

Introduction

When you live in the shadow of one of the most powerful, innovative nations on earth, the United States, you can't sit still for long. If you do, you will be frozen out of existence – literally.

Canadians, for this and countless other reasons, have long since learned the importance of innovation – thinking for themselves. Stemming from a fundamental principle of maintaining a unique identity, this determination has manifested itself in achievements in numerous fields, ranging from communications and satellite advances to medical technology.

In the 64 years since the discovery of life-saving insulin by Canadians Frederick Banting and Charles Best, medical researchers have increasingly moved

Canada into the forefront of new frontiers of medicine.

From pioneer breakthroughs in specialty areas like heart surgery, artificial prosthetic devices and heart pacemakers, to an intimate understanding of some of the complexities of the brain, researchers have opened new vistas encompassing everything from immunology and organ transplants to blood vessel surgery in some of the almost inaccessible areas of the human brain.

In today's "high tech" era, Canadian researchers and clinicians are researching and developing some of the most sophisticated medical diagnostic and treatment hardware. The list of products ranges from abdominal surgical

belts to the latest linear accelerator cancer treatment machines. And in between are to be found everything from yoke assemblies for medical gases to implantable heart pacemakers.

Because of its enormous size – Canada comprises some 10 million square kilometres – and its small population of 25.5 million scattered over the broad expanse, this nation has also pioneered the development of medical technologies operable in both metropolitan and remote, sparsely populated outposts. Where it is not feasible to bring all the medical tools to an isolated settlement, researchers have developed advanced communication networks employing satellite "telehealth" to "deliver" the capabilities of these devices where they are needed.

In numerous health science centres in major cities across Canada, researchers have been, and are developing, new medical diagnostic and treatment modalities. And innovative design experts in private industry are fabricating a growing number of diagnostic and therapeutic devices for inclusion in medical tool chests everywhere.

This country's international reputation for medical expertise, coupled with its technological know-how in developing high quality, precision medical devices, are creating increasing demands for our products abroad.



The Therasim 130, which simulates radiotherapy treatment.