



Human health and animal health are interdependent, linked closely to the health of the environment they live in.

Term and concept: While the concept has long been recognised, the term ‘One Health’ was introduced in the early 2000s. It acknowledges the constantly evolving relationship between animals and humans and the planet they share. Many disciplines and sciences are involved and several visionary individuals have, over the centuries, attempted to promote awareness and improve the management of the risks and consequences that arise at the interface between animal, human and ecosystem health.

For example, **Aristotle** in 500 BC and **Hippocrates** in 340 BC refer to the link in their writings¹, and the Chinese scholar **Xu Dachun** stated in the 18th century that ‘The foundations of veterinary medicine are as comprehensive and subtle as those of human medicine, and it is not possible to place one above other’. Equally, German pathologist **Rudolf Virchow** said in the late 19th century that ‘between animal and human medicine there is no dividing line – nor should there be’.

Cooperation: At international level, the World Organisation for Animal Health (**OIE**), the World Health Organisation (**WHO**) and the Food and Agriculture Organisation (**FAO**) work together to promote cross-sectoral collaboration to reduce risks from zoonoses, and other public threats existing and emerging at the human-animal-ecosystem interface.² In Europe, the EU institutions and Member States promote the One Health concept particularly through disease preparedness and by tackling antimicrobial resistance.

Did you know?

The words ‘**vaccine**’ and ‘**vaccination**’ derive from Latin ‘**vacca**’ (cow) because of English physician **Edward Jenner**’s pioneering use of the cowpox virus against smallpox in the 18th century, leading to the world’s first vaccine, a great success in the history of medicine.



Healthy animals are well cared for: where possible disease is prevented minimising pain and discomfort.

Prevention and cure: Animal vaccines and preventative medicines help prevent diseases and therapeutic medicines help treat them, thereby supporting animal welfare. In farms they help prevent productivity losses due to disease, estimated as **20%** of total production.³

¹ <http://mph.sgu.edu/mphblog/2011/08/17/brief-history-of-one-health-one-medicine/>

² [The FAO-OIE, WHO collaboration, a tripartite concept note](#) (2010)

³ World Organisation for Animal Health (OIE)

Did you know?

- **More than 3 out of 5** Europeans believe **animals** have the same **right to receive medicines** as people.⁴
- **Mastitis treatment and vaccination** improves dairy cow health and welfare, and avoids a loss of **375 kg** in milk yield⁵ and up to **€182** economic losses per cow/year⁶.
- The **animal health industry invests** on average **8%** of its annual turnover **in research and development** to provide innovative medicines and vaccines to veterinarians, farmers and pet owners⁷.

Responsible use: Veterinarians, farmers, pet owners, pharmacists and animal medicines manufacturers work together across the EU to ensure good animal health and welfare, and to promote the responsible use of animal medicines.⁸

Did you know?

Animal health stakeholders' joint efforts over the last 10 years to ensure responsible use, under the motto 'as little as possible, as much as necessary', have been led by EPRUMA and should help maintain the future effectiveness of veterinary antibiotics.

People and planet: Healthy animals support people's **health and wellbeing**, economic viability of **livestock farming**, and **environment protection**.



HEALTHY PEOPLE

Healthy animals contribute to people's health and wellbeing.

Health: The use of animal medicines and vaccines helps **reduce disease in people** by protecting them against diseases that can be transmitted between animals (mostly through wildlife) and people, called 'zoonoses'.

- **Salmonella:** Thanks to poultry vaccination, salmonella infections in people reduced **by 50%** over the last 10 years.⁹
- **Rabies:** Vaccination of both dogs and wildlife (foxes and racoons) has led to a considerable reduction of cases in animals in the EU, from almost **4,500** in 2003 to around **250** in 2017¹⁰. Animal vaccination contributes to a lower incidence of rabies in people, with only 3 imported cases reported in the EU in 2014.¹¹

Nutrition: Providing **safe and nutritious food** is key to a healthy life. **Protein**, including meat, milk, eggs and fish, is a vital component of a healthy, nutritious diet. The WHO recommends a minimum protein intake of **48-56 grams** per day.¹²

Did you know?

More than 4 out of 5 Europeans agree that healthy farm animals produce **better quality products**, e.g. milk.¹³

Pets and our wellbeing: Pets are seen as members of the family, and the health and wellbeing **benefits** of pet ownership are numerous.

- Pets can help children learn to be **responsible** and have a sense of **caring**.

⁴AnimalhealthEurope study on EU citizens' attitudes towards animal medicines (2016)

⁵ Seegers, H, Fourichon, Ch. And Beaudeau, F. (2003) Production effects related to mastitis and mastitis economics in dairy cattle herds.

⁶ Huijps, K., Hogeveen, H., Lam, T.J.G.M., Huirne, R.B.M. Preferences of cost factors for mastitis management among Dutch dairy farmers using adaptive conjoint analysis. Prev. Vet. Med. (2009).

⁷AnimalhealthEurope

⁸ European Platform for the Responsible Use of Medicines in Animals (EPRUMA): www.epruma.eu

⁹ European Food Safety Authority (EFSA)

¹⁰ European Food Safety Authority (EFSA)

¹¹ [ECDC rabies annual epidemiological report 2016](#) (2014 data)

¹² Enoughmovement.com

¹³ AnimalhealthEurope study on EU citizens' attitudes towards animal medicines (2016).

- Dog owners are **more physically active**¹⁴, have **lower blood pressure**¹⁵ and **cholesterol** levels.
- Pet companionship contributes to **quick recovery after heart surgery** and positive impact on people's lives in nursing homes and hospitals, and leads to **healthcare cost savings**.

Did you know?

- In the **United Kingdom**, **pet ownership** has been shown to **save** the National Health Service (NHS) **£2.45bn** every year.¹⁶
- In **Germany**, pet owners **visit doctors fewer times** (11) than non-pet owners (13), representing a **16% reduction**.¹⁷



Healthy animals enable farmers to produce more meat, milk, eggs and fish, with less environmental impact.

Healthy animals mean **less natural resource input** (feed, energy and soil use) and **less waste output** (e.g. manure) and **up to 40% decrease** in CO₂ emissions.¹⁸

Did you know?

3 out of 4 Europeans agree that **healthy farm animals** enable farmers to **produce and supply food** in a **sustainable** manner.¹⁹

Animals use **grasslands** that cannot be/are hard to use for other high-quality protein production. Grasslands are important carbon traps, and animal grazing supports biodiversity.

Did you know?

1/3 of EU's surface²⁰ and about **0.20%** of the world's oceans' volume²¹ **can be saved** annually worldwide thanks to **innovation in dairy production**.

#OneHealth

One Health requires the cooperation of policy and decision makers, together with the animal, human and environmental health communities.

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Healthy animals mean healthy people and a healthier planet

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¹⁴ Cutt H, Knuiman M, Giles-Corti B (2008) Does getting a dog increase recreational walking? Int J Behav Nut Phys Act 5.

¹⁵ Beck A, Meyers N (1996) Health enhancement and companion animal ownership. Annual Review of Public Health 17: 247–257.

¹⁶ Companion Animal Economics – the Economic Impact of Companion Animals in the UK, published by CABI (2017)

¹⁷ Heady and Grabka (2007).

¹⁸ Knowledge for Innovation policy paper 'Sustainable livestock production in Europe: A question of food security, climate and innovation' (2015).

¹⁹ AnimalhealthEurope study on EU citizens' attitudes towards animal medicines (2016).

²⁰ amounting to 1,570,180 km² - Source: World Bank [data on agricultural land](#).

²¹ amounting to 2.34 million km³ of water - Source: US National Centers for Environmental Information (NOAA) [data on the volumes of the world's oceans](#).