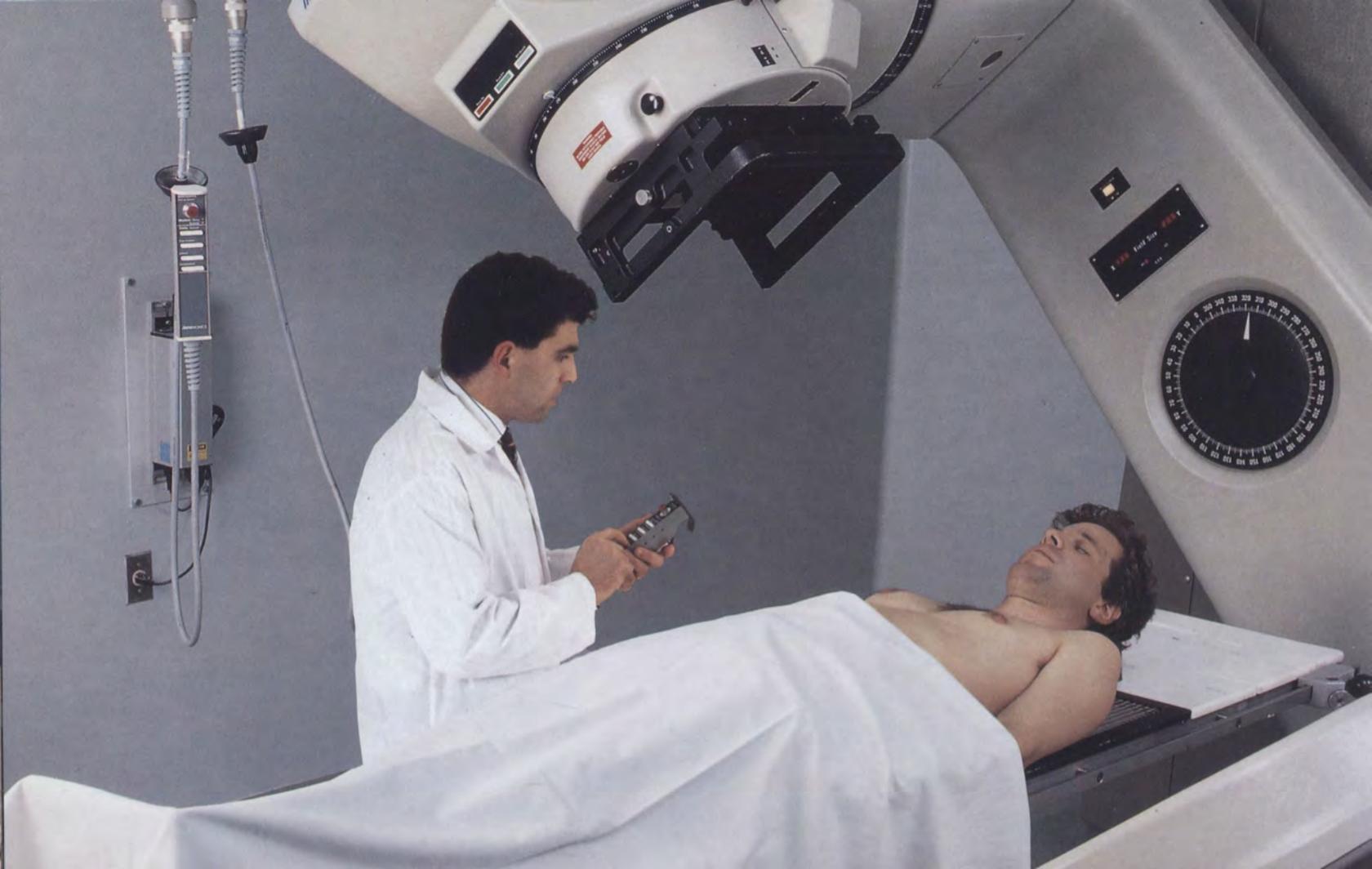
1987 – researchers develop a new process for producing radiopharmaceuticals for use in thyroid imaging, brain and heart studies and experimental nuclear medicine

1991 – a Canadian manufacturer introduces the world's smallest dialysis machine to international markets

On the move today, Canada's medical products industry includes more than 650 manufacturing firms. Total production in this sector has tripled in just over a decade.

One Canadian manufacturer of high-tech, specialized catheters reports average sales increases of 35% per year for the past three years. Over 90% of its products are exported to markets in the United States, Europe and Asia.





Increasingly, Canadian manufacturers are finding new markets abroad. Exports range from tongue depressors to sophisticated imaging systems.

- Canada exports almost one third of all medical devices it manufactures. Canadian subsidiaries of several large multinational companies supply world markets from the Canadian manufacturing base.

What we offer

Canada is an important international player in several major product areas:

New medical device technologies

We're on the cutting edge in imaging, *in vitro* diagnostics, assistive devices, and dental and cardiovascular technology.

- In *imaging*, Canada is world-renowned for its hardware, software and instrumentation related to nuclear, infrared and ultrasound diagnostics and therapy. We have a long tradition of pioneering developments in nuclear medicine and imaging technologies, such as X-ray and 3-D imaging systems.

On the horizon:
The development of magnetoencephalograph (MEG) technology which uses high temperature super-conducting materials and systems for measuring and diagnosing brain functions.





- In *diagnostics*, a unique synthetic peptide technology has been used to develop highly sensitive diagnostic test kits which can simultaneously detect the antibodies for both AIDS viruses, HIV-1 and HIV-2. This new technology is also being used in competitive products for diagnosing the presence of certain viral and bacterial diseases.

- In *assistive devices*, we're recognized for our pioneering work in the design and development of artificial limbs, wheelchair seating systems, bio-compatible materials, robotics, and educational and technical aids for the physically disabled.



***On the horizon:
A non-invasive blood
chemistry analyzer for
the measurement of glu-
cose, triglycerides and
cholesterol. This process
does not use consum-
ables, such as reagents,
and no blood sample is
required.***



- In *dental products*, Canada is a leading exporter of dental burrs, miniature orthodontic appliances, and table-top dental instrument sterilizers.
- A global performer in *cardiovascular devices*, Canada is out front in artificial heart technology, heart implants and cardiac ablation treatments.

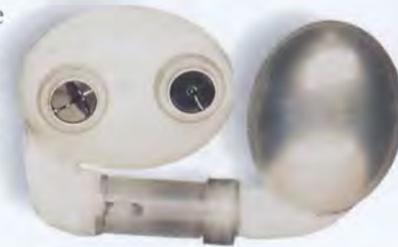
Pharmaceuticals and biologicals

Canada's thriving biological products industry has a strong record of product innovation, particularly in human vaccines.

- We are among the largest full-line producers of human vaccines in the world.

Pharmaceutical research spending in Canada has almost quadrupled in the past four years – to approximately \$387 million in 1991.

- Between 1991 and 1995, one large multinational pharmaceutical company will spend \$270 million in Canada for a new research facility and therapeutic research into respiratory diseases.



***On the horizon:
An energy transfer
and information transfer
system that powers,
monitors and controls
implantable medical
devices, including an
artificial heart, without
piercing the skin.***



II-CARBON
SPINNER

CARRIER
FLASK
8000
7000
6000
5000

Some of the promising new pharmaceutical products now under development in Canada include:

- a drug to prevent the AIDS virus from replicating in the body
- an innovative, light-sensitive cancer therapy drug
- a drug which holds the promise of rebuilding bone lost due to osteoporosis

Canada is an ideal setting for drug development. Together, our well-established medical research infrastructure and our top-notch health care delivery system have fostered the development of strong pre-clinical and clinical research expertise.



We have expertise in setting up turn-key operations for sterilizing medical devices using gamma radiation and electron beam linear accelerator technology.



Mini industry profiles

- An Ontario firm produces 3-D computers which reconstruct 2-dimensional images from X-rays, CAT scans, magnetic resonance imaging (MRI) and other devices. A boon in both diagnosis and treatment, the technology helps surgeons understand the actual structure of an operation site. In radiotherapy, the technology allows more accurate placement of radiation seeds for the treatment of tumours.
- A Canadian corporation is the number one supplier of Cobalt 60 worldwide.
- A Canadian company, working in collaboration with the National Research Council of Canada and orthopaedic surgeons at the Ottawa Civic Hospital, has developed a unique implantable spinal fixation device which is breaking new ground in spinal surgery.



***Customer support:
Canadian companies
have the back-up.
Comprehensive support
services are available
to install and maintain
technical health equip-
ment exported to other
countries.***



III: A supportive infrastructure

We're here to stay

Keeping a place in the highly competitive world market means maintaining a solid base of institutional support at home. Canada takes pride in its well-established medical research and development infrastructure. Our economic goals include strengthening our position in the industries of the future. The commitment runs deep.

Government-sponsored programs support the health industry through tax credits, grants and financial assistance.

Canada's regulatory environment – setting manufacturing standards and testing and certification procedures – ensures products meet strict safety and quality guidelines.

Canadian universities and teaching hospitals have strong links with a vigorous private sector.

Seven “Centres of Excellence” bring together Canada's top researchers from industry, academia and government. Dedicated to promoting excellence in Canadian scientific research in specific health care areas, the centres are composed of networks of 5 to 20 institutions and companies from across the country. They are supported by more than \$120 million in government funding over five years.





- The Neural Regeneration and Functional Recovery Centre works with industry to commercialize technology promoting nervous system regeneration and recovery of functions lost as a result of trauma or disease.
- The Genetic Basis of Human Disease Centre is breaking new ground studying how gene mutations predispose humans to disease. This research could lead to major commercial opportunities in the areas of DNA diagnostics and therapeutics.
- The Protein Engineering Centre is working with industry to improve the building block structure of proteins. Among other uses, improved proteins can be beneficial in the treatment of infectious diseases.
- The Respiratory Health Network of Centres of Excellence is working to develop mechanical lung ventilators, lung testing kits and new drugs to overcome airway blockage in cystic fibrosis and asthma patients.
- The Institute for Robotics and Intelligent Systems is a consortium of 32 R&D institutions and universities which carry out advanced research in robotics and artificial intelligence.





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