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Becoming a Veterinarian

SO YOU LIKE ANIMALS? That's a start. But it is only a start if you're interested in a career in veterinary medicine. Veterinarians are far more than people with a fondness for animals. A veterinarian is a doctor of animal health who has trained at a university for at least six years and is licensed to provide medical and surgical care for animals. Although a lot of veterinarians practice in small animal and pet clinics, one third of all Canadian veterinarians work with food-producing animals and in mixed practices. Their work involves the inspection, care, and treatment of farm livestock as well as pets. Some veterinarians supervise the health of fish, reptiles and birds, while other veterinarians devote themselves to research, teaching, administration or government work related to the care and welfare of animals. There are almost 14,000 veterinarians in Canada.

The Profession

What is a veterinarian? A veterinarian is a doctor of veterinary medicine (DVM), a professional in animal health care, who has completed a degree at a veterinary college. He or she may practice veterinary medicine in one of several different fields:

- **Private Practice** 75 per cent of Canadian veterinarians work in either small, large, or mixed animal practices, or in specialized practices dealing with one species or discipline
- **Government** 10 per cent of Canadian veterinarians work for some level of government
- **Industry** 6 per cent of veterinarians hold various occupations in the veterinary industry
- **Teaching and Research** 5 per cent of Canadian veterinarians are in teaching and research
- The remaining 4 per cent of veterinarians work in other related fields





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Small (Companion) Animal Practice

Companion animal practices are community-based facilities that generally accept dogs and cats as patients and sometimes treat exotic species (birds, small mammals, and reptiles) as well. Other clinics may limit their scope of practice to the exclusive treatment of a particular species.

Every companion animal practice is registered with a provincial licensing body and regularly inspected to ensure compliance with high quality standards. Most veterinary facilities are miniature hospitals complete with laboratories, X-ray equipment, surgical suites, pharmacies, examination and treatment rooms, isolation wards, dentistry stations, and kennels for patient boarding/hospitalization.

Other services provided may include pet selection and care, nutrition counselling, behaviour counselling, boarding, and grooming. Wellness (preventive) medicine and life stage education are important components of the veterinary practice. Some veterinarians undertake additional training courses or certificates dealing with specific medical, surgical, or dental procedures, or with alternative medical techniques such as chiropractic and acupuncture. Small animal practices within a region will often co-manage an emergency facility that handles after-hours calls. Other practices offer 24-hour care.

Mobile practices provide limited veterinary services and may be associated with a local veterinary hospital.





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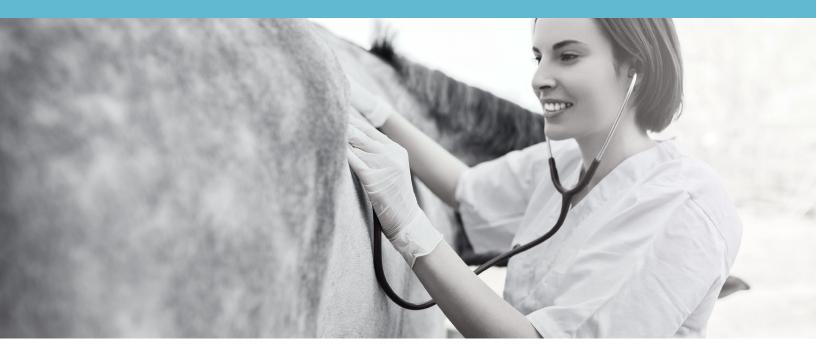
Private Practice

The single largest employment group in veterinary medicine is private practice. This includes small, large and mixed animal practices, as well as specialization in one type of species or discipline such as equine practice or surgery.

Veterinarians in private practice:

- examine animals
- diagnose and treat diseases
- use specialized diagnostic techniques such as radiography, ultrasound, urine tests and laboratory tests of blood or other tissues
- perform surgery
- perform dentistry
- vaccinate to prevent the spread of diseases
- advise their clients on the hygiene, feeding, breeding, and care of animals
- manage their own business

Veterinarians ensure health maintenance and disease prevention among companion and food producing animals. This means veterinarians need to be well-informed about emerging diseases in animals, maintain a thorough knowledge of available products used to treat animals, use the latest diagnostic and treatment techniques, and educate clients about zoonoses — animal diseases that can be shared between animals and humans.





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Large Animal Practice

Large animal practice encompasses medical and surgical services for livestock (sheep, cattle, goats, swine, and poultry) and horses. Every large animal practice is also registered with a provincial licensing body and regularly inspected to ensure compliance with high quality standards. Medical services can include diagnosis and treatment of individual animals, and diagnosis, treatment, and preventive measures for livestock.

Some practices offer in-hospital surgery suites in addition to on-farm surgery capability, while others refer complex surgery cases to referral institutions such as specialty practices or veterinary colleges. In addition to treating patients, large animal veterinarians offer preventive herd health management and also monitor their area for possible disease outbreaks.

Today, it is not unusual for large animal practices to limit their practice to poultry, beef cattle, dairy cattle, swine, equine, or small ruminant (sheep and goat) medicine and surgery, though some practices treat all species. Emphasis of the practice is often placed on herd health including environmental, nutritional, and reproductive medicine. Equine practitioners may focus on racehorses, breeding farm management, pleasure horse practice, or a combination of the three.

Mixed Animal Practice

The mixed animal practice encompasses both large animal and companion animal species in one facility. This type of practice is most common in rural areas, and provides comprehensive general medical and surgical services.





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Specialized Practice

Certified specialists offer services within local veterinary hospitals or are employed in referral multi-specialist practices or veterinary college teaching hospitals. Many referral practices and all veterinary colleges provide more than one area of specialized care. Some of these specialists are available via telemedicine consultation with a local veterinarian. Examples of specialized practice include: dermatology, cardiology, neurology, ophthalmology, oncology, behaviour, anesthesiology, internal medicine, and dentistry, to name a few.

Other specialty practices focus on a particular species. Certified feline specialists, equine specialists, avian, swine, bovine, zoo or exotics specialists have carried out in-depth studies relating to their species of interest.

A veterinarian cannot be referred to as a specialist without having achieved board certification. These designations require additional study following completion of the DVM degree. The American College of Veterinary Internal Medicine (ACVIM) and American Board of Veterinary Practitioners (ABVP) are examples of North American boards registering certified specialists.





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Government

Government veterinarians have an important responsibility in maintaining the health of humans through the health of food-producing animals.

Veterinarians in government contribute significantly to human health through meat inspection and control of contagious diseases. They are also involved in testing animals for import and export, the approval of veterinary biologics, research, and diagnostic testing of animal diseases.

Typical *field veterinarians* cover an animal health district. They inspect animals and collect necessary laboratory samples to qualify these animals for export to other countries. They investigate reportable diseases such as rabies or tuberculosis and forward the samples to laboratories.

Some government veterinarians are in managerial positions. They help manage and deliver animal health programs and provide input on government policy.

To become employed as a government veterinarian, it is helpful to take optional courses offered by veterinary colleges relating to government work. It is also strongly recommended to have some experience in private practice.

Industry

Veterinarians working in industry may work in management, as sales representatives, or in technical research.

Management veterinarians develop relationships with veterinary practice owners, clinic staff, and animal health organizations. They must have strong planning, marketing and communication skills, as well as product knowledge.

Sales representatives develop and maintain relationships with veterinary practice owners and clinic staff. They are frequently on the road, visiting their clients and attending trade shows or meetings.

Veterinarians conducting industry research investigate the safety of products destined for the animal health market. They also research ways of increasing the productivity of intensive farming operations by introducing new and improved preventive treatment methods, and by undertaking studies.



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Teaching and Research

Veterinarians who teach may be employed by one of the five Canadian veterinary colleges, training and mentoring future veterinarians. Others teach in veterinary technician programs at colleges and universities across Canada.

To be employed as a professor of veterinary medicine at a veterinary college, generally a minimum master's degree plus board certification in a clinical specialty is needed. In some cases, a PhD will be required.

Professors can teach clinical veterinary medicine, basic science courses, or a combination of both. Professors also mentor students, sit on committees, and attend meetings, lectures, and professional development events.

Veterinarians working in research look for preventions and cures for diseases. At veterinary colleges, professors conduct their own research projects, developing new therapies and medicines.





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Educational Requirements

A student who is interested in becoming a veterinarian should select courses in science at the high school level and discuss a suitable preparatory academic program with a well-informed guidance counsellor. Science courses such as biology, chemistry, and physics form a foundation upon which further education will rest, but optional courses in the humanities and social sciences are also recommended, as well as a strong background in mathematics. If working in a clinic upon graduation is of interest, consider taking courses in business administration, management, or entrepreneurship.

A student must also plan to gain practical experience by working with several animal species. Voluntary experience and employment with a veterinarian is very helpful in gaining insight into the profession, and references from these sources are part of the admission requirement.

To obtain a doctor of veterinary medicine (DVM) degree, a minimum of six years of university education is required: two years of pre-veterinary study at a regular university followed by four years of courses in veterinary medicine at one of the five Canadian veterinary colleges (five years in the province of Quebec). Some of the colleges are adjusting their pre-veterinary requirements and introducing some curriculum changes to reflect the changing face of the profession. Guidance counsellors at the institution of your choice should be able to advise you regarding these admission and curriculum changes. The number of students that can be accommodated in a veterinary school is quite limited. Canadian veterinary colleges currently graduate about 350 veterinarians each year.

Average Income

In addition to the satisfaction of making a worthwhile contribution to the community, veterinarians receive many personal rewards throughout their careers.

Incomes of general practitioners vary with the type of practice and the size of the community served. The annual average salary for a new veterinarian is approximately \$62,000.



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Professional Associations

Canadian Veterinary Medical Association (CVMA)

The Canadian Veterinary Medical Association is the voice of the Canadian veterinary profession in promoting animal welfare and One Health, to ensure optimal care for animals, people and the environment. The CVMA is the national and international voice for Canada's veterinarians, providing leadership and advocacy for veterinary medicine. The CVMA focuses on three main priorities: a successful career, a balanced life; leadership on national issues; and animal welfare advocacy.

The CVMA offers continuing education to veterinarians through its annual convention.

The CVMA's National Examining Board (NEB) offers competency examinations to both Canadian and foreign veterinary students.

In addition, the Association publishes two journals – The peer-reviewed *Canadian Veterinary Journal* and the *Canadian Journal of Veterinary Research*, Canada's only national veterinary research publication.

For further information, visit the CVMA online at **canadianveterinarians.net**





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Veterinary Colleges in Canada

Canada has five excellent veterinary colleges:

University of Calgary Faculty

of Veterinary Medicine 3280 Hospital Drive NW Calgary, AB T2N 4Z6 vet.ucalgary.ca

Western College of Veterinary Medicine

University of Saskatchewan 52 Campus Drive Saskatoon, SK S7N 5B4 usask.ca/wcvm

Ontario Veterinary College University of Guelph Guelph, ON N1G 2W1 ovc.uoguelph.ca

Faculté de médecine vétérinaire

Université de Montréal 3200, rue Sicotte Saint-Hyacinthe, QC J2S 2M2 medvet.umontreal.ca

Atlantic Veterinary College

University of Prince Edward Island 550 University Avenue Charlottetown, PE C1A 4P3 upei.ca/avc

To obtain a complete outline of admission requirements, scholarship, and bursary information for the Canadian veterinary colleges, please contact the respective admissions offices care of the addresses provided above.

Licensure of Veterinarians

To practice veterinary medicine in Canada, you must first obtain a license. The licensure of veterinary medicine is a provincial responsibility.

Provincial veterinary licensing bodies establish and maintain standards of practice for veterinarians and discipline those who are guilty of professional misconduct.

Veterinary licensing bodies also regulate the practice of veterinary medicine to protect the public interest.



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Registered veterinary technicians/technologists (RVT)

Registered veterinary technicians/technologists are highly trained professionals working as an integral part of the veterinary medical team. A RVT has graduated from a Canadian Veterinary Medical Association (CVMA) or the Ontario Association of Veterinary Technicians (OAVT) accredited program, successfully completed the Veterinary Technician National Examination and has met all the requirements identified by their provincial professional association. The title of technician versus technologist is dependent on the province of registration. The term RVT is recognized across Canada.

A RVT works under the supervision of a licensed veterinarian. Their education provides them with the theory and practical skills essential to deliver a gold standard of veterinary care.

RVTs receive extensive training in:

- Anatomy and physiology
- Animal behaviour and welfare
- Best practices surrounding biosecurity
- Dental structures, conditions and lesions, causes and stages of diseases
- Microbiology, immunology, bacteriology, parasitology, zoonoses, and virology
- Professionalism and ethics
- Surgical preparation and assistance

As animal welfare advocates, some of the important tasks carried out by RVT's include:

- Administering and dispensing medications and treatments as prescribed by the attending veterinarian
- Anaesthetic delivery and monitoring
- Breeding, reproduction, and neonatal care
- Diagnostic laboratory testing (hematology, clinical chemistry, cytology, and urinalysis)
- Emergency and first aid care
- Exotic animal medicine
- Nutrition management
- Obtaining and processing diagnostic radiographs and ultrasounds
- Preventing and controlling zoonotic diseases
- Professional practice administration, veterinary hospital management, and client relations
- Providing optimum husbandry, restraint, and handling
- Public education
- Routine, intensive, and emergency care of animals
- Sanitation, sterilization, and disinfection controls and procedures

Training for a career as a RVT includes two to three years of college education at a CVMA or OAVT accredited veterinary technician/technologist program.

Graduates may find employment in private veterinary practices, zoos, wildlife rehabilitation, government and research laboratories, as well as industry.

For more information on becoming a RVT, or to obtain a list of Canadian colleges accredited by the Canadian Veterinary Medical Association (CVMA) or the Ontario Association of Veterinary Technicians (OAVT), visit the Registered Veterinary Technologists and Technicians of Canada (RVTTC) online at rvttcanada.ca.