



Health Career Directory

Physician (Specialist)

What would I do?

Specialist physicians are doctors who are trained and certified in a specific area of medical practice.

Specialist physicians are experts in preventing, diagnosing and treating diseases, physiological and psychiatric disorders, and injuries. They examine patients and give advice and treatment towards the management of patient's health. Specialists also act as consultants to other doctors; perform surgery and supervise surgical procedures; and may do research on the nature, cause and development of diseases in humans.

There are more than 50 specialties and subspecialties recognized in Canada. See the Royal College of Physicians and Surgeons of Canada website for a complete list of specialties.
<http://www.royalcollege.ca/portal/page/portal/rc/public>

Specialists may also choose to work in clinical medicine, in laboratory medicine and/or in surgery. Specialists may work independently or participate in health care teams and coordinate their work with other physicians, nurses, pharmacists and other health care providers.

Clinical Medicine:

- Diagnose and treat diseases and physiological or psychiatric disorders
- Order laboratory tests, X-rays and other diagnostic procedures
- Prescribe medication and treatment and refer patients for surgery
- Act as consultants to other physicians
- Do medical research

Laboratory Medicine:

- Study the nature, cause and development of diseases in humans and the structural and functional changes caused by diseases
- Do microscopic and chemical analyses of laboratory samples and specimens
- Supervise laboratory activities
- Act as consultants to other physicians

Surgery:

- Assess patients' diseases or disorders to decide appropriate surgical procedures
- Perform and supervise surgical procedures to correct physical abnormalities and deficiencies and repair injuries

- Act as consultants to other physicians

Specific duties and responsibilities will vary depending on the type of position, such as:

- Other medical specialists
- Public health officer
- Occupational health officer
- Research scientist
- Teacher or professor
- Administrator

What education do I need?

While in secondary school, you would need good grades in mathematics and the sciences.

A doctor of medicine degree (MD) is required to work in this field. The MD requires at least three years of undergraduate studies, as well as four years of medical school.

Once they graduate, an MD does an internship, and then, a residency program in their specialty. (Residency is a paid training period.) The total amount of studies to become a specialist physician can take up to 11-13 years of university studies.

Medical schools have demanding academic admission requirements. University medical programs hold interviews to ensure that applicants, who already have acceptable academic credentials, also have the appropriate social skills and attitudes to work as medical professionals.

Physicians must complete:

1. pre-medicine studies at the university level (3-4 years program)
2. complete a Medical Doctor (MD) degree program at an accredited university (3-4 years program)
3. post-graduate training in a specialty (4-7 years)

After completing 3-4 years of medical school, a medical student can apply to a program to become a specialist in one of the following clinical specialty areas of medicine:

- [Allergy and Clinical Immunology](#)- study of disease caused by disorders of the immune system
- [Anatomical Pathology](#) - study and diagnosis of disease through examination of organs, tissues, bodily fluids, and whole bodies (autopsies).
- [Anesthesiology](#) – trained in using anesthesia during perioperative procedures
- [Cardiology](#) –medical specialty focuses on disorders of the heart
- [Cardiovascular/Thoracic Surgery](#) -is the field of medicine involved in surgical treatment of disease that affects organs inside the thorax (the chest), treatment of conditions of the heart (heart disease), and lung (lung disease)
- [Community Medicine](#)- the study of health and disease in defined communities or groups in order to identify their health needs, and to plan, implement, and evaluate health programs to effectively meet these needs.
- [Dermatology](#) -is the branch of medicine focused on the skin and it's diseases
- [Diagnostic Radiology](#) -is the branch of medicine which uses of various imaging modalities to aid in the diagnosis of disease
- [Emergency Medicine](#) - is a medical specialty in which physicians care for patients with life threatening illnesses or injuries that requires instant medical attention.

- [Endocrinology & Metabolism](#) - is a branch of biology and medicine focused on the endocrine systems, its diseases, and its specific secretions called hormones
- [Family Practice](#) - is a medical specialty devoted to comprehensive health care for people of all ages
- [Gastroenterology](#) - is a branch of medicine focused on the digestive system and its disorders.
- [General Internal Medicine](#) - is the medical specialty focused on the prevention, diagnosis, and treatment of adult diseases.
- [General/Clinical Pathology](#) - is a medical specialty that is concerned with the diagnosis of disease based on the laboratory analysis of bodily fluids (such as blood, urine, and tissues) using the tools of chemistry, microbiology, hematology and molecular pathology.
- [General Surgery](#) -is a surgical specialty that focuses on abdominal contents. These abdominal contexts include esophagus, stomach, small bowel, colon, liver, pancreas, gallbladder and bile ducts, and often the thyroid gland (depending on the availability of head and neck surgery specialists).
- [Geriatric Medicine](#) - is a sub-specialty of internal medicine and family medicine that focuses on the health care of elderly people
- [Hematology](#) - is the study of blood, the blood-forming organs, and blood diseases.
- [Medical Biochemistry](#) - is that branch of medicine concerned with the biochemistry and metabolism of human health and disease
- [Medical Oncology](#) - is a branch of medicine that focuses on cancer
- Microbiology Infectious Diseases - is a subspecialty of Internal Medicine. It focuses on the diagnosis and treatment of infectious diseases
- [Nephrology](#) -is a specialty of medicine that focuses on the study of kidney function and kidney problems
- [Neurology](#) – is a medical specialty that focuses on disorders of the nervous system
- [Neurosurgery](#) -is the medical specialty that focuses on the prevention, diagnosis, treatment, and rehabilitation of disorders. These are disorders that affect any portion of the nervous system including: the brain, spinal cord, peripheral nerves, and extra-cranial cerebrovascular system
- [Nuclear Medicine](#) - is a medical specialty that involves the use of radioactive substances in the diagnosis and treatment of disease.
- [Obstetrics/Gynecology](#) - the two surgical-medical specialties focus on female reproductive organs when a woman is either pregnant or not pregnant-. These two specialties are often joined into a single medical specialty and postgraduate training program
- [Ophthalmology](#) - is the branch of medicine that focuses on the anatomy, physiology and diseases of the eye.
- [Orthopaedic Surgery](#) - is the branch of surgery concerned with conditions involving the musculoskeletal system
- [Otolaryngology](#) - (ear, nose, and throat) is the branch of medicine and surgery that specializes in the diagnosis and treatment of disorders of the head and neck
- [Paediatrics](#) - is the branch of medicine that focuses on the medical care of infants, children, and teenagers.
- [Physiatry](#) - is a branch of medicine that aims to enhance and restore functional ability and quality of life to those with physical impairments or disabilities.
- [Plastic Surgery](#) - is a medical specialty concerned with the correction or restoration of form and function
- [Psychiatry](#) - is the medical specialty focused on the diagnosis, treatment, and prevention of mental disorders
- [Radiation Oncology](#) - specializes in the treatment of cancer patients using radiation

- therapy as the main modality of treatment
- [Respiratory Medicine/Respirology](#) - is the medical specialty that focuses on disease involving the respiratory system
- [Rheumatology](#) - is a sub-specialty in internal medicine and pediatrics focused on the diagnosis of clinical problems involving joints, soft tissues, autoimmune diseases, vasculitis, and heritable connective tissue disorders.
- [Urology](#) - is the medical and surgical specialty that focuses on the urinary tracts of males and females, and on the reproductive system of males

To become a fully licensed physician in BC, graduates must pass the Medical Council of Canada Evaluating Examination. As well, they must also become licensed through the College of Physicians and Surgeons of British Columbia.

The specialist physician has three years to sit the Royal College of Physicians and Surgeons of Canada examinations, with the expectation that the examinations are to be done at the first opportunity.

Where would I work?

Specialists tend to work in hospitals, outpatient centers, clinics, and private offices. They are often assisted by a small staff of nurses and medical administrators. Specialists in clinical medicine usually work in offices or in a hospital, while those in laboratory medicine and in surgery usually work in hospitals.

The majority of specialists are self-employed or independent contractors in BC. They set up their own practice and bill the provincial government directly for their services. Some, however, are staff members in hospital settings or members of a medical practice group and may co-ordinate their work with other doctors, nurses, pharmacists, and other health care providers. By practicing in groups or healthcare organizations, Specialists provide back-up coverage for one another and coordinate the care of their patients as a team, and often participate in on-call rosters.

Many physicians work in independent practice or are employed by health authorities in BC in various settings such as:

- health administration
- hospitals
- medical research and laboratories
- offices of physicians and surgeons
- occupational medicine
- public health; and
- universities.

Specialist physicians often work irregular hours, including nights and weekends. They may also be on-call 24 hours a day when required to respond to emergencies.

Who is suited to become specialist physicians?

Specialists are most effective when they have the following skills and characteristics:

- the intellectual ability to successfully complete the necessary academic training and to continue lifelong learning
- the ability to get along with people and for people to feel confident in your abilities
- the energy required to work long hours

- emotional strength and maturity
- good communication skills
- the ability to work effectively in a health care team
- the ability to find solutions to problems; and
- the ability to coordinate the work of others.

Canadian Medical Schools

Dalhousie University, Faculty of Medicine
<http://www.medicine.dal.ca/>

Laval University, Faculty of Medicine
<http://www.fmed.ulaval.ca/>

McGill University, Faculty of Medicine
<http://www.med.mcgill.ca/>

McMaster University, Faculty of Health Sciences
<http://www.fhs.mcmaster.ca/>

Memorial University of Newfoundland, Faculty of Medicine
<http://www.med.mun.ca/>

Queen's University, Faculty of Medicine
<http://meds.queensu.ca/medicine/>

University of Alberta, Faculty of Medicine and Dentistry
<http://www.med.ualberta.ca/>

University of British Columbia, Faculty of Medicine
<http://www.med.ubc.ca/>

University of Calgary, Faculty of Medicine
<http://www.ucalgary.ca/UofC/faculties/medicine/>

University of Manitoba, Faculty of Medicine
<http://www.umanitoba.ca/>

University of Montreal, Faculty of Medicine
<http://www.umontreal.ca>

University of Ottawa, Faculty of Medicine
<http://www.uottawa.ca/academic/med/>

University of Saskatchewan, College of Medicine
<http://www.usask.ca/medicine/>

University of Sherbrooke, Faculty of Medicine
<http://www.med.usherbrooke.ca/>

University of Toronto, Faculty of Medicine
<http://www.facmed.utoronto.ca/>

University of Western Ontario, Faculty of Medicine and Dentistry
<http://www.med.uwo.ca/>

Financial assistance and bursaries

For information about Canada student loans and grants, please visit:
http://www.hrsdc.gc.ca/eng/learning/canada_student_loan/index.shtml

Associations and other Links

British Columbia Medical Association
<http://www.bcma.org/>

Canadian Institute for Health Information
<http://secure.cihi.ca/cihiweb/splash.html>

Canadian Medical Association
<http://www.cma.ca/>

Canadian Resident Matching Service
<http://www.carms.ca/eng/index.shtml>

College of Physicians and Surgeons of British Columbia
<https://www.cpsbc.ca/node/147>

Health Match BC
<http://www.healthmatchbc.org/>

Medical Council of Canada
<http://mcc.ca>

Professional Association of Residents of British Columbia
<http://www.par-bc.org/>

Royal College of Surgeons and Physicians of Canada
<http://www.royalcollege.ca/portal/page/portal/rc/public>