

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 practice. 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 approximately 11,000 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% of Canadian veterinarians work in either small, large or mixed animal practices, or in specialized practices dealing with one species or discipline
- **Government** — 10% of Canadian veterinarians work for some level of government
- **Teaching and Research** — 5% of Canadian veterinarians are in teaching and research
- **Industry** — 6% of veterinarians hold various occupations in the veterinary industry
- The remaining 4% of veterinarians work in other related fields

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 will:

- 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 that 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.

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

laboratory, X-ray, surgery suite, pharmacy, examination and treatment rooms, isolation ward, dentistry station, and kennels for patient boarding and/or 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.

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 differs only from the above descriptions in that they encompass 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.

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.



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.

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 masters 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.

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 planning, marketing and strong 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.

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 400 veterinarians each year.




A CAREER IN VETERINARY MEDICINE



PROFESSIONAL ASSOCIATIONS

Canadian Veterinary Medical Association (CVMA)

The Canadian Veterinary Medical Association is the national body representing and serving the interests of veterinarians in Canada. The Association is committed to excellence within the veterinary profession and to the well being of animals. 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 and online courses.

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, and has developed an interactive Web site for animal owners, www.animalhealthcare.ca

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

VETERINARY COLLEGES IN CANADA

Canada has five excellent veterinary colleges:

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

Faculté de médecine vétérinaire
Université de Montréal
3200, rue Sicotte
Saint-Hyacinthe, QC
J2S 7C6
www.medvet.umontreal.ca

**University of Calgary
Veterinary Medicine**
G#359
3330 Hospital Drive NW
Calgary, AB
T2N 4N1
www.vet.ucalgary.ca

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

**Western College of
Veterinary Medicine**
University of Saskatchewan
52 Campus Drive
Saskatoon, SK
S7N 5B4
www.usask.ca/wcvm

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.

ANIMAL HEALTH TECHNICIAN (AHT)/VETERINARY TECHNICIAN (VT)

Animal health technicians/veterinary technicians are highly trained professionals who work as an integral part of the veterinary medical team to provide humane, top quality animal health care. An AHT/VT works under the supervision of a licensed veterinarian. Some of the important tasks carried out by licensed AHT/VTs include:

- assisting in surgical procedures
- sterile preparation of the surgical patient
- administering and monitoring various anesthetics under veterinary supervision
- emergency, intensive and chronic nursing care
- performing diagnostic laboratory procedures such as hematology, clinical chemistry, urinalysis and bacteriology
- administering medications and treatment as prescribed by the attending veterinarian

- exposing and developing radiographs (X-rays)
- clinical pathology — assisting with post mortems, preparing cytology and histology samples, etc.
- dental cleaning
- nutritional program implementation and counselling
- restraining and handling animals
- maintaining animal husbandry, professional nursing care including providing close, careful observation of hospitalized patients, and assisting with practice pain control programs
- public education / client relations
- business management / administration

Training for a career as an AHT/VT generally takes two to three years depending on the training institution's program design and provincial requirements. Courses of study involve the basic sciences as well as applied technical courses.

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

Employment outlook for graduates of AHT/VT programs continues to be bright. For more information on becoming an AHT/VT, or to obtain a list of Canadian colleges accredited by the Canadian Veterinary Medical Association (CVMA) visit the Canadian Association of Animal Health Technologists and Technicians (CAAHTT) online at www.caahtt-acttsa.ca

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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CANADIAN VETERINARY MEDICAL ASSOCIATION
339 Booth Street, Ottawa ON K1R 7K1
Tel: (613) 236-1162 | Fax: (613) 236-9681



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WWW.ANIMALHEALTHCARE.CA