

Our Interconnected World, the Globe-Trotting Canine, and You



<https://woodlandsdogboarding.com/dogs-on-an-airplane/>

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Learning objectives

- 1) Discuss global changes that are impacting veterinary medicine
- 2) Evaluate disease risks associated with the importation of dogs
- 3) Discuss how veterinary clinics are the first line of defense, and what to look for
- 4) Discuss reporting of suspicious cases



What's happening around the globe that affects veterinary medicine?

Disease Emergence

- Over the last decades there seems to be a dramatic increase in the emergence or re-emergence of virus threats in humans and animals worldwide



“Quite apart from avian influenza, emerging animal diseases, three quarters of which are zoonotic, are set to become more and more part of the world landscape”

OIE/World Bank joint press release Jul 29, 2010



What is an “emerging” disease?

An emerging zoonosis is a zoonosis that is newly recognized or newly evolved, or that has occurred previously but shows an increase in incidence or expansion in geographical, host or vector range.

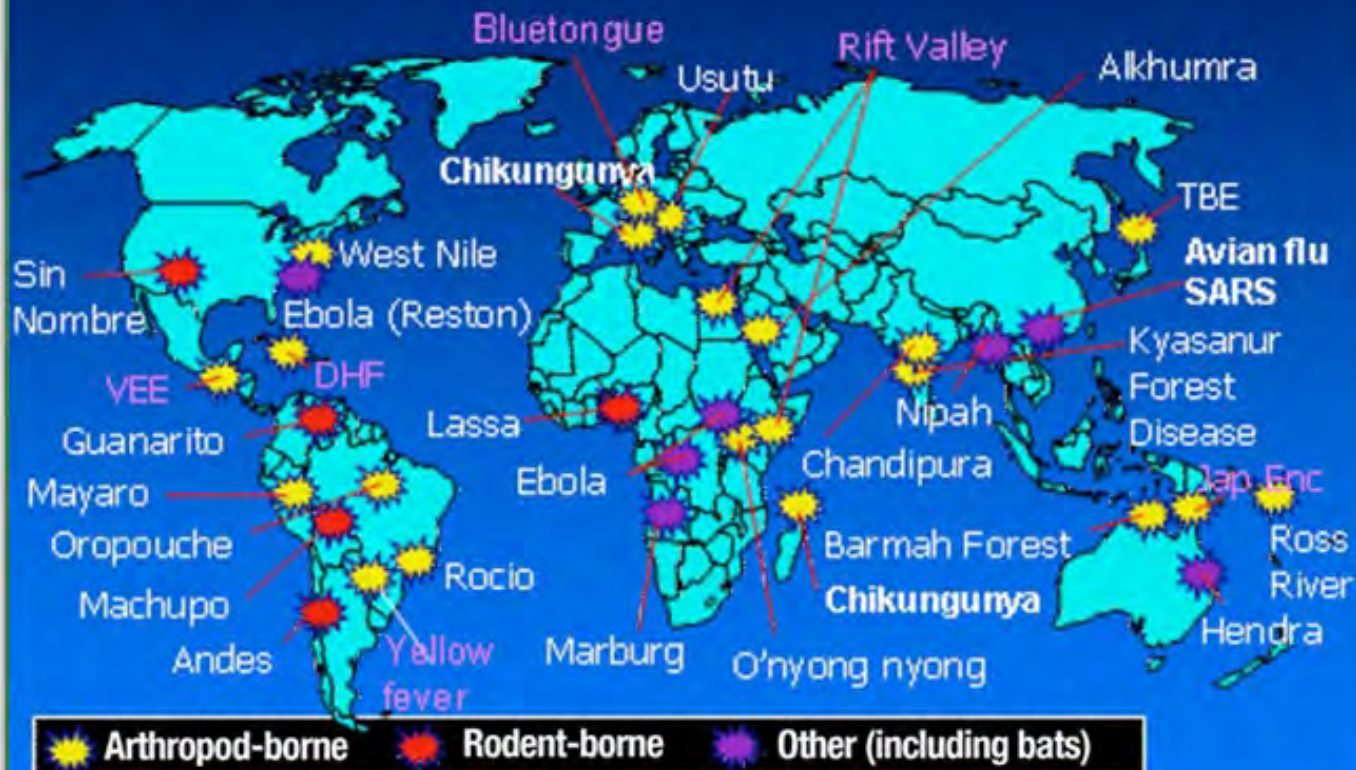
- Report of the WHO/FAO/OIE joint consultation on emerging zoonotic diseases, 2004



Disease Emergence

- Mostly:
 - Increase in disease incidence
 - Invasion into new areas or changes in the host range
- ...rather than a novel disease agent appearing for the first time.

Emerging and Reemerging infections - 70% vector-borne or zoonotic

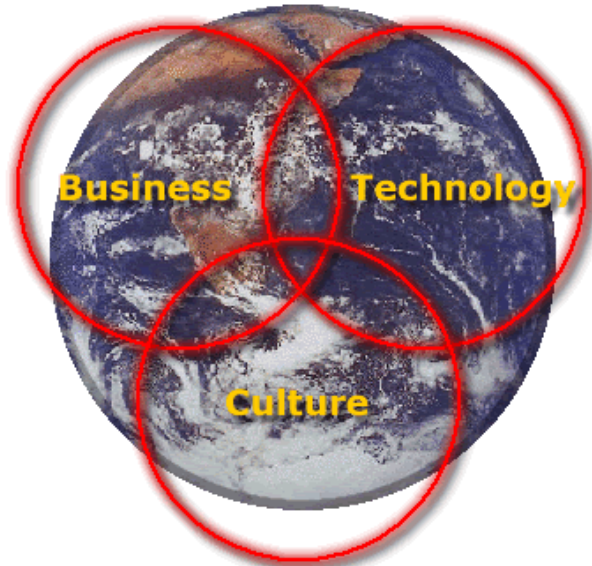




Why is this happening?

Globalization

- Rapidly changing exchanges of information, linkages of societies and economies.



Climate change

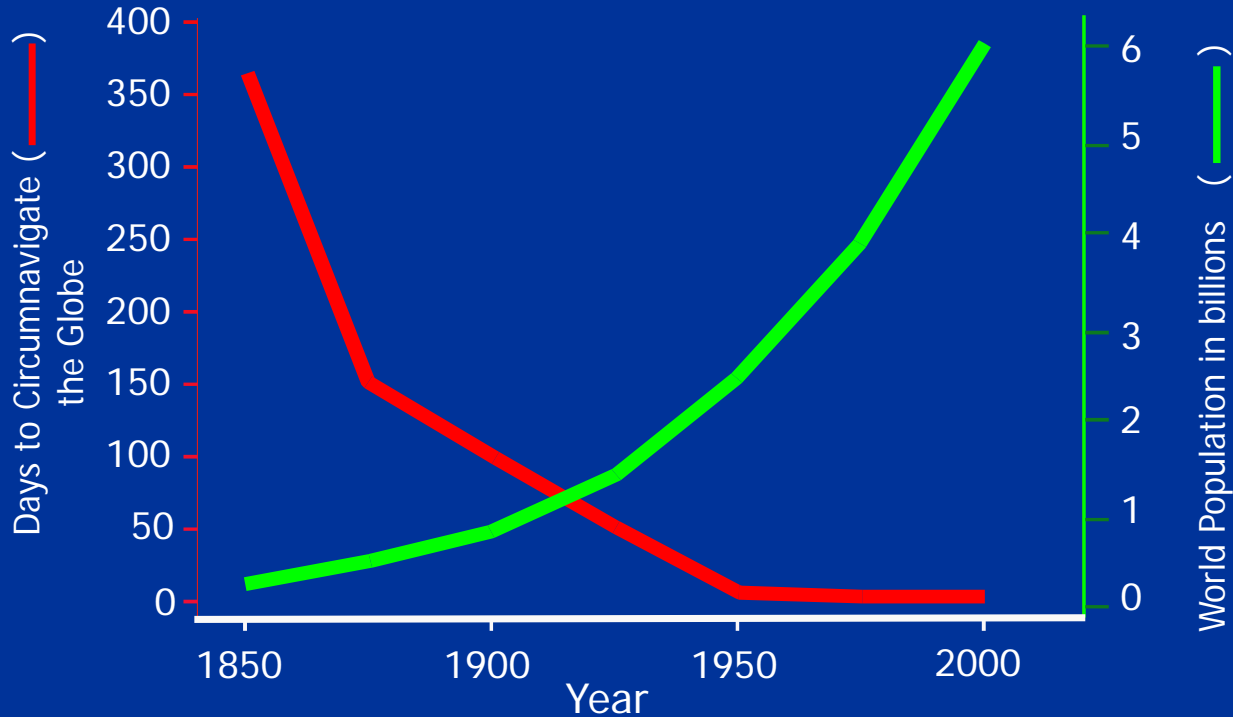
- Alters vector distribution and abundance
- Migration patterns of birds and other wildlife
- Alters the survival time of pathogens outside the host



Factors associated with the disease-causing agent

- Adaptation to new vectors and hosts
- Mutation and recombination/reassortment in humans and other animals after exposure to multiple pathogens (e.g. foodborne viruses, influenza viruses)
- Development of increased virulence or drug resistance

Speed of Global Travel in Relation to World Population Growth



From: Murphy and Nathanson. Semin.
Virol. 5, 87, 1994

Prediction of Emerging Diseases

- Extremely difficult
- Many faceted and constantly evolving risk factors





Is there *REALLY* a risk from
imported dogs?

Yup!



Ehrlichiosis discovered in Australia 2021

THE CONVERSATION

Academic rigor, journalistic flair

Search analysis, research, academics...

COVID-19 Arts + Culture Economy Education **Environment + Energy** Ethics + Religion Health Politics + Society Science + Technology



Protect your dog from this new deadly disease outbreak. We still don't know how it got here

Published: January 27, 2021 1:53pm EST

Imported Canine Rabies in Ontario – Again

By Maureen Anderson on February 7, 2022

POSTED IN DOGS, RABIES

For the second time in 7 months, [rabies has been identified in a dog in Ontario that was imported from Iran](#) through a rescue organization. [The first case was detected in July 2021 in an adult dog that started to develop signs of rabies within 10 days of arrival in Canada, and was euthanized 2 days later.](#) The second case was detected in January 2022 in a dog that was imported at the age of approximately 3



CDC Responds to a Case of Rabies in an Imported Dog

[Print](#)

In June 2021, CDC was notified about a dog in Pennsylvania that tested positive for rabies. The dog was among a group of 33 dogs and one cat imported into the U.S. from Azerbaijan by an animal rescue group. CDC coordinated a response to this case with multiple state health departments, the U.S. Department of Agriculture, and U.S. Customs and Border Protection. Public Health officials identified at least 19 people and 36 animals who were exposed to the rabid dog. Everyone in contact



Upcoming Events

Sunbelt Ag Expo - October 18-20

USDA GAP Certification: Removing Barriers - October 25

FREE BQA Training Offered - October 26

Florida Forests Week Landowner Workshop and Mill Tour - October 26

Panhandle Cattlemen's College - October 26-28

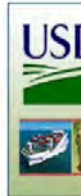
Cold Hardy Citrus Field Day - October 27

APHIS Confirms New World Screwworm in Dade County Dog

by Doug Mayo | Jan 13, 2017 | [Ag in the News](#), [Beef Cattle](#), [Dairy](#), [Goats](#), [Horse](#), [Insects](#), [Livestock](#), [Pest Management](#), [Poultry](#), [Sheep](#), [Swine](#)

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X-SCITECH >

Parasite that can eat pets alive resurfaces in Florida

OCTOBER 11, 2016 / 5:12 PM / AP



<https://www.cbsnews.com/news/screwworm-florida-fights-deadly-parasites/>

And a recent emerging disease...

Health > Monkeypox

A Dog With Monkeypox? Suspected Case of Human-to-Dog Transmission Sparks CDC Guidance Change

Keep these signs of monkeypox in dogs on your radar.



BY KORIN MILLER PUBLISHED: AUG 15, 2022

<https://www.prevention.com/health/a40896678/can-dogs-get-monkeypox/>

Monkeypox

CDC > Poxvirus > Monkeypox > Your Health > Prevention

🏠 Monkeypox

Your Health

Signs & Symptoms

How It Spreads

Testing

Prevention

Protect Yourself

Safer Sex & Social
Gatherings

Pets & Monkeypox

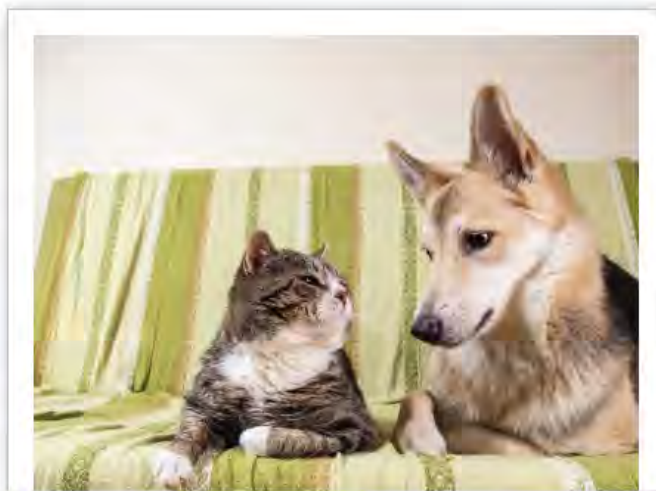
Congregate Settings

Pets in the Home

Updated August 17, 2022 [Español](#) | [Print](#)

Infected animals can spread *Monkeypox virus* to people, and it is possible that people who are infected can spread *Monkeypox virus* to animals through close contact, including petting, cuddling, hugging, kissing, licking, sharing sleeping areas, and sharing food.

People with monkeypox should avoid contact with animals, including pets, [domestic animals](#), and [wildlife](#) to prevent spreading the virus. If your pet is exposed to monkeypox:



The Globe Trotting Dog



Who let the dogs in?

PERSONAL PETS

- Returning from a short-term trip
- Returning from a long-term trip (moving back)
- Entering with an owner for the first time
- Entering for veterinary care



<https://www.austintexas.gov/department/traveling-pets-airport#>

Who let the dogs in?



COMMERCIAL REASONS

- Breeding
- Working dogs
- Competition
- Research
- Prearranged individual sale



Who let the dogs in?

RESCUED DOGS

- From shelters/internet rescue campaigns
- Adopted/found overseas
- Rescued from abuse/neglect/meat markets



<https://nypost.com/2020/11/24/88-chinese-pups-rescued-from-dog-meat-trade-coming-to-new-york/>



Risks from dog importation

- Concerns include:
 - introduction of novel pathogens that can infect dogs, especially zoonotic pathogens
 - pathogens that can become established in existing reservoirs or vectors, and
 - vectors that might carry pathogens and/or become established in a new region.



Risks from dog importation

- Diseases of concern:
 - Rabies
 - Screwworm
 - Canine influenza
 - Canine brucellosis
 - Leptospirosis
 - Melioidosis
 - Leishmaniasis
 - Onchocerciasis
 - New emerging?



Risks from dog importation

- Will vary significantly based on:
 - Country being imported from
 - Status of dog – owned, rescue, history unknown
 - Length of time in country
 - Health/age/vaccination status of dog
 - Status of health evaluation prior to export



So how many dogs are we
talking about??

Dogs by the numbers...

- CDC estimates 1 million dogs are imported into the United States annually
 - ~ 700,000 via air
 - ~ 300,000 via land-borders
- CDC *states less than one percent of these dogs* are inspected for diseases such as rabies, influenza, hepatitis, and distemper
- CDC does not collect data on domestic travel within the United States

Requirements for dogs to enter the United States

- Regulated by multiple U.S. agencies
 - CDC
 - USDA, APHIS, Veterinary Services
 - State animal health officials
- Depends on where the dog is coming from, especially if coming from a high-risk country for dog rabies (and there are a lot of them!)
 - List of high-risk countries is available on the CDC website.

▮ CDC import regulations for dogs entering the US are minimal

- Per CDC: Pet dogs – if not been in a high-risk country in the past 6 months, can enter at any port of entry with a 6-month travel history statement and health appearance.
 - Rabies vaccination (RV) certificate not required by CDC, but RV is recommended and may be required by the state of destination.
 - CDC issued a temporary ban from importations from high-risk countries in July 2021, extended to January 2023.
 - Will allow a few exceptions, such as for dogs vaccinated for rabies in the US and a few others
- Requirements may change so ALWAYS check when advising clients.

USDA, APHIS, Veterinary Services

- Has additional requirements for importation of dogs for dogs imported from countries affected by specific diseases such as rabies, screwworm, and foot and mouth disease.
- Has additional requirements for dogs being imported for commercial sale or adoption
 - Included requirements for vaccination for distemper, hepatitis, parvovirus, parainfluenza, and leptospirosis (DHLPP) within 12 months of entry into the U.S.
 - Exceptions for dogs imported for research or veterinary treatment and resale
- Always check requirements when advising clients as they may change!
- Be sure to also check state import requirements



Pending legislation

- **Healthy Dog Importation Act**
 - Introduced in April 2021 in the House of Representatives
 - Introduced in the Senate in August 2021
- Requires that no live dog can enter the US unless the USDA has first determined the dog is in good health, has received all necessary vaccinations, and is permanently identified
- Supported by the AVMA



The private practitioner as
a first line of defense

└ The role of the private practitioner

- The “eyes and ears” of animal health
- Usually the first to see the initial cases of an imported or emerging disease
- Early detection is essential to contain the spread of infectious diseases
 - Especially in a naïve population



What should you watch for?

- Any unusual or unexplained signs of disease
 - Neurological signs
 - Unusual maggot infestation
 - General signs such as fever, vomiting or diarrhea, others, that are unresponsive to normal treatment
 - Anything that looks weird

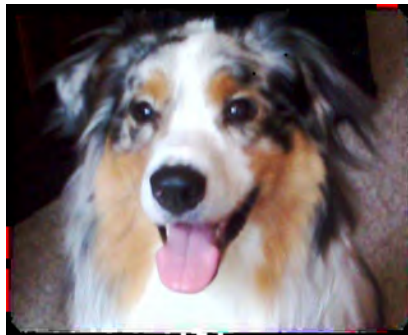
▮ What should you do if you see something unusual?

- Get a good history, especially any history of travel
- Report to the state veterinarian or to the USDA, APHIS, Veterinary Services office for the state
 - You can find your state USDA office here:
https://www.aphis.usda.gov/animal_health/contacts/field-operations-districts.pdf
- If in doubt, call!

Summary



- Awareness is key!
- Emerging diseases are on the rise and are becoming more global
- As more people and pets move around the world, there is an increased risk of bringing diseases back
- Veterinarians are a first line of defense
- If you see something unusual, don't hesitate to report!





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