

Veterinarian

Professional Activities

Veterinarians diagnose and treat diseases and dysfunctions of animals. Specifically, they care for the health of pets, livestock, and animals in zoos, racetracks, and laboratories. Some veterinarians use their skills to protect humans against diseases carried by animals and conduct clinical research on human and animal health problems. Others work in basic research, broadening our knowledge of animals and medical science, and in applied research, developing new ways to use knowledge.

Most veterinarians diagnose animal health problems, vaccinate against diseases, medicate animals suffering from infections or illnesses, treat and dress wounds, set fractures, perform surgery, and advise owners about animal feeding, behavior, and breeding.

According to the American Medical Veterinary Association, 77 percent of veterinarians who work in private medical practices treat pets. These practitioners usually care for dogs and cats but also treat birds, reptiles, rabbits, ferrets, and other animals that can be kept as pets. About 16 percent of veterinarians work in private mixed and food animal practices, where they see pigs, goats, cattle, sheep, and some wild animals in addition to farm animals. A small proportion of private-practice veterinarians, about 6 percent, work exclusively with horses.

Veterinarians who work with food animals or horses usually drive to farms or ranches to provide veterinary services for herds or individual animals. These veterinarians test for and vaccinate against diseases and consult with farm or ranch owners and managers regarding animal production, feeding, and housing issues. They also treat and dress wounds, set fractures, and perform surgery, including cesarean sections on birthing animals. Other veterinarians care for zoo, aquarium, or laboratory animals. Veterinarians of all types euthanize animals when necessary.

Veterinarians who treat animals use medical equipment such as stethoscopes, surgical instruments, and diagnostic equipment, including radiographic and ultrasound equipment. Veterinarians working in research use a full range of sophisticated laboratory equipment.

Some veterinarians contribute to human as well as animal health. A number of veterinarians work with physicians and scientists as they research ways to prevent and treat various human health problems. For example, veterinarians contributed greatly to conquering malaria and yellow fever, solved the mystery of botulism, produced an anticoagulant used to treat some people with heart disease, and defined and developed surgical techniques for humans, such as hip and knee joint replacements and limb and organ transplants. Today, some determine the effects of drug therapies, antibiotics, or new surgical techniques by testing them on animals.

Some veterinarians are involved in food safety and inspection. Veterinarians who are livestock inspectors, for example, check animals for transmissible diseases such as E. coli, advise owners on the treatment of their animals, and may quarantine animals. Veterinarians who are meat, poultry, or egg product inspectors examine slaughtering and processing plants, check live animals and carcasses for disease, and enforce government regulations regarding food purity and sanitation. More veterinarians are finding opportunities in food security as they ensure that the Nation has abundant and safe food supplies. Veterinarians involved in food security often work along the country's borders as animal and plant health inspectors, where they examine imports

and exports of animal products to prevent disease here and in foreign countries. Many of these workers are employed by the Department of Agriculture's Animal and Plant Health Inspection Service division, or the U.S. Food and Drug Administration's Center for Veterinary Medicine.

Veterinarians in private or clinical practice often work long hours in a noisy indoor environment. Sometimes they have to deal with emotional or demanding pet owners. When working with animals that are frightened or in pain, veterinarians risk being bitten, kicked, or scratched.

Veterinarians who work with food animals or horses spend time driving between their offices and farms or ranches. They work outdoors in all kinds of weather and may have to treat animals or perform surgery, often under unsanitary conditions.

Veterinarians working in nonclinical areas, such as public health and research, work in clean, well-lit offices or laboratories and have working conditions similar to those of other professionals who work in these environments. Veterinarians in nonclinical areas spend much of their time dealing with people rather than animals.

Veterinarians often work long hours. Those in group practices may take turns being on call for evening, night, or weekend work; solo practitioners may work extended hours (including weekend hours), responding to emergencies or squeezing in unexpected appointments.

Educational Requirements

Prospective veterinarians must graduate with a Doctor of Veterinary Medicine (D.V.M. or V.M.D.) degree from a 4-year program at an accredited college of veterinary medicine. There are 28 colleges in 26 States that meet accreditation standards set by the Council on Education of the American Veterinary Medical Association (AVMA).

The prerequisites for admission to veterinary programs vary. Many programs do not require a bachelor's degree for entrance, but all require a significant number of credit hours—ranging from 45 to 90 semester hours—at the undergraduate level. However, most of the students admitted have completed an undergraduate program and earned a bachelor's degree. Applicants without a degree face a difficult task in gaining admittance.

Preveterinary courses should emphasize the sciences. Veterinary medical colleges typically require applicants to have taken classes in organic and inorganic chemistry, physics, biochemistry, general biology, animal biology, animal nutrition, genetics, vertebrate embryology, cellular biology, microbiology, zoology, and systemic physiology. Some programs require calculus; some require only statistics, college algebra and trigonometry, or pre-calculus. Most veterinary medical colleges also require some courses in English or literature, other humanities, and the social sciences. Increasingly, courses in general business management and career development have become a standard part of the curriculum to teach new graduates how to effectively run a practice.

In addition to satisfying preveterinary course requirements, applicants must submit test scores from the Graduate Record Examination (GRE), the Veterinary College Admission Test (VCAT), or the Medical College Admission Test (MCAT), depending on the preference of the college to which they are applying. Currently, 22 schools require the GRE, 4 require the VCAT, and 2 accept the MCAT.

Admission to veterinary school is competitive. The number of accredited veterinary colleges has remained largely the same since 1983, but the number of applicants has risen significantly. Only about 1 in 3 applicants was accepted in 2007.

All States and the District of Columbia require that veterinarians be licensed before they can practice. The only exemptions are for veterinarians working for some Federal agencies and some State governments. Licensing is controlled by the States and is not uniform, although all States require the successful completion of the D.V.M. degree—or equivalent education—and a passing grade on a national board examination, the North American Veterinary Licensing Exam. This 8-hour examination consists of 360 multiple-choice questions covering all aspects of veterinary medicine as well as visual materials designed to test diagnostic skills.

Most veterinarians begin as employees in established group practices. Despite the substantial financial investment in equipment, office space, and staff, many veterinarians with experience eventually set up their own practice or purchase an established one.

Newly trained veterinarians can become U.S. Government meat and poultry inspectors, disease-control workers, animal welfare and safety workers, epidemiologists, research assistants, or commissioned officers in the U.S. Public Health Service or various branches of the U.S. Armed Forces. A State license may be required.

Nearly all States have continuing education requirements for licensed veterinarians. Requirements differ by State and may involve attending a class or otherwise demonstrating knowledge of recent medical and veterinary advances.

Academic Programs

[University of Illinois at Urbana-Champaign](#)

Employment/Salary Outlook

Veterinarians usually practice in animal hospitals or clinics and care primarily for small pets. Recent trends indicate particularly strong interest in cats as pets. Faster growth of the cat population is expected to increase the demand for feline medicine and veterinary services, while demand for veterinary care for dogs should continue to grow at a more modest pace.

Many pet owners consider their pets as members of the family, which serves as evidence that people are placing a higher value on their pets and is an example of the *human-animal bond*. These pet owners are becoming more aware of the availability of advanced care and are more willing to pay for intensive veterinary care than owners in the past. Furthermore, the number of pet owners purchasing pet insurance is rising, increasing the likelihood that considerable money will be spent on veterinary care.

More pet owners also will take advantage of nontraditional veterinary services, such as cancer treatment and preventive dental care. Modern veterinary services have caught up to human medicine; certain procedures, such as hip replacement, kidney transplants, and blood transfusions, which were once only available for humans, are now available for animals.

State and National Wages

Location	Pay Period	2021		
		Low	Median	High
United States	Hourly	\$29.21	\$48.26	\$79.62
	Annual	\$60,760	\$100,370	\$165,600
Illinois	Hourly	\$28.24	\$47.56	\$73.43
	Annual	\$58,740	\$98,930	\$152,720

State and National Trends

United States	Employment		Percent Change	Job Openings ¹
	2020	2030		
Veterinarians	86,800	101,300	17%	4,400
Illinois	Employment		Percent Change	Job Openings ¹
	2018	2028		
Veterinarians	2,930	3,380	+15%	170

¹Job Openings refers to the average annual job openings due to growth and net replacement.

Professional Organizations

American Veterinary Medical Association (avma.org)

Association of American Veterinary Medical Colleges (aavmc.org)

References

Occupational Outlook Handbook, U.S. Department of Labor, Bureau of Labor Statistics
(<https://www.bls.gov/ooh/healthcare/veterinarians.htm>)

O*Net Online (<http://online.onetcenter.org/link/summary/29-1131.00>)

Last Modified: October 3, 2022