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HEALTH, NUTRITION, BEHAVIOUR & TRAINING



Text: Dr Jan du Preez | Photography: Supplied

What is

ZOONOSIS?

The disease-link between pets and humans

ave you ever heard the term zoonosis and wondered what it is, or how it affects pet owners? This is the first of a series of articles to unwrap the essence of zoonosis and the impact it has on our daily lives.

In its broad sense, the term zoonosis means a disease of animals, particularly of vertebrates and therefore also of humans. Prof Rudolph Virchow (Germany) was the first to use the term zoonosis in the sense of a disease or infection which is naturally transmissible between vertebrate animals and humans.

Contracting zoonoses

More than 200 zoonoses of various types are recognised worldwide. Zoonoses can be caused by a range of disease-causing agents (pathogens), such as viruses, bacteria, fungi, protozoa, helminths, rickettsias and parasites; of the 1,415 pathogens known to infect humans, 61% are zoonotic.

Statistical data indicate that 10 to 15% (more than one billion people globally) or more of the human population will pick up a zoonotic infection at some stage of their lives. World population was estimated during June 2017 at 7.5 billion.

A zoonosis is any disease or infection naturally transmissible from vertebrate animals to humans and vice versa (Photo credits: Cow and pig heads: T Botha. Sable: D Visser. Photo graphics: llana Kemp)

Humans acquire the zoonotic infections by direct contact with infected animals, inhalation, by indirect contact via contaminated objects, eating food or drinking water or milk derived from or contaminated by infected animals, or by the bites of bloodsucking invertebrates like ticks, fleas, mosquitoes and flies.

Fortunately, there are things you can do to protect yourself and your children from zoonotic diseases. Many have been known to exist for a long time, and methods to prevent them have been developed, for example pasteurisation of milk to protect people from

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To win a copy of the book on zoonoses, turn to page 69, or buy the book on www.coolmags.co.za.

LIST OF IMPORTANT ZOONOTIC DISEASES TRANSMISSIBLE FROM DOGS AND CATS

| Species | Worms (helminths) | Bacteria, chlamydia and rickettsia | Viruses | Protozoa | Fungi | Mites |
|---------|---|--|---------|--|-------------------------------|---|
| DOGS | Dipylidiasis tapeworm infestation Echinococcosis or hydatid disease Sandworm or creeping eruption (Ancylostoma caninum) Visceral larva migrans or toxocariasis (Toxocara canis and Toxascaris leonina) | Campylobacter enteritis or campylobacteriosis Leptospirosis Salmonellosis | Rabies | Cryptosporidiosis or 'Crypto' Giardiasis | Ringworm or dermatomycosis | Sarcoptic mange or scabies (Sarcoptes scabiei) |
| CATS | Dipylidiasis tapeworm infestation Sandworm or creeping eruption (Ancylostoma braziliense) Visceral larva migrans or toxocariasis (Toxocara cati and Toxascaris leonina) | Campylobacter enteritis or campylobacteriosis Cat scratch disease or bartonellosis (Bartonella henselae) Salmonellosis | Rabies | Cryptosporidiosis or 'Crypto' Giardiasis | Ringworm or dermatomycosis | Sarcoptic mange or scabies (Sarcoptes scabiei) |



A zoonosis is any disease or infection naturally transmissible from vertebrate animals (dogs, cats, cattle, sheep, goats, game, poultry, birds, pigs, horses, donkeys, fish and crocodiles, for example) to humans and vice versa. Humans are often an incidental host who acquires disease through close contact with an infected animal who may or may not be symptomatic.

People benefit emotionally and socially from having pets

milk-borne diseases like cattle tuberculosis and brucellosis.

People at risk

Some people are more at risk of getting infected than others. People who are more likely than others to get really sick and even die of zoonotic diseases include adults over the age of 65, children under the age of five, pregnant women, and anyone with a weakened immune system (like people with human immunodeficiency virus (HIV) or acquired immunodeficiency syndrome (AIDS), or a cancer patient undergoing chemotherapy).

Scientists estimate that more than six out of 10 infectious diseases in humans are spread from animals. Zoonoses also undermine the health, productivity and reproductivity of livestock on which humans rely on for their food (meat, milk, eggs), fibre (wool, hair, feathers) as well as labour and transport.

Zoonoses may thus, in the long run, add to the problem of human malnutrition, particularly in children. Similarly, millions of people throughout the world will have to receive post-exposure treatment for rabies. Millions of man-hours may be lost, and this has financial implications and brings about stress.

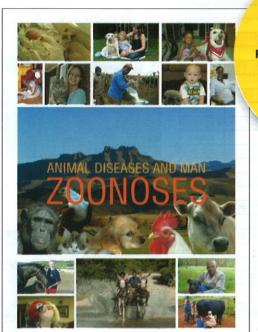
Preventing zoonosis

Recent decades have seen remarkable breakthroughs in vaccine development and

therapeutics. Most zoonoses are preventable, and the great majority are treatable if diagnosed soon enough. There is no reason to fear animals or avoid them to protect yourself from zoonoses. The result of collaboration between experts in human and veterinary medicine presents the message very clearly: continue to enjoy the close relationships you have with companion and other animals, the pleasure of watching wildlife, fishing, working with animals, and eating whatever your favourite food may be and drinking milk, as long as you are aware of any possible risks and take the appropriate hygienic precautions in terms of their health and yours to avoid infection.

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TIME TO WIN

You can win a copy of Dr Jan du
Preez's book, Animal diseases and
man - Zoonoses, by sending your
questions related to zoonoses and
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animaltalk@panorama.co.za
before 31 March 2018.

This is Sammy,

Animaltalk's editorial
assistant. He has a lifetime's
experience in everything
dog related, and his area of
expertise is definitely food!
He is here to share some of his
favourite doggy stuff.



ANIMAL DISEASES AND MAN - ZOONOSES

If you are interested to find out more about zoonoses and how it links diseases between animals and humans, this is the book for you. Author Dr Jan du Preez, who has been studying zoonoses for most of his life, explains the details you may want to know in this book.

The book starts off with an introduction of what zoonoses is, and discusses occupational diseases, environmental impacts, human-animal relationships, social and physical benefits of pets, urbanisation and HIV, AIDS and zoonoses. Dr du Preez then goes into much detail about the various causes of zoonoses. Although zoonoses causes various diseases in humans due to pets, the author never discourages readers to have pets. In fact, he encourages people to have pets, but just to be aware of how zoonoses works and how it transmits diseases between animals and humans. Read more about zoonoses on page 54.

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