



Image from: [The stable fly, Stomoxys calcitrans, may attack... in Encyclopedia of Insects](#)

Summary Article: **Veterinary Medicine**
from *Gale Encyclopedia of Public Health*

Definition

Veterinary medicine is the field of medicine that addresses the diseases, disorders, and injuries that may affect nonhuman animals. It focuses on the **prevention**, diagnosis, and treatment of such diseases and injuries, along with the transmission of zoonotic diseases from nonhuman animals to humans.



Veterinarian examining a dog. (Serdar Tibet/Shutterstock.com)

Purpose

The purpose of veterinary medicine is to provide nonhuman animals with the same type of medical care that is generally available for humans.

Description

The field of veterinary medicine is very similar to that of human medicine, with the major exception of the subject of medical care. As with the human medical profession, veterinary medicine involves the use of workers at various levels of training and expertise, including veterinary physicians (comparable to human medical physicians), veterinary technicians (comparable in many cases to human medical nurses, physicians assistants, nurse practitioners, and similar workers), and veterinary assistants, who may have little or no professional training in the field of veterinary medicine. Veterinary workers with less training than a veterinary physician are sometimes referred to as paraveterinary workers. Veterinary physicians are generally legally certified professionals who have completed undergraduate and graduate training

that leads to the degree of doctor of veterinary medicine (DVM), comparable to the degree of doctor of medicine (MD) in human medicine. Veterinary technicians generally complete at least a two-year college program roughly similar to that of a practical nurse in human medicine. The typical DVM program includes courses such as introduction to veterinary medicine, veterinary anatomy and physiology, cell biology, diagnostic imaging, bacteriology and mycology, parasitology, virology, veterinary surgery, **epidemiology** and public health, endocrine and metabolic diseases, and diseases of farm animals and other animal groups and species.

Veterinary medicine involves the care of all types of animals, including both domestic and wild species. Many veterinarians specialize in the care of special categories of animals, such as small animals (primarily domestic pets, such as dogs, cats, and birds), large animals, farm animals, or wild animals. Specializations are becoming more common also, with many veterinarians choosing to focus on areas such as dentistry, anesthesiology, cardiology, neurology, **nutrition**, and animal behavior. Some veterinarians have also decided to focus on the use of complementary and alternative treatment of animals, such as the use of acupuncture for the treatment of some animal diseases and injuries. The vast majority of veterinary workers are employed in neighborhood clinics, where they treat their animal clients directly. Some veterinarians are also employed in specialized assignments, however, as at race tracks, in large dairy facilities, or at zoos.

Origins

Abundant evidence indicates that veterinary medicine has been practiced in one form or another from the beginning of recorded history. That is hardly surprising, given the essential role that animals have had as a means of transportation, mechanism for work, source of food, and companion of families since the earliest days of human societies. Some Chinese works of medicine dating to the second millennium B.C., for example, refer to “horse priests” who specialized in the care and treatment of large animals. Many early medical works in China and other countries also included sections on the health and medical problems of nonhuman animals, with suggestions for their treatment and prevention. One authority points out that the first descriptions of acupuncture referred to the use of this procedure on horses rather than animals, since the former were often regarded as more essential to a society than the latter. The world's first formal veterinary school is said to have been founded in Lyon, France, in 1761, and the first degree in veterinary medicine in the United States was granted by Cornell University in 1876.

Demographics

According to a survey by the AVMA, there were 92,547 veterinarians in the United States in 2011, divided almost equally between women (49,353) and men (43,194). In addition to general-practice veterinarians, a number of these individuals were board-certified in a variety of special fields, such as internal medicine (2,257), pathology (1,637), surgery (1,386), preventive medicine (679), radiology (408), emergency and critical care (384), ophthalmology (355), anesthesiology (194), microbiology (216), nutrition (61), behavior (52), clinical pharmacology (48), and sports medicine and rehabilitation (27).

Effects on public health

One area of growing interest among many veterinarians is the concept of One Health, which involves problems posed by zoonotic diseases, diseases that are endemic to nonhuman animals, but that are relatively easily transmitted to humans. Many public health authorities are convinced that zoonotic diseases may be the greatest public health problem among humans in the twenty-first century.

Beginning in the mid-twentieth century, a group of veterinarians took the lead in developing mechanisms by which medical experts across all species lines could begin working together to develop a better understanding of the nature of zoonotic diseases, the mechanisms by which they are transmitted across species, and the ways in which veterinarians, physicians, and other health and medical specialists could work together on these issues. Developed originally by members of the veterinary profession, One Health has now become a powerful movement throughout the health and medical profession in the United States and around the world.

KEY TERMS

Endemic—

Characteristic or native to a particular region, species, or population.

One Health—

A movement based on the concept of individuals from a wide variety of disciplines to obtain the maximum level of health possible for individuals of all species.

Paraveterinarian—

A person who assists a veterinarian in working with nonhuman animals.

Zoonotic disease—

A disease that is endemic to animals.

Resources

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ORGANIZATIONS

- American Veterinary Medical Association (AVMA), 1931 North Meacham Rd., Suite 100, Schaumburg, IL USA 60173-4360, (800) 248-2862, Fax: 1 (847) 925-1329,
<https://www.avma.org/About/WhoWeAre/Pages/contact.aspx>, <https://www.avma.org/>.

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