



## Background: Rabies and World Rabies Day

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### Rabies

#### Overview

Rabies has been terrorising humans and animals for 4,000 years. It is a zoonotic disease (transmitted between animals and humans), usually via a bite wound inflicted by an infected animal, although scratches may also be a risk. More than 99% of human cases are a result of exposure to a rabid dog.

Rabies is currently responsible for 59,000 human deaths per year, in addition to the deaths of millions of dogs due to both the virus and indiscriminate culling prompted by fear of the disease.

Annual economic losses because of the disease are around 8.6 billion US dollars, mostly due to premature deaths, but also because of spending on human vaccines, lost income for victims of animal bites, and other costs.

#### United Against Rabies

In 2015, the world called for action by setting a global goal of zero human dog-mediated rabies deaths by 2030, worldwide. [WHO, OIE, FAO and GARC are united](#) to deliver a comprehensive, Strategic Plan to reach “Zero by 30”. The Plan was developed in consultation with relevant global, regional and country stakeholders.

It provides a coordinated foundation for rabies prevention, integrated with human and veterinary health system strengthening to reach the world’s most underserved populations. This aligns with Sustainable Development Goals.

## Prognosis

Following exposure to the virus, the onset of symptoms can take anywhere from a few days to over a year; however, the average is 1 to 12 weeks.

The first symptoms of rabies are similar to those of the flu. As the disease progresses, the person can experience delirium, abnormal behaviour and hallucinations, as well as the famed hydrophobia and foaming at the mouth (related to the paralysis of swallowing muscles).

Once symptoms manifest, rabies is 99.9% fatal with only a handful of survivors ever recorded. However, if people are given a course of vaccinations immediately after exposure to a rabid animal and before symptoms become evident, the disease can be prevented.

## Prevention

Rabies is preventable. The tools and science to halt the extensive suffering, loss of life, and financial burden of rabies already exist.

## Geography

Although rabies is found on every continent, except Antarctica, it is well controlled or even eliminated in most developed countries. Today over 95% of human victims are from Africa and Asia, most from marginalised and impoverished rural communities. The World Health Organization considers rabies one of 20 Neglected Tropical Diseases.

Rabies has been known to decimate numbers of endangered species, for example the Ethiopian Wolf.

## A neglected disease that perpetuates poverty

Rabies is a preventable disease that overwhelmingly afflicts the poor, both in terms of its death toll and the financial burden associated with the disease.

With a survival rate of less than 0.1%, those exposed to the virus face a stark choice: go in search of post-exposure prophylaxis (PEP, the series of vaccines and immunoglobulin that prevent the onset of the disease) or die. In some cases, PEP costs more than the monthly household income and families are known to either go into debt to pay for PEP, or sell livestock on which they depend for income; both are options that negatively affect families' future prospects.

## Dogs

Countless animals die after suffering the horrific clinical symptoms of rabies. Dogs also suffer from a second tragedy: fear of rabies transmission from dogs regularly prompts dog culls in which animals are killed indiscriminately. This creates a territorial vacuum and encourages new dogs to move into the area, before the process starts again. World experts agree that dog culling does not stop rabies.

### Some key challenges to rabies prevention

- **Lack of awareness** – this is a problem at all levels of society, from those most at risk to governments.
- **Lack of coordination** – as a zoonotic disease, prevention often falls under the remit of various agencies. To get sustainable results, it is essential that these agencies are joined-up in their approach the problem.
- **Lack of data** – Accurate surveillance (or monitoring) of rabies incidence is critical to a true understanding of the actual burden.
- **Lack of capacity** – this includes knowledge, the sufficient availability of quality vaccines and immunoglobulin (at a price people can afford), and networks to support supply.

### Preventing canine rabies is the key to saving human lives

Canine vaccination is the key to preventing the disease in humans by stopping the disease at its source. The immunity of vaccinated dogs (and other domestic animals) also offers a barrier of protection between potentially rabid wild animals and people.

All dogs and cats should regularly be vaccinated against rabies, where required by law.

What to do when an animal bites someone:

- A dog or cat that bites a person needs to be examined by a veterinarian immediately.
- The animal may require monitoring for 10 days.
- Report any illness or unusual behavior by the animal to a veterinarian immediately.

What to do when your animal gets bitten by another animal:

- Consult your veterinarian immediately and have your veterinarian examine your animal and assess your animal's vaccination needs.
- Contact local animal control if the bite was from a stray or wild animal.

Monitor your animal for a specified time period by state law or local ordinance (usually at least 45 days) if an unvaccinated or wild animal bit your pet.

### Steps in case of exposure

Following exposure to rabies, time is of the essence.

- The wound needs to be washed thoroughly with soap and running water for at least 15 minutes.
- The victim then needs to seek urgent medical care and exposure assessment.

Prompt and appropriate PEP after being bitten and before the disease develops can stop rabies infection and prevent the disease.

PEP is a course of injections that protects against rabies after exposure to the virus.

It consists of a series of rabies vaccinations, and immunoglobulin injections into the wound (these are antibodies against the rabies virus) in cases of severe exposure. The most cost-effective course currently

recommended is two-site intra-dermal vaccinations on days 0, 3, 7 after the bite. If intra-muscular PEP vaccinations are used, the recommendations are 1-site vaccination on days 0, 3, 7, with a fourth dose between days 14 to 28. Alternatively a 2-site intra-muscular vaccination on day 0 and 1-site vaccination on days 7 and 21 can be used.

In some cases, particularly for people who are considered at high risk of exposure, pre-exposure vaccinations (PrEP) are given. If subsequently exposed to rabies, the patient still needs two additional doses of vaccine, on day 0 and 3 but does not need immunoglobulin injections.

PrEP is particularly important for people who are, or will be, far away from medical services.

## World Rabies Day

### What is World Rabies Day?

World Rabies Day, September 28, is a day of global activism and awareness for rabies prevention. Hundreds of events reaching millions of people take place every year. They range in scope from nationwide media campaigns to local mass dog-vaccinations, puppet-shows for children, and quiz nights for medical personnel.

It is the first and only global advocacy, education, and awareness campaign for rabies. It has the support of all international health organizations and major stakeholders including the WHO, OIE, FAO and CDC.

It has reached millions of people with rabies prevention messages, and continues to reach new audiences: in 2018 almost 200 events were registered on the GARC website, from over 60 countries.

### Why World Rabies Day helps

These events play a special role in supporting rabies prevention efforts by enabling and encouraging people to get involved, become aware of the disease and how it spreads, and understand what they can do to prevent it.

World Rabies Day is an opportunity to celebrate successes so far, build support for existing challenges, and increase awareness of rabies prevention in at-risk communities.

### Why September 28

World Rabies Day was launched in 2007. The date, September 28, was chosen as it commemorates the death of Louis Pasteur who created the first rabies vaccine and laid the foundations of rabies prevention.

### Registering events to multiply impact

Registering events on the GARC website has several benefits. Registered events -

- are advertised on the GARC website and social media feeds,
- enable organisers to find each other and prompt collaboration, and
- as part of the global movement, generally gain more media attention which can, in turn, attract further resources for rabies prevention.

Online event registration is quick and easy. The address is <https://rabiesalliance.org/world-rabies-day/register>.

### **World Rabies Day 2019 – Rabies: Vaccinate to Eliminate.**

Organizations and individuals across the world hold events in their communities and promote World Rabies Day every year, and each year a different theme is selected so that everyone can unite around one message.

The World Rabies Day 2019 theme is ***Rabies: Vaccinate to Eliminate***.

This highlights the essential role of mass canine vaccination in rabies elimination. It also indicates the need for human vaccination to save lives in case of potential exposure to rabies. The theme can also be used to showcase pre-exposure vaccination for high risk individuals.

The theme can be used with various stakeholders, for example, as a reminder to dog owners, animal health professionals and local governments (to keep dogs vaccinated); to human health professionals and educators (to ensure that post-exposure vaccinations are sought by and provided for people in need); to national governments (to commit to the 2030 goal of eliminating rabies deaths).

For more information, banners and other resources visit [rabiesalliance.org](http://rabiesalliance.org)