

# 10 THINGS YOU SHOULD KNOW ABOUT RABIES

The greatest threat of rabies occurs in the world's poorest regions, Africa and Asia, where domestic dog vaccination is not widely implemented and access to post-exposure treatment is limited.<sup>3</sup> Rabies remains a notoriously neglected and under-reported disease in the most affected countries, largely because healthcare in these regions tends to be severely limited and most victims die at home.<sup>4</sup>

In more developed countries, even those thought to be free of rabies, movement of animals from other areas means that rabies remains a constant threat.

The Global Alliance for Rabies Control partners also estimate an enormous global economic burden, reaching 8.6 billion USD annually.<sup>2</sup>

The vast majority of this burden is shouldered by:

These costs are due to:<sup>2</sup>

36.2% Africa      59.9% Asia

55% Premature death, causing loss in productivity  
20% Post-exposure prophylaxis

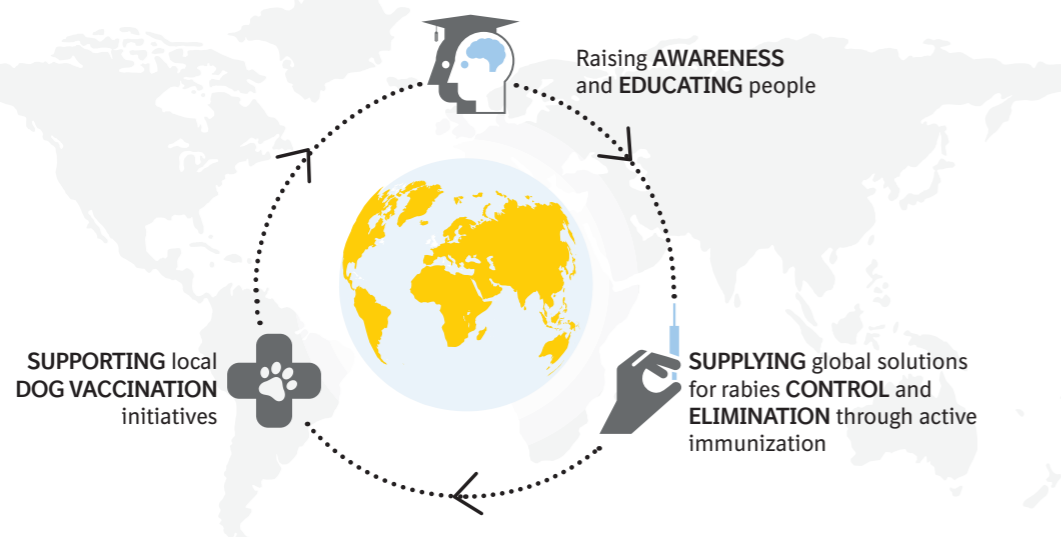
## 9 WHAT IS BOEHRINGER INGELHEIM'S ROLE IN THE FIGHT AGAINST RABIES?

Boehringer Ingelheim is a global leader in the fight to prevent and manage rabies, with a range of vaccines used to prevent the disease in pets, farm animals and wildlife.

Boehringer Ingelheim believes strongly in joining forces to help control and eliminate rabies, and work closely with veterinarians, pet owners, governmental and non-governmental organizations, health authorities, and other interested parties worldwide to help prevent the spread of the disease.

## 10 RABIES PREVENTION REQUIRES A GLOBAL COMMUNITY EFFORT

BOEHRINGER INGELHEIM, global leader in rabies prevention, is **joining forces** with veterinarians, pet owners and major professional and health organizations



## Rabies still kills thousands of people every year.

It is common in more than 150 countries, and 40% of victims are children in Asia and Africa



Vaccinating dogs is the most effective strategy for preventing rabies in people, because it stops the transmission at its source.

### Help protect yourself and your community - get your dog vaccinated against rabies

### With vaccination, education, and rabies monitoring, together we can STOP Rabies

REFERENCES:

<sup>1</sup> [https://www.who.int/health-topics/rabies#tab=tab\\_1](https://www.who.int/health-topics/rabies#tab=tab_1) [Last accessed 21/07/2022]  
<sup>2</sup> Hampson K, Coudeville L, Lembo T, Sambo M, Kieffer A, et al. (2015) Estimating the Global Burden of Endemic Canine Rabies. PLoS Negl Trop Dis 9(4): e0003709. pmid:25881058 [Last accessed 21/07/2022]  
<sup>3</sup> <https://www.who.int/news-room/fact-sheets/detail/rabies> [Last accessed 21/07/2022]  
<sup>4</sup> Preiss S et al. Exp Rev Vac.2018, VOL. 17, NO. 6, 525-545



Building on over 30 years of experience working in rabies prevention and management, STOP Rabies is a program launched by Boehringer Ingelheim to contribute our expertise and heritage towards achieving the joint World Health Organization (WHO), World Organization for Animal Health (WOAH), Food and Agriculture Organization of the United Nations (FAO) and Global Alliance for Rabies Control (GARC) Zero by 30 global goal.

# 10 THINGS YOU SHOULD KNOW ABOUT RABIES

## 1 WHAT IS RABIES?

Rabies is a zoonotic viral disease which occurs in both domestic and wild animals. Essentially, this viral disease attacks the central nervous system of mammals, including humans. Once symptoms of the disease develop, rabies is always fatal to both animals and humans.

## 2 WHAT IS THE IMPACT OF RABIES?

The World Health Organization (WHO) lists rabies as one of the world's most deadly infectious diseases. Rabies kills an estimated **160 people a day, or 1 person every 9 minutes, 40 percent of whom are children.**<sup>1</sup>

It is endemic in more than **150 countries** and mostly threatens people in low-resource communities. More than **95 percent** of cases are reported in Asia and Africa.<sup>1</sup> The Global Alliance for Rabies Control partners estimate the global economic burden caused by rabies each year to be **8.6 billion USD.**<sup>2</sup>

➕ Rabies is 100 percent preventable with the right vaccination and awareness programs.

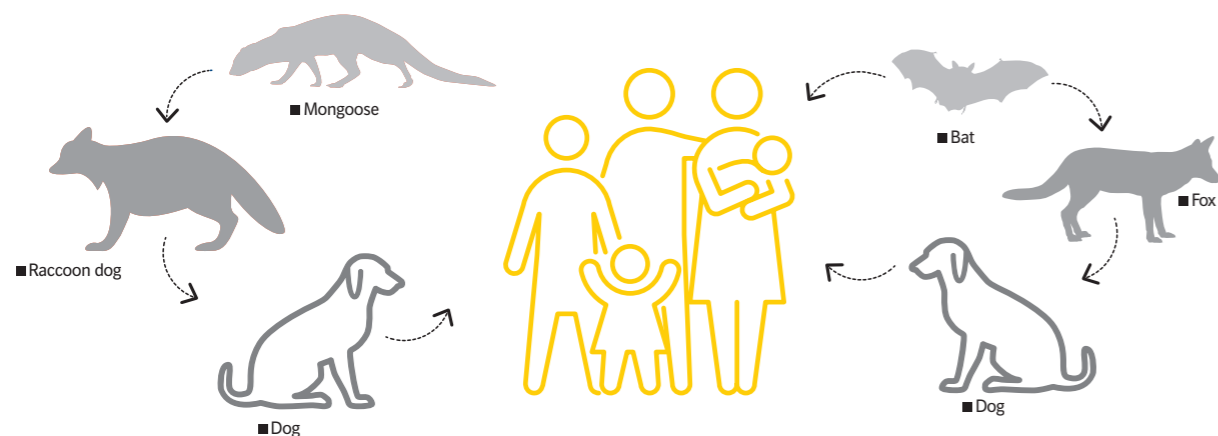
## 3 HOW IS RABIES TRANSMITTED?

The rabies virus is transmitted between animals, and between animals and humans, through close contact with saliva from infected animals, usually via bites, scratches, and licks on broken skin and mucous membranes. Dogs are the most common source of the virus, and cause more than 99 percent of all human rabies deaths.<sup>3</sup>

Wildlife populations also often serve as a reservoir for the rabies virus. Raccoon dogs and foxes are the main wildlife reservoirs in Eastern Europe; skunks and bats in North America; jackals and mongooses in Africa and Asia; bats in Latin America; mongooses in Puerto Rico and other Caribbean islands; and raccoon dogs in South Korea and possibly other countries in the region.

Pets can be infected through direct contact with rabid animals. Humans can be infected through contact with rabid animals or through their contaminated pets.

For both routes of infection, from pets or the wildlife population, animal vaccination serves as the best defense against this deadly disease.



## 4 WHAT ARE THE SYMPTOMS OF RABIES?

Once symptoms of the disease appear, rabies is almost always fatal to both animals and humans. The diagnosis of rabies on clinical grounds alone is difficult and often unreliable.

In animals, the most reliable signs of rabies are acute behavioural changes and unexplained progressive paralysis. Animals may show signs of agitated, aggressive behaviour and/or lethargy and paralysis.

In humans, the first signs of rabies may include headache, fever, anxiety and tingling or altered sensation near the site of the animal bite. In most human cases, it is also characterized by dilation of pupils, unusual sensitivity to sound and light and changes in temperature, as well as seizures, hallucinations and hydrophobia – that is, spasms on touching or even seeing water.

In both humans and animals, rabies progresses from paralysis to coma and then eventually death.

## 5 HOW IS RABIES DIAGNOSED?

Rabies can be diagnosed:

- Through the history of a person or animal that has been bitten or been in contact with an animal suspected of having rabies
- By detection of very early rabies symptoms.

However, as in animals, confirmatory diagnosis can only be carried-out post-mortem.

## 6 WHAT SHOULD YOU DO IF YOU SUSPECT YOU OR YOUR PET HAVE BEEN EXPOSED TO RABIES?

If your pet or a person is suspected of having been in contact with an infected animal, early intervention may prevent the disease.

The first step is to apply local wound treatment immediately: vigorously wash and flush the wound with water and soap or detergent for about 15 minutes. Then, apply virucidal treatment such as 70 percent alcohol/ethanol, tincture or iodine solution if available. Delay suturing the wound for as long as possible.

A doctor must be contacted immediately and will decide to apply a post-exposure prophylaxis, or preventive medical treatment, to prevent rabies from developing in humans. The veterinarian will implement the appropriate follow-up of the rabid animal.

## 7 CAN RABIES BE PREVENTED?

Rabies is 100 percent preventable with the right vaccination and awareness programs. Rabies can be prevented by:

- Reducing or eliminating the infection at the source through mass vaccination of reservoir populations
- Vaccination of domestic animals who are in contact with humans, and livestock in case of high risk exposure (dogs and wildlife)



- Prevention and treatment of humans by vaccination and anti-rabies immunoglobulin administration.

Importantly, pet owners and veterinarians can be key partners in the global fight against rabies by ensuring pets are vaccinated.

## 8 HOW SERIOUS A THREAT IS RABIES TODAY?



The World Health Organization estimates that **59,000 PEOPLE** die from rabies annually (or 160 people a day)



Every year, more than **29 MILLION PEOPLE** worldwide receive a post-bite vaccination.<sup>3</sup>

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