

# ANIMALS

Animals (also called Metazoa) are multicellular eukaryotic organisms that form the biological kingdom Animalia. With few exceptions, animals consume organic material, breathe oxygen, are able to move, can reproduce sexually, and grow from a hollow sphere of cells, the blastula, during embryonic development. Over 1.5 million living animal species have been described—of which around 1 million are insects—but it has been estimated there are over 7 million animal species in total. Animals range in length from 8.5 micrometres (0.00033 in) to 33.6 metres (110 ft). They have complex interactions with each other and their environments, forming intricate food webs. The scientific study of animals is known as zoology.

Most living animal species are in Bilateria, a clade whose members have a bilaterally symmetric body plan. The Bilateria include the protostomes—in which many groups of invertebrates are found, such as nematodes, arthropods, and molluscs—and the deuterostomes, containing both the echinoderms as well as the chordates, the latter containing the vertebrates. Life forms interpreted as early animals were present in the Ediacaran biota of the late Precambrian. Many modern animal phyla became clearly established in the fossil record as marine species during the Cambrian explosion, which began around 542 million years ago. 6,331 groups of genes common to all living animals have been identified; these may have arisen from a single common ancestor that lived 650 million years ago.

Historically, Aristotle divided animals into those with blood and those without. Carl Linnaeus created the first hierarchical biological classification for animals in 1758 with his *Systema Naturae*, which Jean-Baptiste Lamarck expanded into 14 phyla by 1809. In 1874, Ernst Haeckel divided the animal kingdom into the multicellular Metazoa (now synonymous for Animalia) and the Protozoa, single-celled organisms no longer considered animals. In modern times, the biological classification of animals relies on advanced techniques, such as molecular phylogenetics, which are effective at demonstrating the evolutionary relationships between taxa.



# Dogs

Dogs can have many positive effects on the lives of their owners. They influence social, emotional, and cognitive development in children, promote an active lifestyle, provide companionship, and have even been able to detect oncoming epileptic seizures or the presence of certain cancers. Dogs can also help to relieve stress and anxiety in people. Around 38% of US households are estimated to have one or more dogs.

Although dogs can be beneficial to the health and wellbeing of their owners, people should be aware that dogs of any age, including puppies, can sometimes carry harmful germs that can make people sick. Germs from dogs can cause a variety of illnesses, from minor skin infections to serious illnesses. One of the best ways you can protect yourself from getting sick is to thoroughly wash your hands after handling, caring for, feeding, or cleaning up after dogs.

By providing your dog with routine veterinary care and following the Healthy People tips, you are less likely to get sick from touching or interacting with a dog.



## BIRDS

Bird, (class Aves), any of the more than 10,400 living species unique in having feathers, the major characteristic that distinguishes them from all other animals. A more-elaborate definition would note that they are warm-blooded vertebrates more related to reptiles than to mammals and that they have a four-chambered heart (as do mammals), forelimbs modified into wings (a trait shared with bats), a hard-shelled egg, and keen vision, the major sense they rely on for information about the environment. Their sense of smell is not highly developed, and auditory range is limited. Most birds are diurnal in habit. More than 1,000 extinct species have been identified from fossil remains.

