



Reducing risk of zoonotic Diseases

Risk Communication

Maria Thereza Bonilha Dubugras

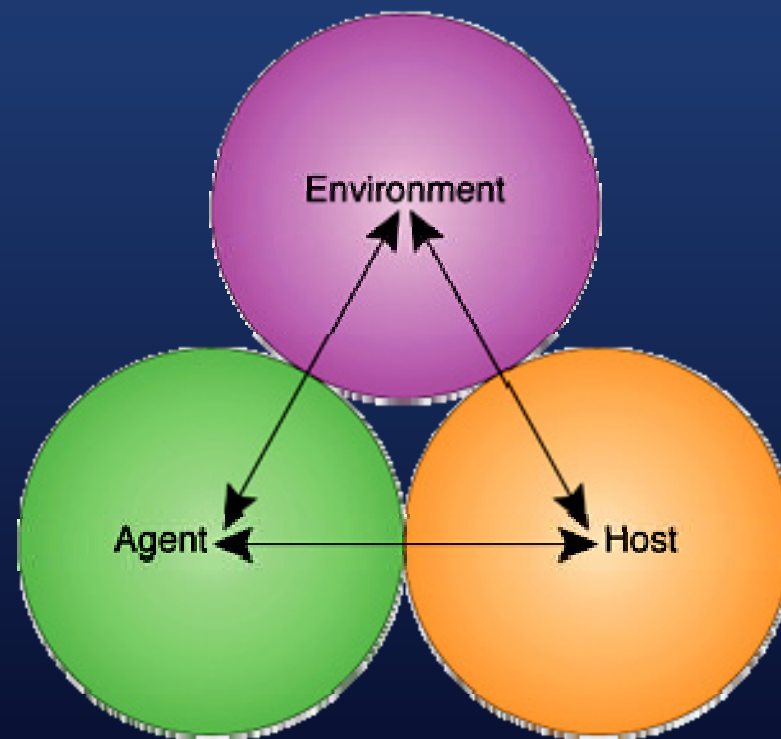
UNIFESP/ Universidade Federal de São Paulo



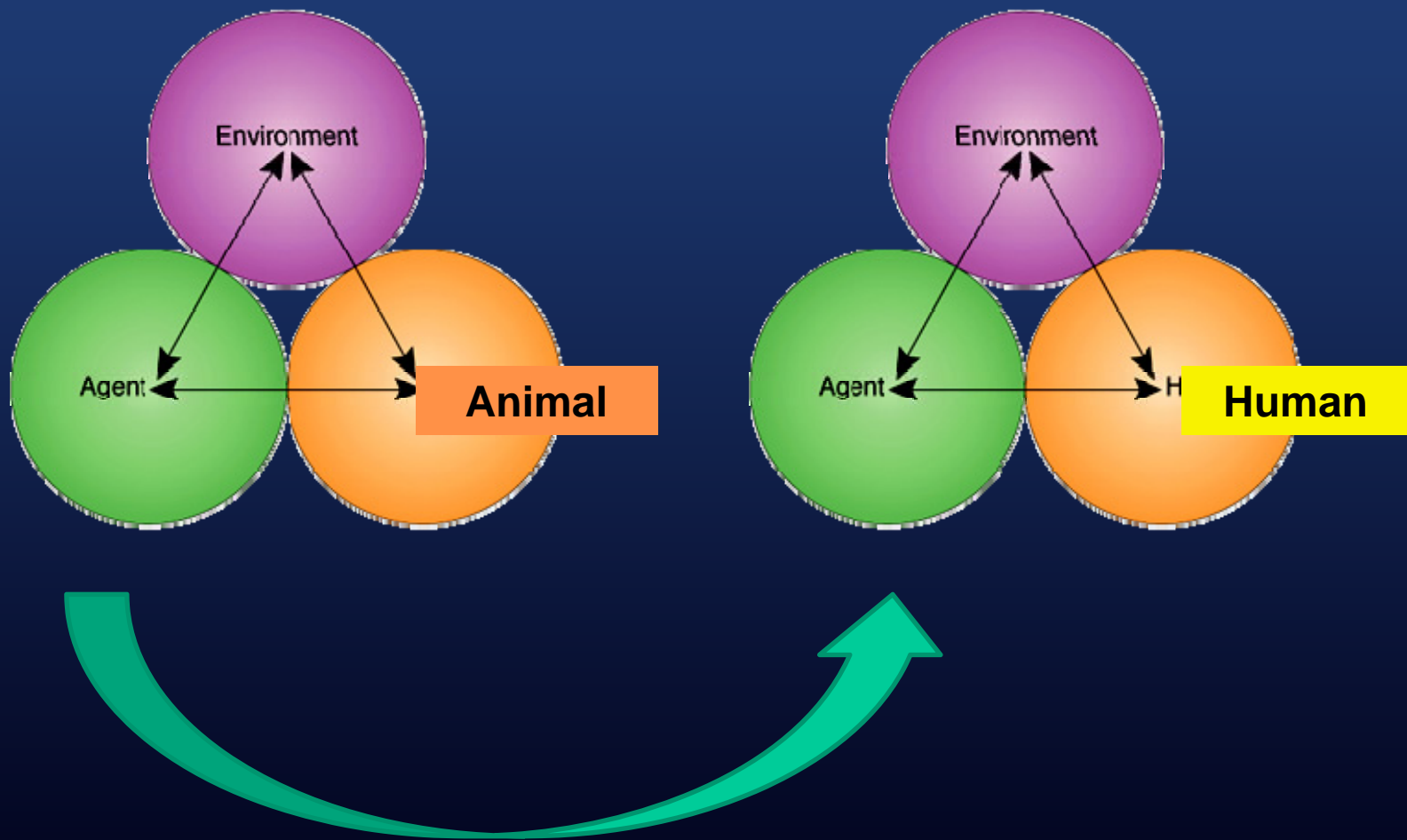
RISK

- Probability of effect occurs
AND magnitude
- RISK FACTORS

Epidemiology



Epidemiology



1986	1988		1990		1995	1996
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A previously **unrecognized disease** on **cattle** was identified in UK.



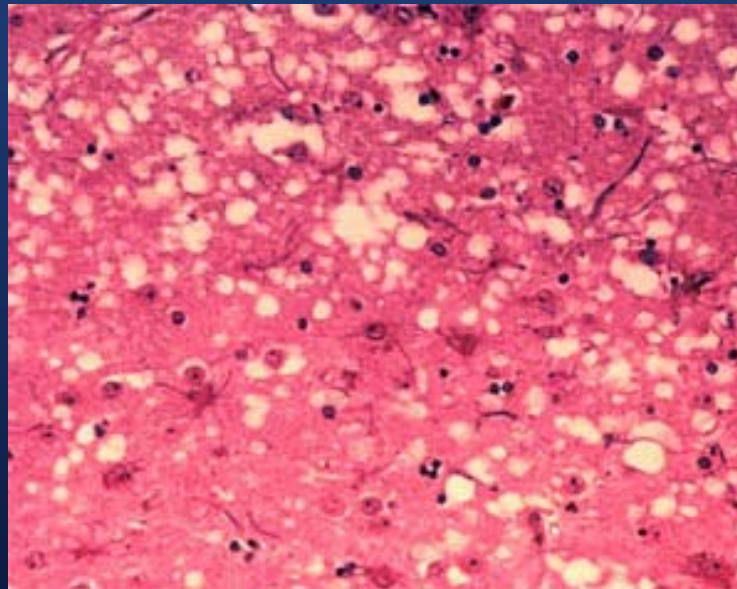
1986

1988

1990

1995

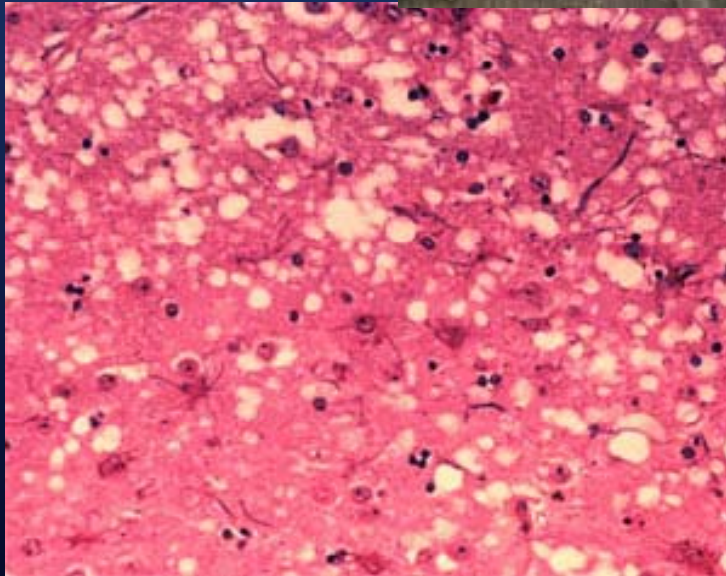
1996



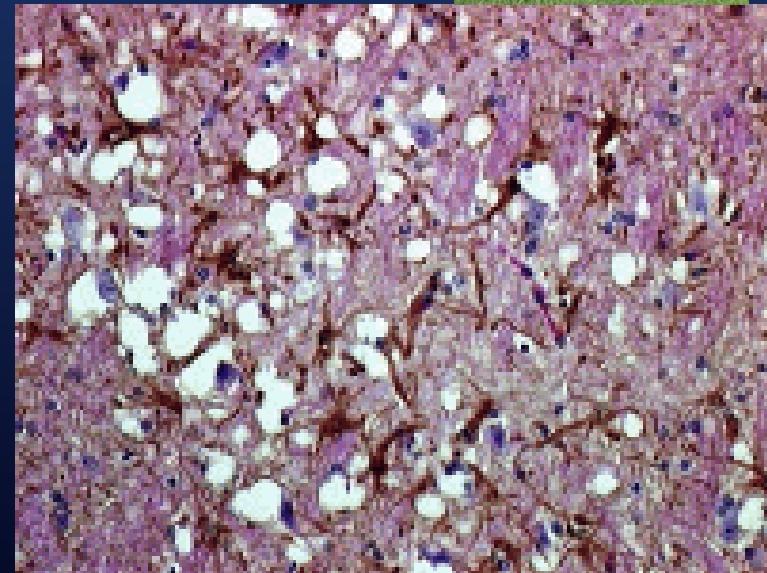
Histopathological changes

1986	1988		1990		1995	1996
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The **lesions were similar** to those characteristic of transmissible spongiform encephalopathies (TSE) or **Prion Diseases** in other species, specifically scrapie of sheep.



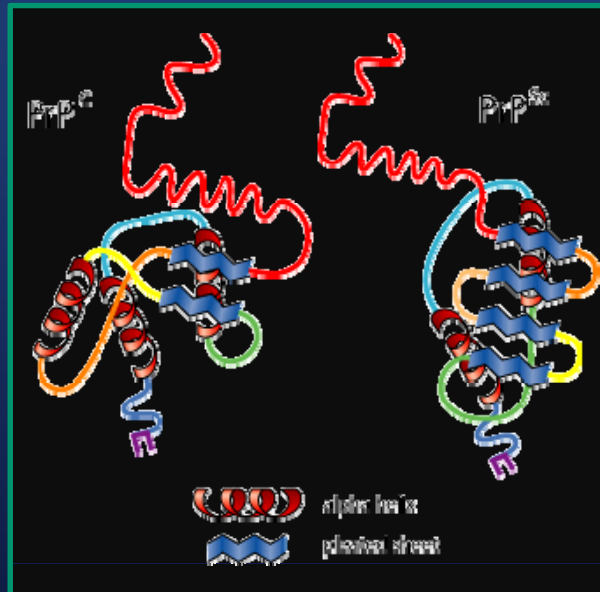
New Disease



Scrapie

1986	1988		1990		1995	1996
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PRION



Prion Diseases

The infectivity of prions is notoriously resistant to heat (including steam under pressure) and treatment with some harsh denaturing agents.

1986	1988		1990		1995	1996
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➤ **Mapping of the cases** that occurred within the first 18 months ⇒ common exposure.

➤ Common exposure = use of a dietary protein supplement, **meat and bone meal (MBM)**.



➤ Dairy x beef herds = higher incidence of disease in dairy herds (MBM)



➤ Age at onset of animals/ first wave of cases = 3-5 years old (it may be Inferred that exposure began in the early **1980s**).

Meat and Bone Meal

- Slaughterhouse refuse (offal) \Rightarrow 2 products: tallow (fat) and a defatted mixture of MBM.
- Changes in rendering practices:
 - ❖ Decline in solvent-based extraction of meat in the early 1980s.
 - = **Sheep scrapie-infected** carcasses and offal.

Meat and Bone Meal

- **Most common in England where modern industrial farming methods have increasingly become the norm.**
- **Northern Ireland and Scotland**
 - **Herds are grass fed**
 - **BSE has rarely occurred.**

1986

1988

1990

1995

1996

Bovine Spongiform Encephalopathy (BSE) Mad Cow Disease

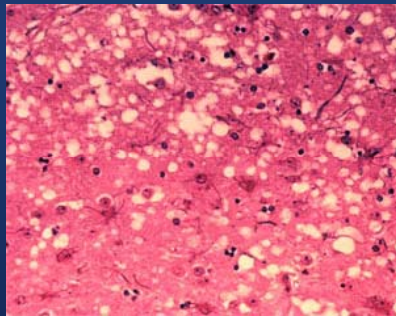


- BSE - Reportable Disease - Obligatory notification
 - ❖ Preventing the spread of disease through international movements.
- Diagnostic service to screen all suspected cases
- Animals destroyed because of the disease
- Ban on the feeding of ruminant protein to ruminants
- Ban on specified bovine offals - food chain
 - ❖ UK BSE 2.225 casos

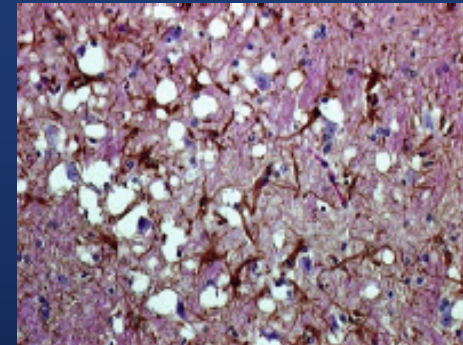
NEWSPAPERS: Risk????

- ❖ *Mystery/ Unknown disease*

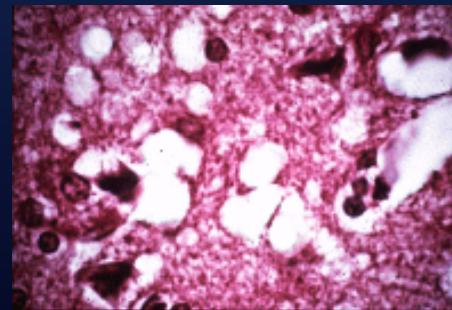
Spongiform Encephalopathy



BSE



Scrapie



Kuru

Creutzfeldt-Jakob disease (CJD)

- CJD - occurred predominantly in patients of middle age (34 and 73 years).
- It was uncommon in younger people.

1986

1988

1990

1995

1996



Is there a **potential transmission of BSE to humans** by the consumption of beef or beef products?

- Previous epidemiologic studies failed to demonstrate an association between sporadic cases of Creutzfeldt-Jakob disease (CJD) (or other human prion diseases) and consumption of lamb.



- Low infectivity of scrapie, when administered by feeding
 - BSE **can not jump species** barriers
 - No human health risk

1986

1988

1990

1995

1996

➤ Laboratory – transmission to pigs



➤ Case in cat - Feline spongiform encephalopathy (FSE)

Apparently transmitted to cats in BSE-contaminated food

❖ BSE Total 14.407 in cattle

1986

1988

1990

1995

1996



ZERO RISK???

1986

1988

1990

1995

1996



- 2 cases of CJD in **teenagers**
- Press coverage increased.
- Professor Sir Bernard Tomlinson announced in that he had stopped eating hamburgers.
- Beef consumption drops even more.
 - Public risk perception amplified.
 - Stigma= **Beef is not safe**

1986

1988

1990

1995

1996

20 de março - Stephen Dorrell



- New variant form of CJD (vCJD) - 10 patients UK, with onsets of illness between February 1994 and October 1995).
- Cases were mainly under age 40 years at onset.
- Potential link between BSE and CJD.
- World-wide export ban on British beef followed.

Thursday, 26 October, 2000

Ministers 'misled' public on BSE



The inquiry was chaired by Lord Phillips

Former health secretary, Stephen Dorrell, **has expressed regret** over statements he made relating to the safety of British beef during the BSE crisis.

Mr Dorrell - who was one of the ministers criticised in the BSE inquiry report - told BBC Radio 4's Today programme that he has made a mistake when he said there was "no conceivable risk from beef".

Conservative ministers and their officials repeatedly misled the public about the threat to human health posed by mad cow disease, according to the official BSE inquiry report.

The long-awaited report said the **crisis had been made worse by an over-riding desire to avoid a health scare, poor communication between government departments,** and bureaucratic delays in responding to scientific warnings about the risks.

1986

1988

1990

1995

1996

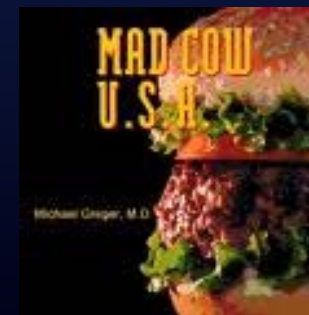
Modern industrial farming



Importance of zoonotic diseases

More than 60% of the newly identified infectious agents that have affected people over the past few decades have been caused by pathogens originating from animals or animal products (WHO, 2010).

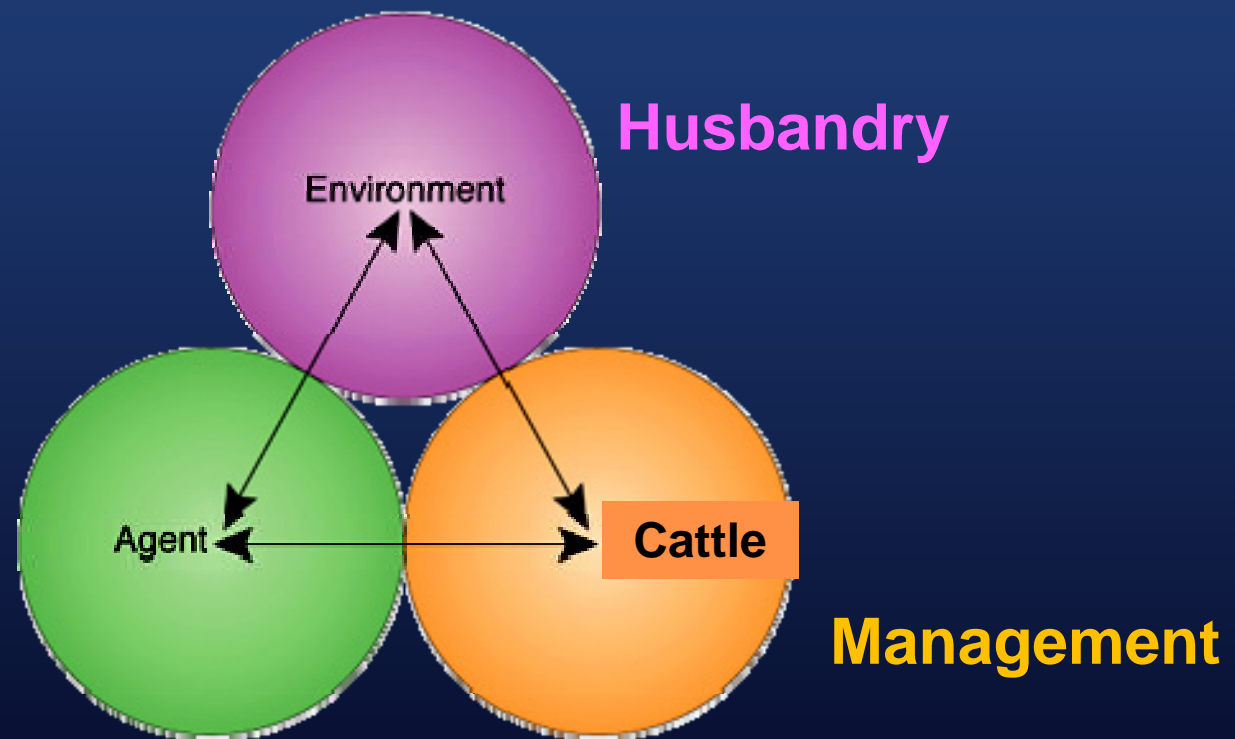
70% zoonotic infections: wildlife origin



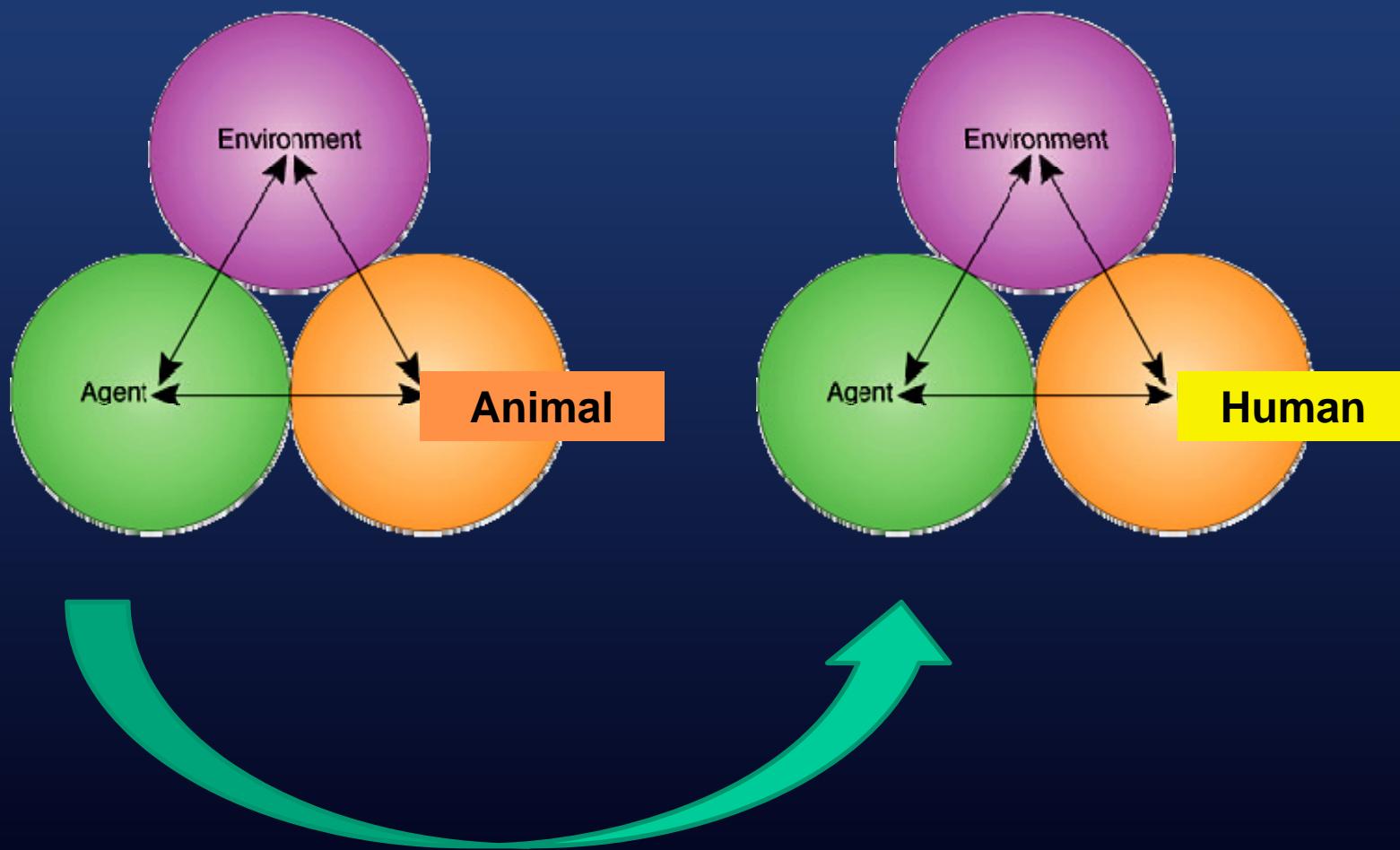
Disease outbreaks

- The **emergence or re-emergence** of zoonotic disease is complex and multifactorial, driven by factors which include:
 - Microbial adaptation
 - Ecology
 - Global climatic anomalies
 - Human demographics and behaviour
 - International travel and trade
 - Agricultural practices, technology and industry.

Epidemiology



Epidemiology

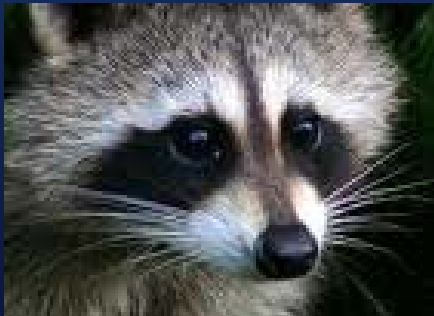


Zoonoses transmission

Direct contact:

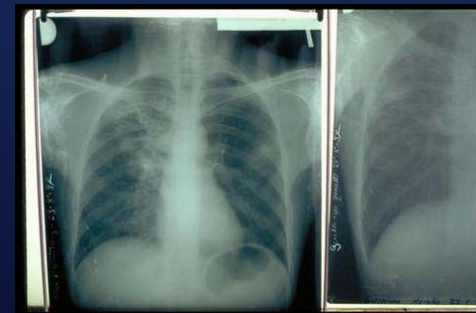
Rabies

Rhabdovirus



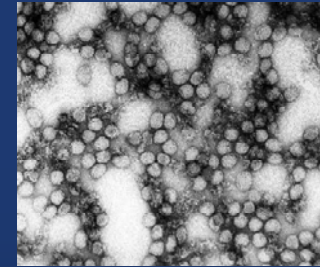
Zoonoses transmission

Food:
Zoonotic Tuberculosis
Mycobacterium bovis



Zoonoses transmission

Insects:
Yellow Fever
Flavivirus



Aedes mosquitoes

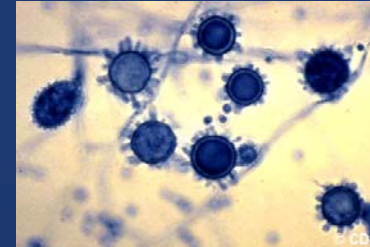


Zoonoses transmission

Environmental contamination:

Histoplasmoses

Histoplasma capsulatum



RABIES

RABIES



125 years ago, **Louis Pasteur** developed the first rabies vaccine.

Why the disease still occurs today?



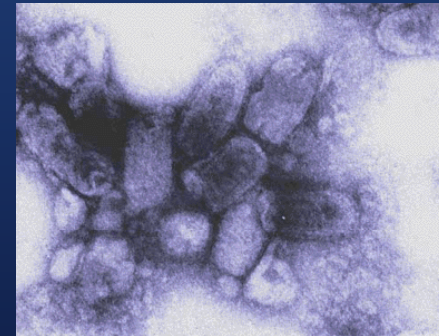
RABIES



Genus: *Lyssavirus*

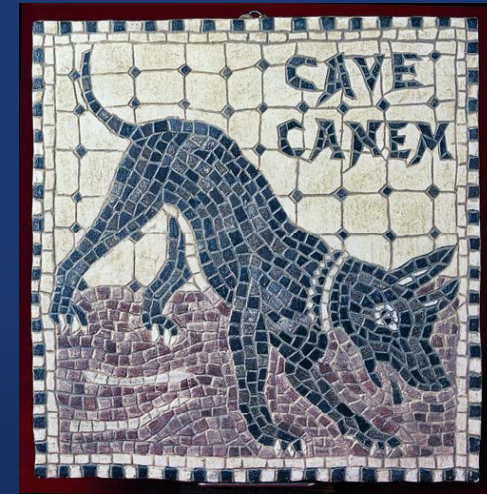
Family: *Rhabdoviridae*

Rabies virus



- More than 55 000 human deaths per year
(about 95% in Asia and Africa)

RABIES



2300 BC

Dog owners in the Babylonian city of Eshnunna are fined heavily for deaths caused by their dogs biting people.

RABIES

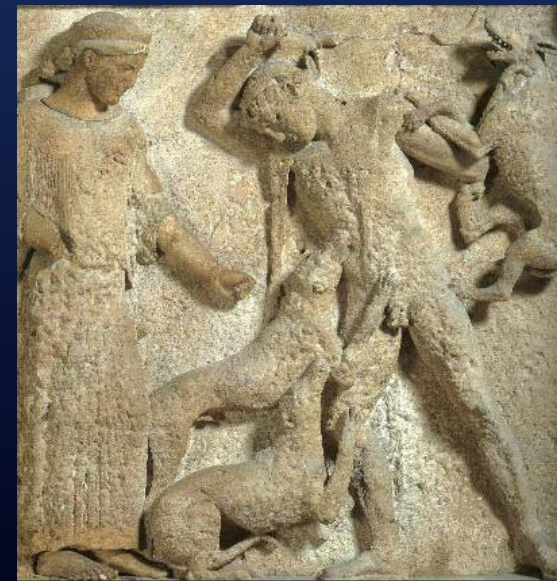
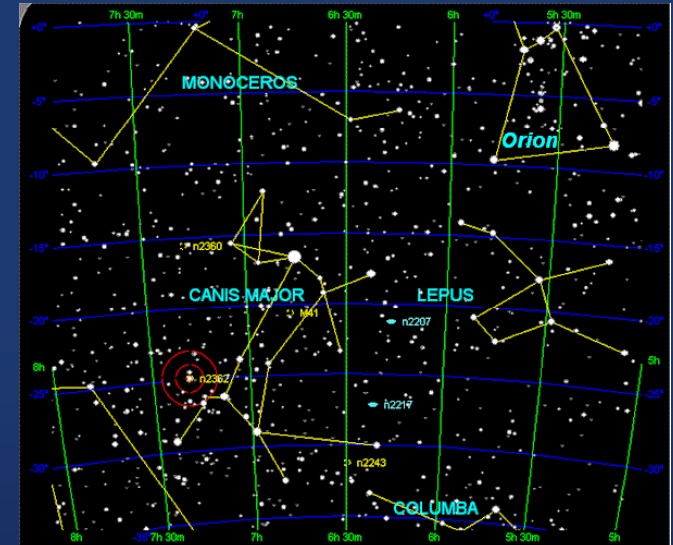
800-700 BC

The Iliad (Homer)

Sirius, the dog star of Orion, “*exerts a malignant influence upon the health of mankind*”.

Myth of Acteon and Artemys

Arisaeus, son of Apollo, had powers to counteract the effects of rabies.



RABIES



1800

There are accounts of European villagers dying from contact with mad **wolves**, foxes and dogs.





Evil Werewolf

The legend of the werewolf is one of the most ancient and wide spread. Due to wolf attacks upon humans, fear of rabies, and a conflation of werewolves with witches, the sympathetic medieval werewolf exited entertainment literature.

NEW WORLD



RABIES IN THE NEW WORLD



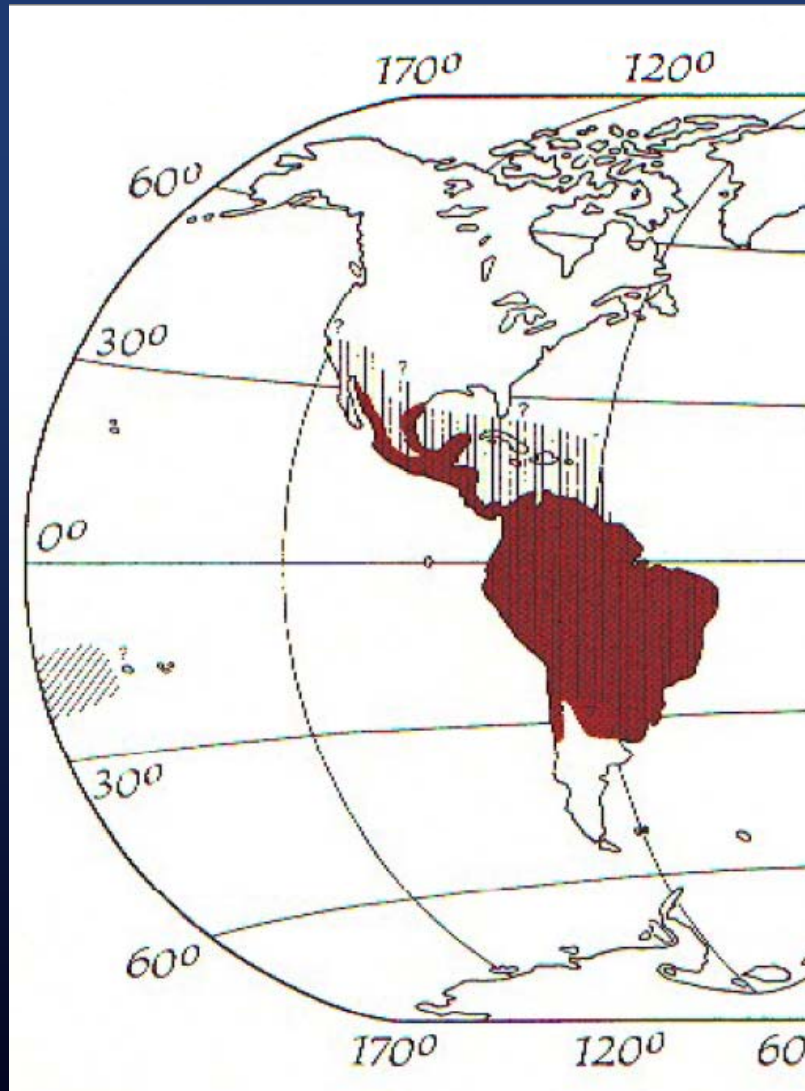
Mayan Cult of Camazotz

RABIES IN THE NEW WORLD



Vampire Bat





Vampire bats
Desmodus rotundus

RABIES IN THE NEW WORLD



Vampire-transmitted rabies has probably existed has probably existed in tropical America since the pre-Hispanic era.

Fernandez de Oviedo (*Sumario de la Historia Natural de las Indias*): many soldiers died from bat bites during the Darien conquest.

Molina Solis (*Historia del Descubrimiento y Conquista de Yucatán*) : many soldiers and horses of Francisco de Montejo's army were attacked by vampire bats.



VAMPIRE BAT RABIES

First scientific report on bovine rabies in tropical America - by Carini in 1911 (SP, Brazil)

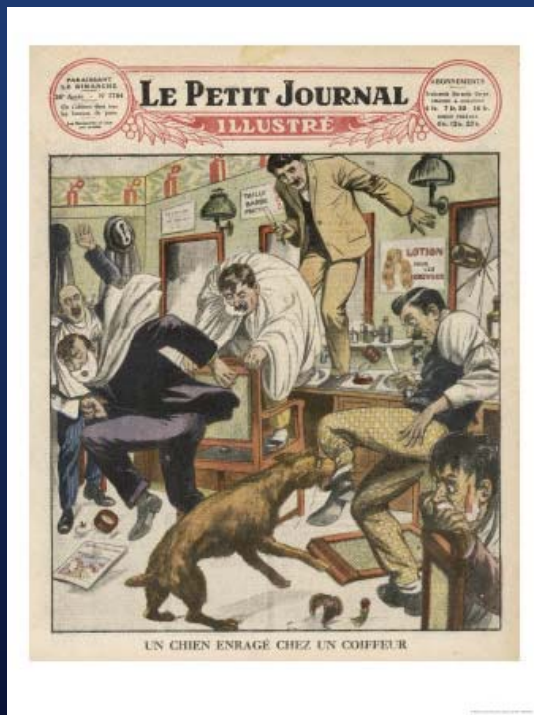


First outbreak of bat-transmitted human rabies reported on scientific literature - Trinidad in 1927

➤ 55 human deaths (1929 – 1935)



RABIES



19th century - Many rabies cases in Europe (e.g. London - 29 deaths in the first weeks of 1877)

Rabies Order gave local authorities the right to muzzle, control, seize, lock up, and dispose of stray dogs.

RABIES

Louis Pasteur began to work on rabies in 1880.



1885

Vaccination of Joseph Meister (9 years) - 13 injections of rabbit medulla homogenate (one per day)

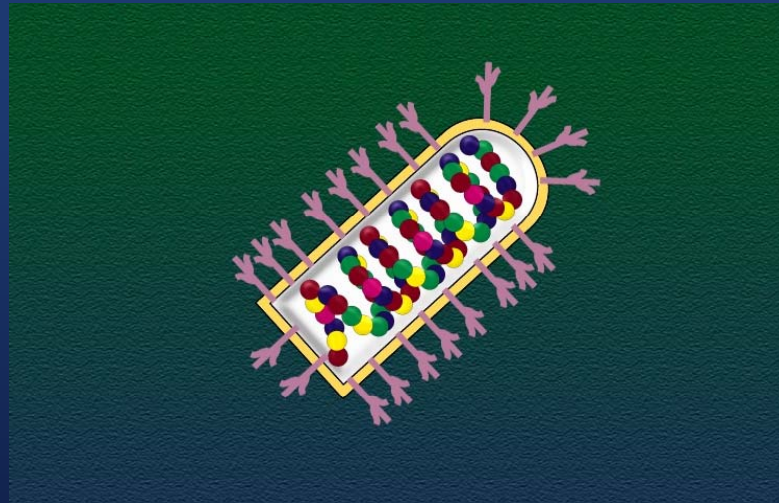
3 months later

Vaccination of Jean-Baptiste Jupille, severely bitten by a rabid dog

26 October 1885 - Results presentation at French Academy of Sciences.



RABIES



Direct contact – saliva contact of broken skin or mucous membranes with saliva.

Aerosol transmission (bat infested caves, labs).



RABIES



All tissues of infected animals are potentially infectious, with highest titers in the CNS, saliva, and salivary glands.

Transplant surgery

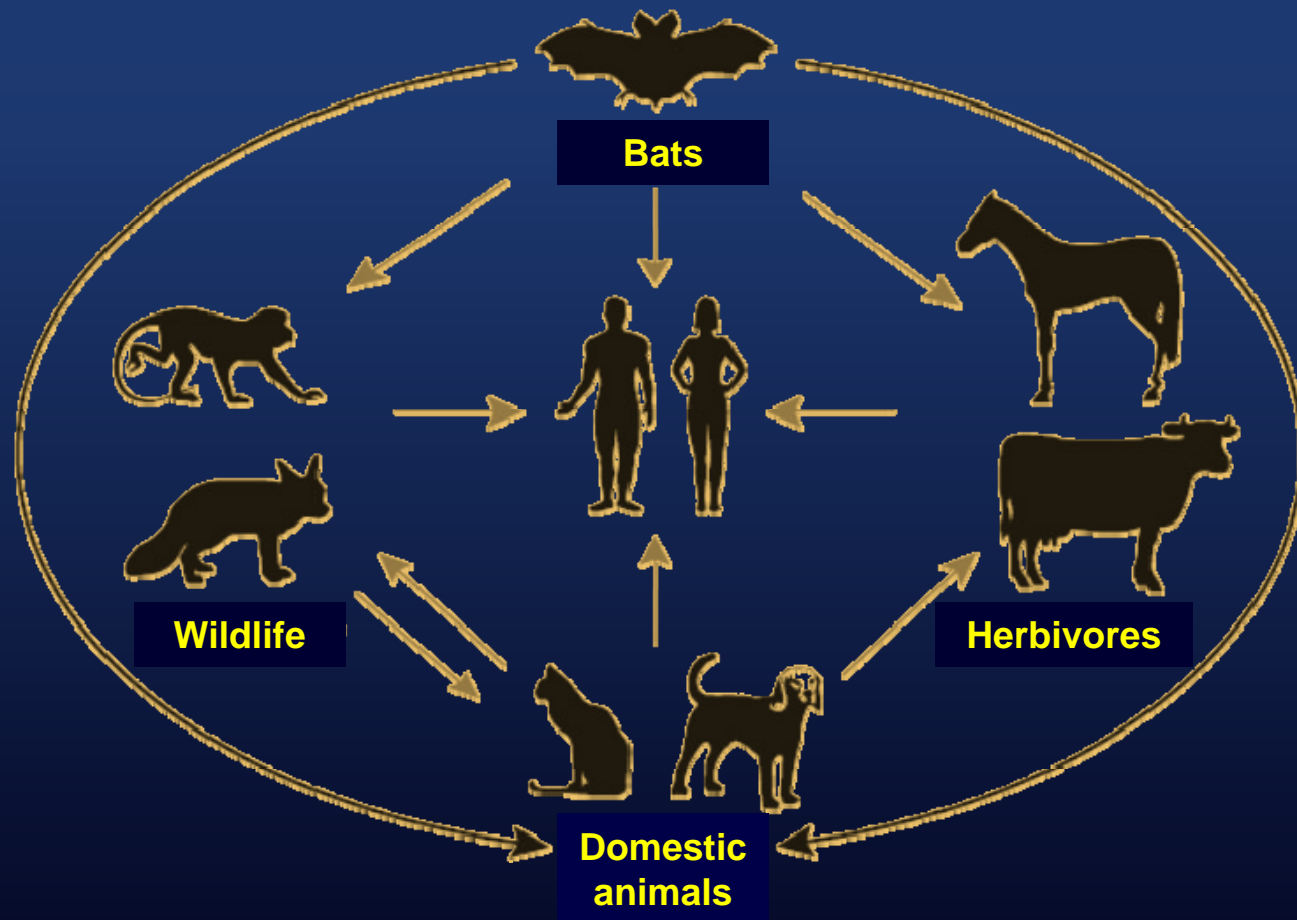
HUMAN RABIES PREVENTION



Elimination of **exposition** to rabid animals

Prompt local **treatment** of wounds and
postexposure rabies prophylaxis for
exposed persons.

RABIES



RABIES - CONTROL MEASURES



Dogs and Cats

Animal **population control** (without animal suffering)
= reducing a stray dog

Mass **vaccination** campaigns

Responsible dog ownership





Animal aggressions

RABIES - CONTROL MEASURES



Cattle, horses, deer and other herbivores

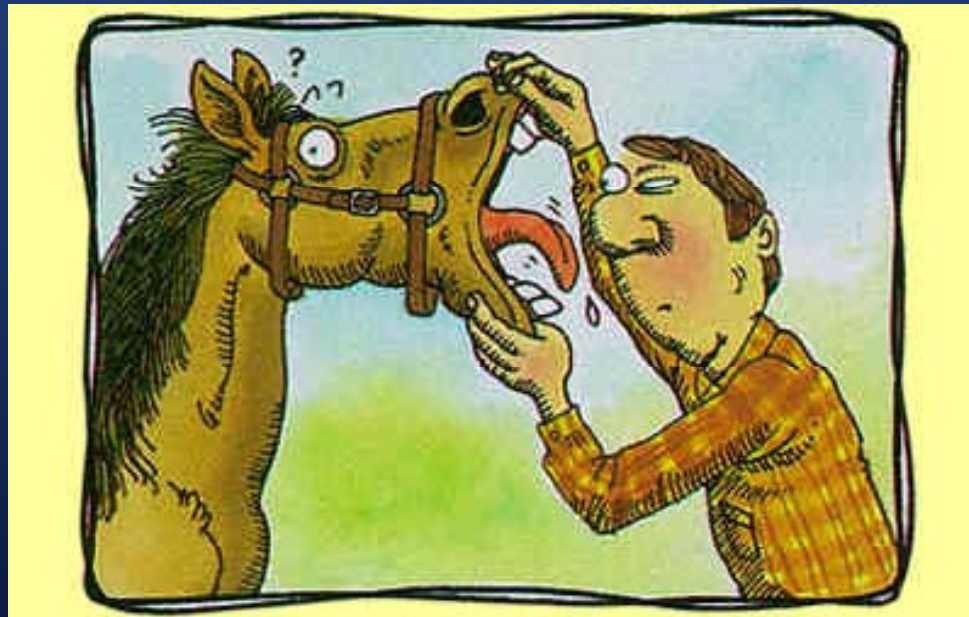
Vaccination

Vampire bite

Vampire bats control



Herbivores rabies



- Preexposure vaccination for professionals.
- Proper animal handling, basic biosecurity precautions, and personal hygiene.



Individuals that are more likely to be exposed to rabies than is the general public

RABIES - CONTROL MEASURES

Wildlife



Raccoon, Grey Wolf, Red Fox, Skunk (National Geographic)

RABIES - CONTROL MEASURES

Wildlife



Canada - The Ministry of Natural Resources Rabies
Research and Development Unit



RABIES - CONTROL MEASURES

Wildlife – Bats



RABIES - CONTROL MEASURES

Wildlife – Bats



RABIES - CONTROL MEASURES

Wildlife – Bats





Contact with wildlife

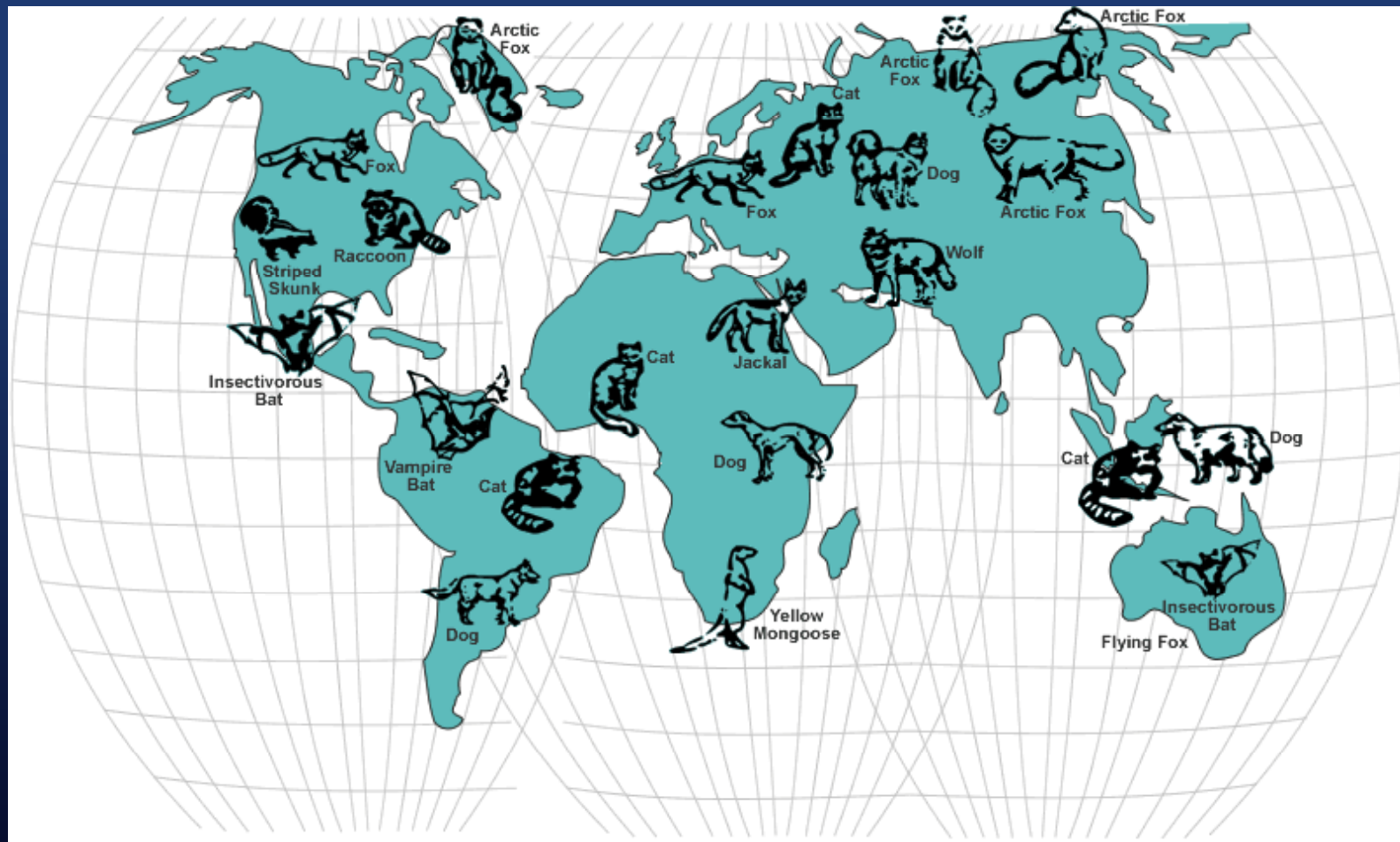
France

1998 - 4 animal cases

- 2 Border with the Belgium – fox and cat
- 1 Brittany – bat *Eptesicus serotinus*
- 1 South – dog abandoned
 - Variant - Egypt

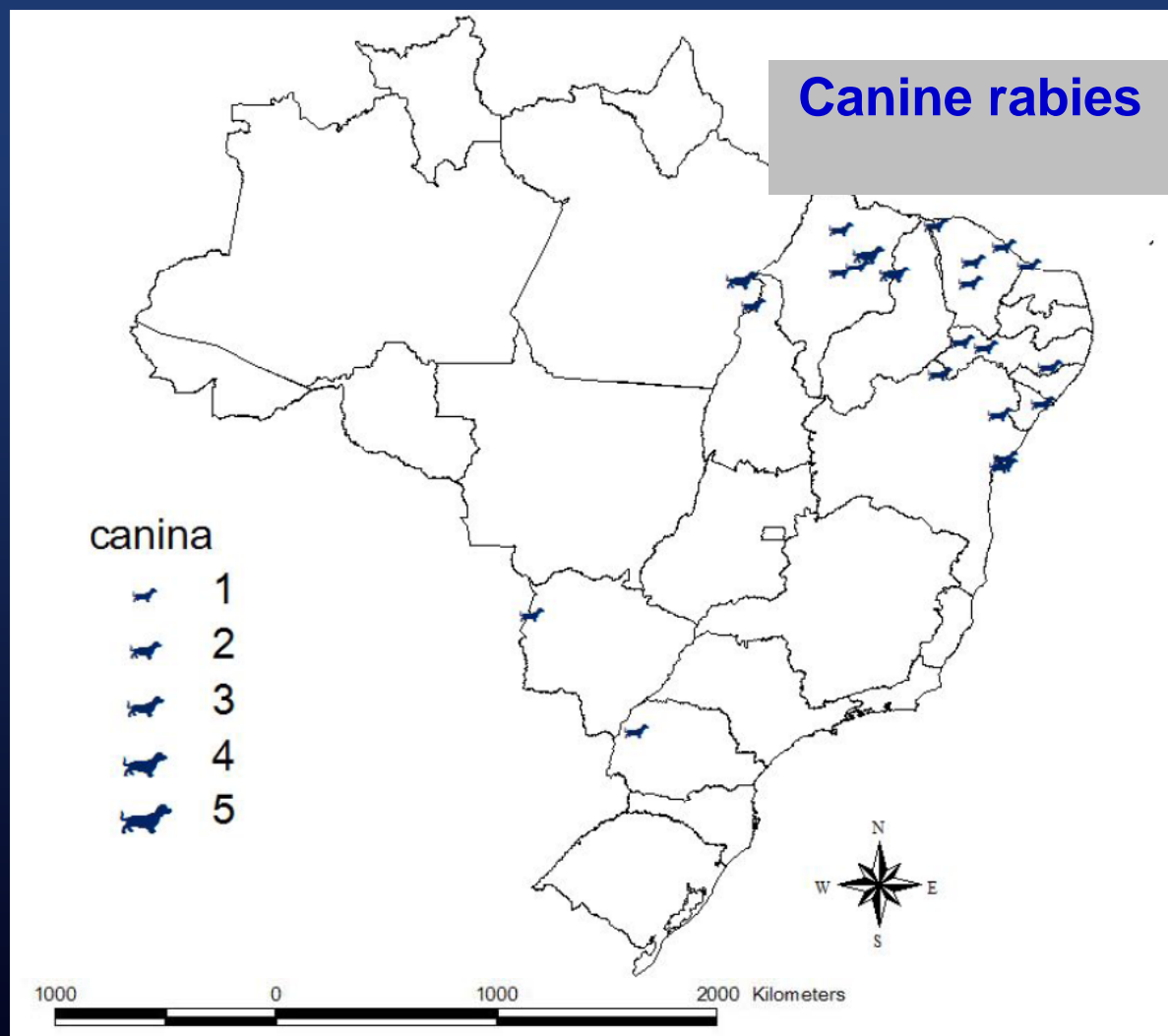


**Illegal importation of animals
Travels**



1^o Canine and feline rabies control

RABIES – BRAZIL 2009



Estado	C
Norte	3
Rondônia	-
Acre	-
Amazonas	-
Roraima	-
Pará	3
Amapá	-
Tocantins	-
Nordeste	21
Maranhão	7
Piauí	-
Ceará	6
R.G do Norte	-
Paraíba	-
Pernambuco	3
Alagoas	-
Sergipe	1
Bahia	6
Sudeste	-
Minas Gerais	-
Espírito Santo	-
Rio de Janeiro	-
São Paulo	-
Sul	1
Paraná	1
S. Catarina	-
R.G do Sul	-
Centro-Oeste	1
M.G do Sul	1
Mato Grosso	-
Goiás	-
D. Federal	-
Brasil	26

RABIES – BRAZIL 2009

Herbivores rabies

Bovina

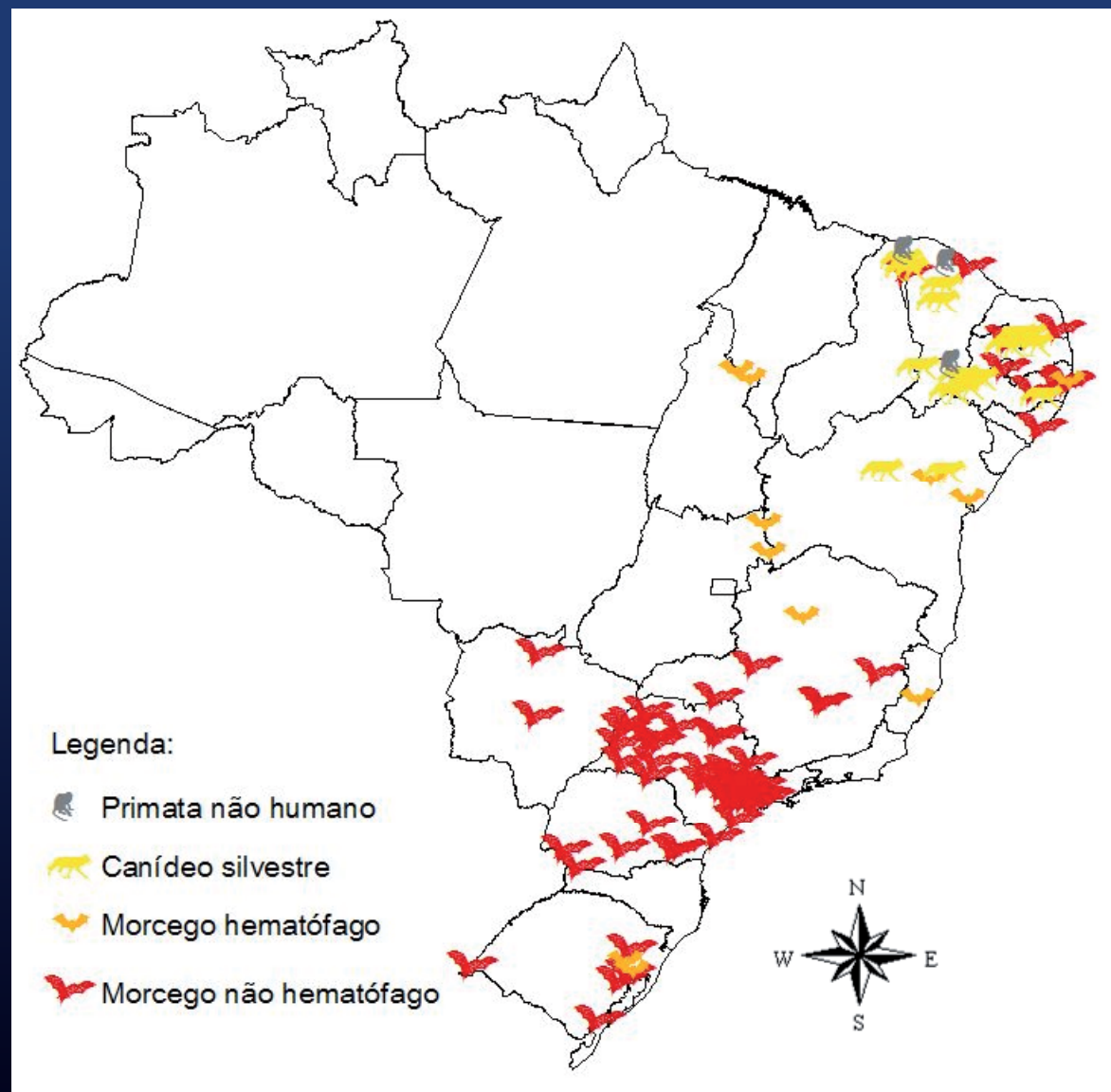


1000 0 1000 2000 Kilometers



Estado	B
Norte	35
Rondônia	11
Acre	-
Amazonas	2
Roraima	-
Pará	5
Amapá	2
Tocantins	15
Nordeste	131
Maranhão	-
Piauí	-
Ceará	2
R.G.do Norte	5
Paraíba	-
Pernambuco	55
Alagoas	-
Sergipe	1
Bahia	68
Sudeste	319
Minas Gerais	133
Espírito Santo	61
Rio de Janeiro	36
São Paulo	89
Sul	190
Paraná	119
S.Catarina	17
R.G.do Sul	54
Centro-Oeste	104
M.G.do Sul	5
Mato Grosso	62
Goiás	37
D. Federal	-
Brasil	779

RABIES – BRAZIL 2009



State of São Paulo

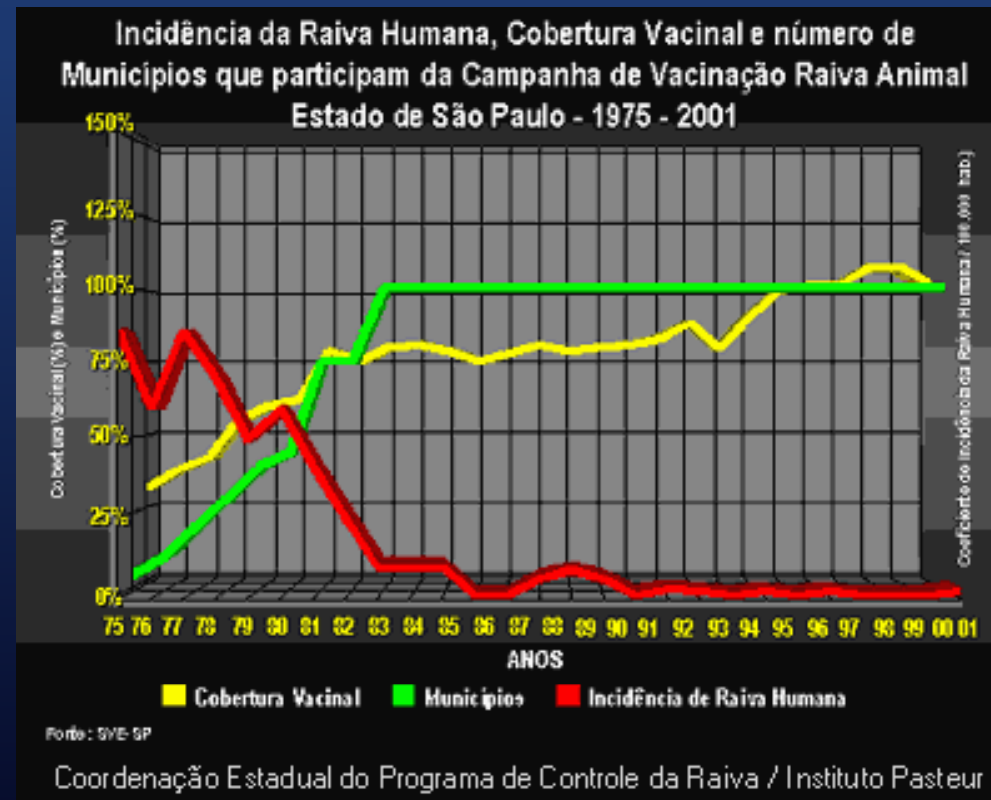


State of São Paulo



Since 2001 = no human rabies transmitted
by dogs in state of São Paulo

Human rabies x Canine and Feline Vaccination



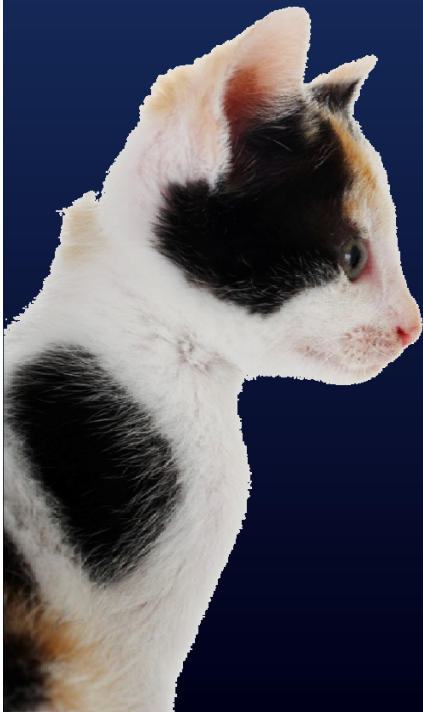
Canine and Feline Rabies

2001 Human rabies case
Municipy: Dracena
Cat not vaccinated



Antigenic study - *Desmodus rotundus* variant

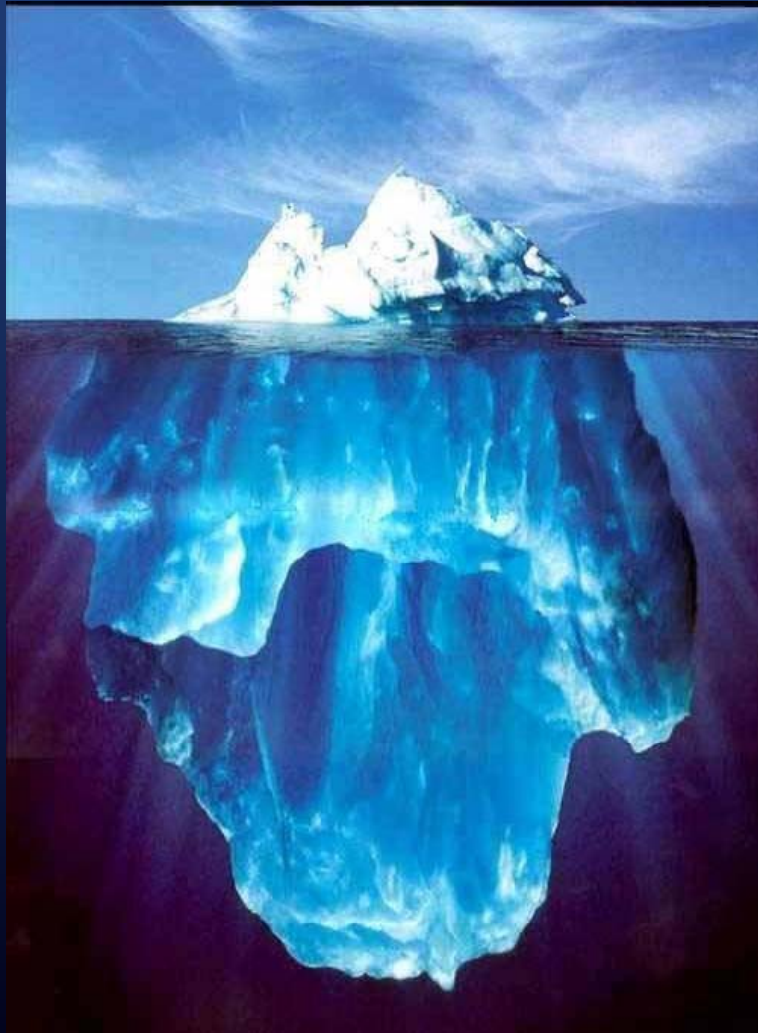
(KOTAIT et al, 2001)





**Adhesion to
recommendations**

Canine and Feline Rabies might only be the tip of the iceberg...



Outbreak human rabies transmitted by vampire bats 2004 - 2005



Source: Literature reviews, Ministry of Health of Brazil, 2007; Ministry of Health of Peru, 2007.

Outbreak human rabies transmitted by vampire bats



Small villages in the Rain Forest

Outbreak human rabies transmitted by vampire bats



Social risk factors



Humans occupation of the forest

Deforestation

Fire points – “*queimadas*”

Social risk factors



**Prospection for gold - cutting down trees, bringing in noisy machinery, hunting animals for food
GARIMPO**

Social risk factors



“These changes in the environment in turn can lead to changes in the type of species available as a food supply for vampire bats, which could lead to their attacking people” (Schneider, 2009).

Social risk factors



Photos: Jakeline Rios
Estado do Maranhão
Secretaria de Estado da Saúde

Social risk factors



- Poverty
- Poor living conditions
- Vulnerable housing in remote areas
- Sleeping in hammocks
- Difficulties accessing health services
 - **Human serve as easy prey**

Photos: Jakeline Rios
Estado do Maranhão
Secretaria de Estado da Saúde

Biological risk factors



Photos: Jakeline Rios
Estado do Maranhão
Secretaria de Estado da Saúde

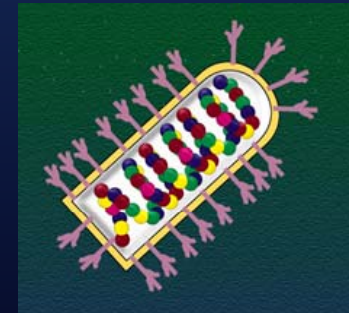
Biological risk factors



Human Rabies Cases

2004 - 2005

- Pará: 38 cases
- Maranhão: 24 cases





Changes in the environment
Urbanization

Social factors

Risk

- Animal aggressions
- Individuals that are more likely to be exposed to rabies than is the general public
- Contact with wildlife
- Illegal importation of animals and travels
- Adhesion to recommendations
- Changes in the environment:
Urbanization
- Social factors



Adequate choice of measures for risk management

Financial and personal recourses

Is the problem solved?

÷ RESPONSABILITIES

PUBLIC AWARENESS – e responsibilities essential component of rabies prevention and control:

- Responsible pet ownership
- Routine veterinary care
- Awareness about: rabies transmission routes
- Avoiding contact with wildlife
- Prompt recognition and reporting of possible exposures to medical professionals and local public

Health communication

Health communication is the study and use of communication strategies to inform and **influence** individual and community decisions that enhance **health**

(U.S. Department of Health and Human Services, 2000)



Risk communication

Risk communication is an interactive process of exchange of information and opinion among individuals, groups, and institutions (e.g. scientists, communities, media professionals) about the nature, magnitude, significance, and/or control of health risks (FAO & OMS, 2005).

Risk analysis



Risk analysis



Risk analysis

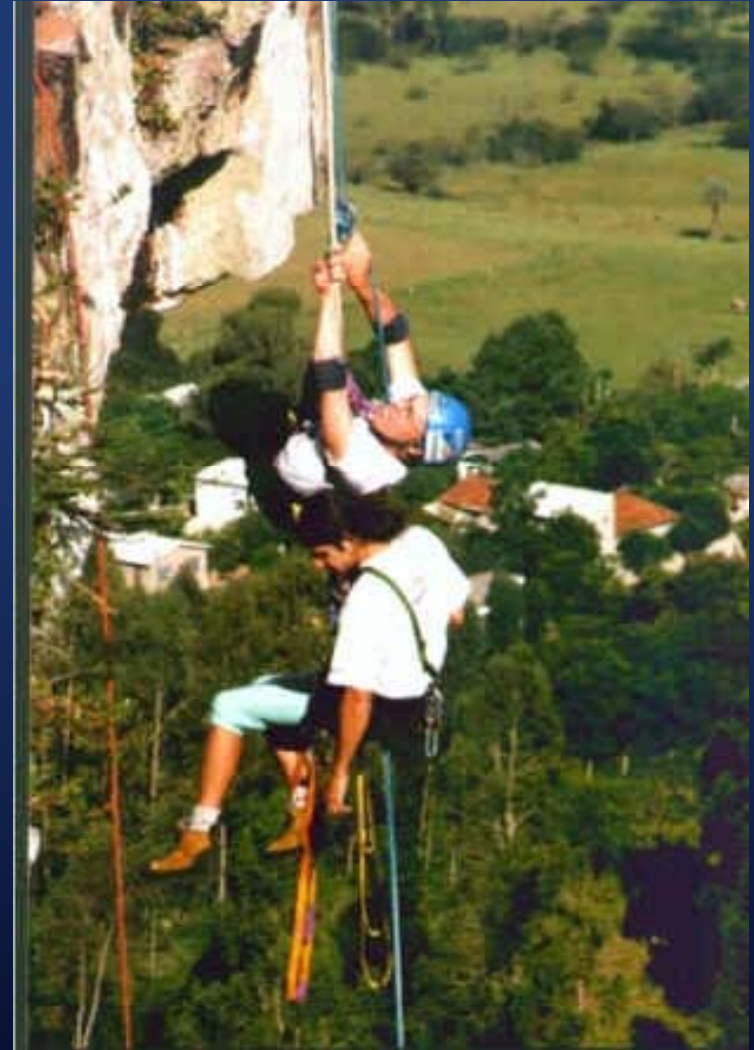


How we deal with health risks?



... just ignorance?

Foto: Antonio Siqueira



Why people expose themselves to risks?



*“My father was bitten by the
bats, he lived for 110 years,
now you are inventing a
disease from this?!!”*

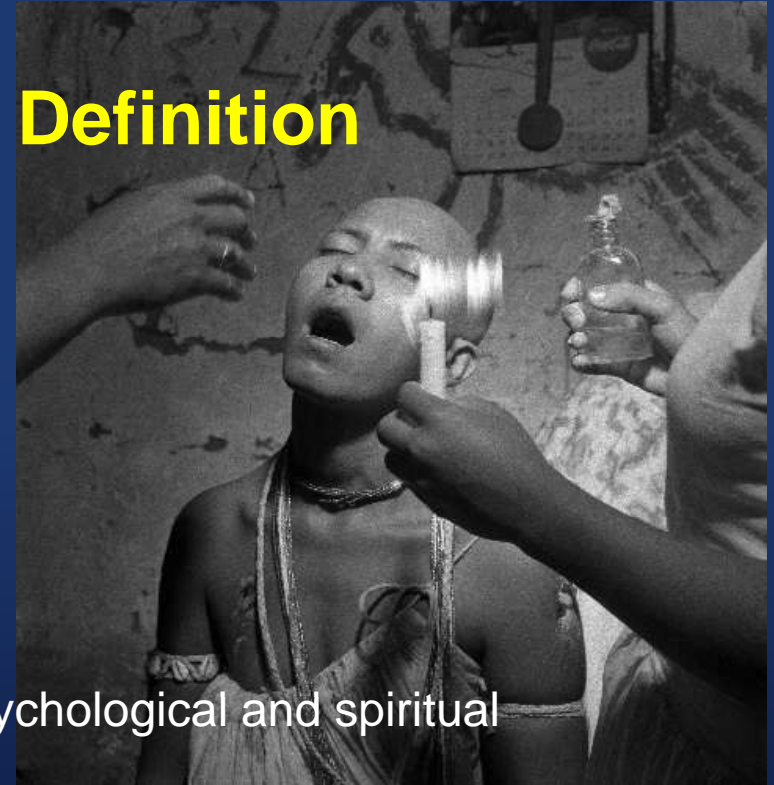
(Habitant of Pará)

Culture and Disease definition



- What a **culture** defines as abnormal behavior is a consequence of what it defines as a modal personality.

Culture and Disease Definition



Shamans

- Religious practitioners who attend to the psychological and spiritual needs of a community - privileged status.
- They interact with spirit entities and have special powers and can influence the course of nature or human affairs.

Schizophrenia

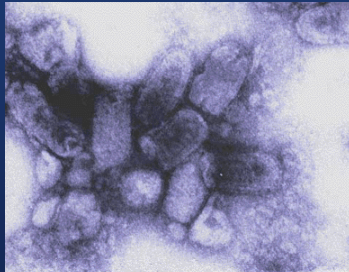
- Silverman (1967) postulated that shamanism is a form of acute schizophrenia: the two conditions have in common “grossly non-reality oriented ideation, abnormal perceptual experiences, profound emotional upheavals, and bizarre mannerisms”



**Ecuador rainforest – Shuaro
8 cases**

(Castro, 2001)

Scientific concepts



Public concepts

**Spiritual
condition**

Human Behavior



Risk perception

Knowledge
Health literacy
Beliefs
Values
Personality
Life experience



Social context



Risk Benefits

Risk perception

Knowledge
Health literacy
Beliefs
Values
Personality
Life experience

**ACCEPTABLE
LEVEL OF RISK**

**ATTITUDE
BEHAVIOR**

Social context

Risk Benefits

Risk perception

School

**Science
Medicine**

His experience

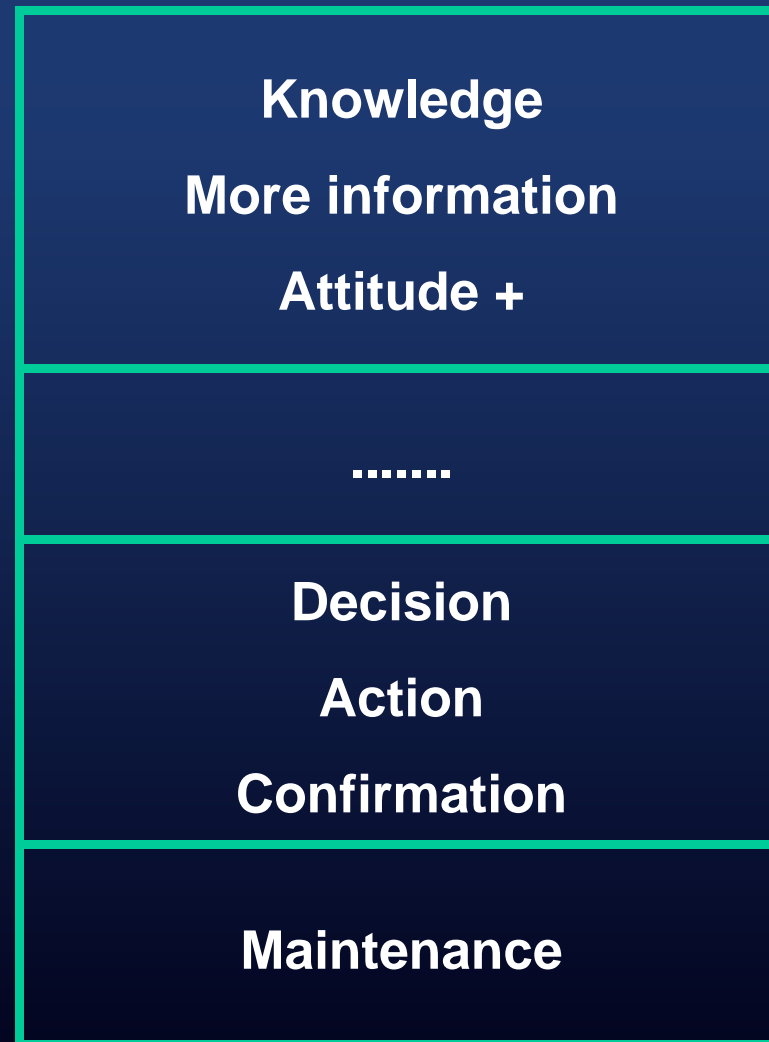


Religion

**Community
Family, friends**

Media

Change in behaviour



Risk perception



Risk perception



Subjective, Emotional

Personal experience

Community

**Need absolute answer
(100%)**

Risk analysis

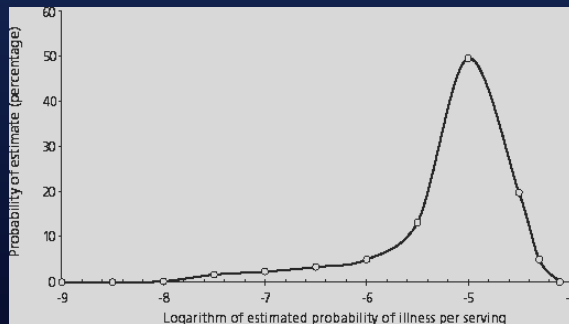


Science

Objective

Population

Probability



What is the main goal of risk communication?

- **Health**
- **Awareness of risk factors**
- **Commitment to risk reducing measures**

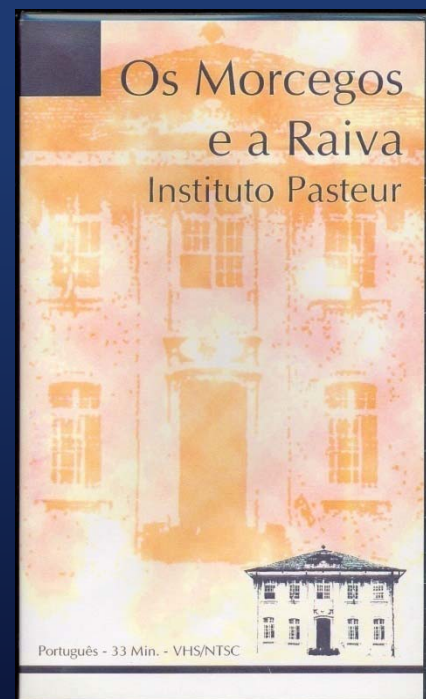
Risk communication

People does not do measures just because they are scientific.

- Promote **consistency and transparency** in arriving at and implementing risk management decisions
- Promote **awareness** and understanding
- Foster public **trust and confidence**
- Community Engagement - **Mobilization**
- **Crisis** managment



How?





Target audience



"Dog bites mailman"

SEST/SMES/GESAU
PROJETO CÃO

IP



Coordenation: Dr. Maria de
Lourdes Reichmann



*When I saw, his leg
already was inside my
mouth....*

Morcegos em áreas urbanas

Vacinação Contra a Raiva de Cães e Gatos

Lembre-se!
Preciso ser vacinado
contra a raiva

Vacinação Contra a Raiva de Cães e Gatos

Lembre-se!
Preciso ser vacinado
contra a raiva



A raiva em cães e gatos no Estado de São Paulo

Colabore para o controle da raiva. Informe-se no seu município onde e quando vacinar.

Local:

Data:

Fonte: Ministério da Saúde - 2008

Dúvidas sobre a raiva?

Profilaxia da Raiva Humana

Consulte sempre o Médico Veterinário para diagnóstico de animais, tratamento e controle e os profissionais adequados.



RAIVA DOS HERBÍVOROS



gomas
quária ou
região.

A RAIVA

Desenho da capa
Cristina Carbone Sardassi, 1999

Instituto Pasteur
Av. Paulista 303
São Paulo - SP - Brasil
CEP 01311-000
Fone (11) 288-0088
www.pasteur.saude.sp.gov.br

apoio

FIAT

Liberté • Égalité • Fraternité
REPUBLIQUE FRANÇAISE

realização

INSTITUTO PASTEUR

SECRETARIA
DA SAÚDE

GOVERNAMENTO DO ESTADO DE
SÃO PAULO

Exposição

**Centenário do
Instituto Pasteur
de São Paulo**

**Sua trajetória
1903 2003**

Exposição

**Vida e obra de
Louis Pasteur**

Exposição aberta de 5 de agosto a 30 de setembro 2003
de segunda a sexta das 9 às 17:30h
Av. Paulista 407 - São Paulo - SP
Espaço cedido pela **FIAT do Brasil SA**



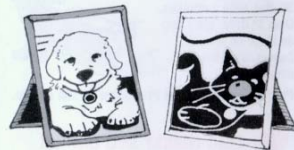

Responsible dog ownership

**AGORA FAÇO PARTE
DE SUA FAMÍLIA!
VOCÊ SABE
CUIDAR DE MIM ?**



**ENTÃO VAMOS
CONVERSAR...**

**Você já
ouviu falar
de Raiva?**



**A Raiva é uma doença
mortal que afeta
mamíferos. Os cães e
gatos podem adquiri-la e
transmiti-la aos seres
humanos.**



Sociedade Protetora dos Animais
São Roque

**CAMPANHA DE
CASTRAÇÃO
CÃES E GATOS**

DIA 22 DE MARÇO

Valor: R\$ 60,00

Local: Escola Roque Verani

Tel.: (11) 4784-3899

Inscrição: Empório Country

Apoio:

Empório Country

Agora também!
Hering Adulto e Infantil
Lado Averso e Lee

Tel.: 011 4712-8773
Av. Tiradentes, 183 - Centro - São Roque

Animal identification
Castration campaigns



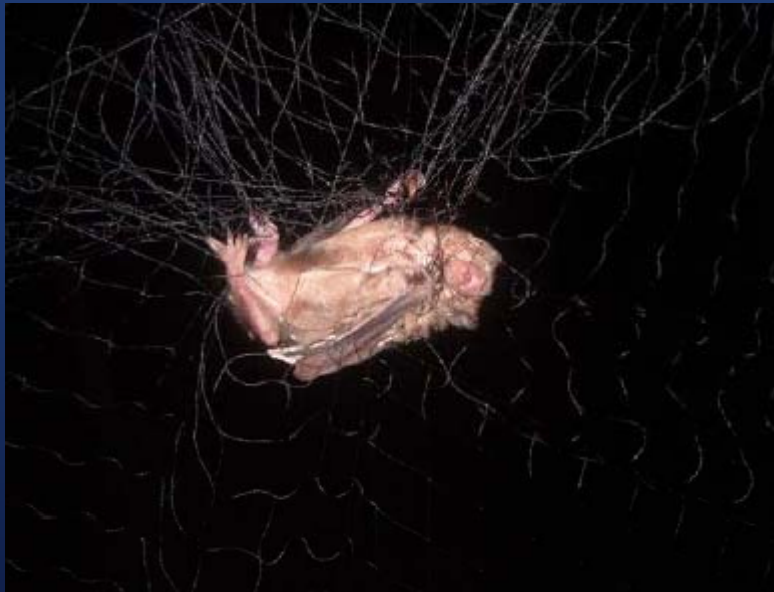
Small villages in the Rain Forest

Estado do Maranhão Secretaria de Estado da Saúde



Photos: Jakeline Rios
Estado do Maranhão
Secretaria de Estado da Saúde

Estado do Maranhão Secretaria de Estado da Saúde



**Photos: Jakeline Rios
Estado do Maranhão
Secretaria de Estado da Saúde**

Estado do Maranhão Secretaria de Estado da Saúde



Photos: Jakeline Rios
Estado do Maranhão
Secretaria de Estado da Saúde

Estado do Maranhão Secretaria de Estado da Saúde



Photos: Jakeline Rios
Estado do Maranhão
Secretaria de Estado da Saúde



Campanha Brasil Livre da Aftosa - MAPA



MAPA




MAPA



Health risks were unknow

113,597 DOCTORS FROM COAST TO COAST WERE ASKED:



Family doctors, surgeons, nose and throat specialists... doctors in every branch of medicine were asked: "What cigarette do you smoke?"

Three nationally known independent research groups did the asking.

The answers came in by the thousands. Actual statements from doctors themselves. The result? Camels... convincingly!

According to this recent Nationwide survey:

MORE DOCTORS SMOKE CAMELS THAN ANY OTHER CIGARETTE!

This is no casual claim. It's an actual fact. Based on the statements of doctors themselves to three nationally known independent research organizations.

THE QUESTION was very simple. One that you... any smoker... might ask a doctor: "What cigarette do you smoke, Doctor?"

After all, doctors are human too. Like you, they smoke for pleasure. Their taste, like yours, enjoys the pleasing flavor of costlier tobaccos. Their throats too appreciate a cool mildness.

And more doctors named Camels than any other cigarette!


If you are a Camel smoker, this preference for Camels among physicians and surgeons will not surprise you. But

CAMEL - COSTLIER TOBACCOS

if you are not now smoking Camels, try them. Compare them in your "T-Zone."

THE "T-ZONE" TEST WILL TELL YOU

The "T-Zone" - T for taste and T for throat - is your own laboratory, your proving ground, for any cigarette. For only your taste and your throat can decide which cigarette tastes best to you... and how it affects your throat.



Thanksgiving Dinner

...and then the powerful feeling that comes from good digestion and smoking Camels!

WHY IS A THANKSGIVING DINNER SO IMPORTANT? It's the time when the family gets together to enjoy a big Thanksgiving dinner. It's a special time when the family gets together to enjoy a big Thanksgiving dinner. It's a special time when the family gets together to enjoy a big Thanksgiving dinner.

THE THANKSGIVING DINNER... The Thanksgiving dinner is a special time when the family gets together to enjoy a big Thanksgiving dinner. It's a special time when the family gets together to enjoy a big Thanksgiving dinner.

WHY IS A THANKSGIVING DINNER SO IMPORTANT? It's the time when the family gets together to enjoy a big Thanksgiving dinner. It's a special time when the family gets together to enjoy a big Thanksgiving dinner.

Good food and good tobacco go together naturally!

Right down the Thanksgiving dinner, bring out "Camels" as the gift from men and women who'll heartily enjoy a big Thanksgiving dinner. It's a special time when the family gets together to enjoy a big Thanksgiving dinner.

Enjoy Camels all year long - all through the day. Camels' smooth tobacco and delicious mild smoke makes you feel like the best of all. And when you're tired, try Camels a "T-Zone" with a Camel!

COSTLIER TOBACCOS

Camels are made from the finest tobacco... Turkish and American... there are no other popular brands.

FOR DIGESTION'S SAKE - SMOKE CAMELS

More Doctors Smoke Camels than any other Cigarette
For Digestion's Sake - Smoke Camels
I'd walk a mile for a Camel

Where there's a Man...



there's a Marlboro

—with a filter that delivers a smoke of surprising mildness



The Marlboro filter... contains a special filter that delivers a smoke of surprising mildness. This smooth and gentle smoke has helped Marlboro cigarettes become the most popular in the world.

YOU GET A LOT TO LIKE... FILTER, FLAVOR, PUFF-YOY BOX

(From a grand index of the world's great indexes)

Reprint of box of 10— with instruction and other



Blow in her face and she'll follow you anywhere.

Hit her with tangy Tipalet Cherry. Or rich, grape-y Tipalet Burgundy. Or luscious Tipalet Blueberry. It's Wild! Tipalet. It's new. Different. Delicious in taste and in aroma. A puff in her direction and she'll follow you, anywhere. Oh yes... you get smoking satisfaction without inhaling smoke.

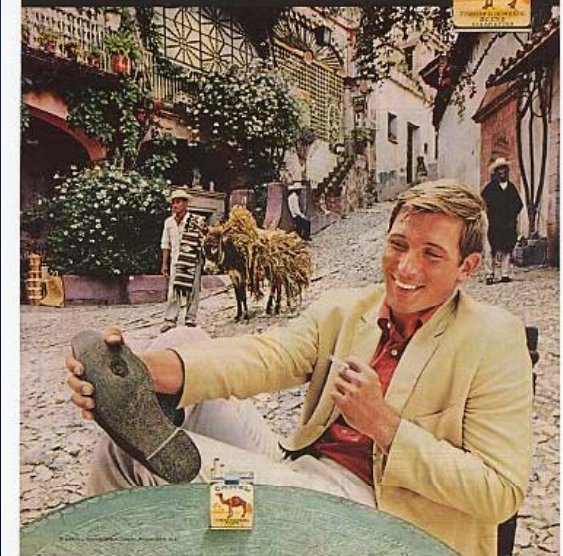


New from Muriel. About 5 for 25¢.

Smokers of America, do yourself a flavor. Make your next cigarette a Tipalet.

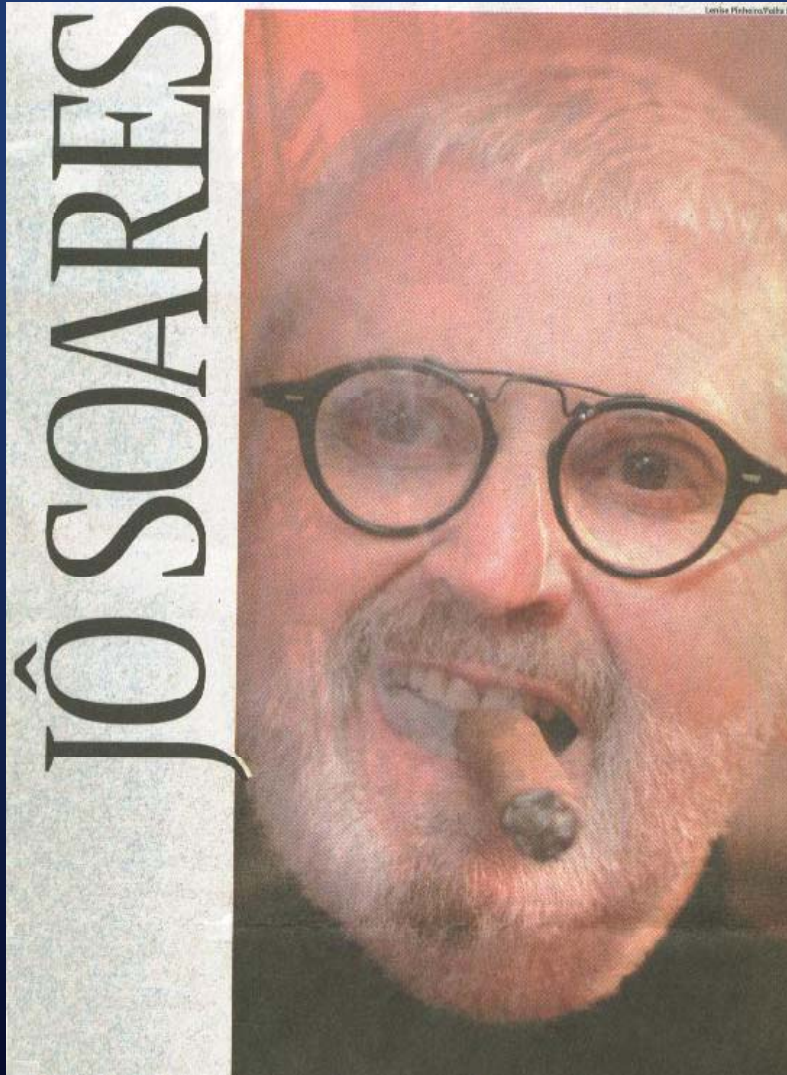
"I'd walk a mile for a Camel."

This message is strictly for smokers who never tasted a Camel cigarette. Camel smokers, you know what we mean. You other guys, start walking.



1950 Ads





Opinion Leaders



Hitler's Anti-Tobacco Campaign



Anti Tobacco Campaign



First War - Tobacco consumption increased 5 a 15% per year

1950 UK – First scientific article about tobacco and lunge cancer association (Richard Doll and A Bradford Hill, 1950)

1964 USA – Report of the Surgeon General on smoking and and heath risks = smoking causes lung cancer.

Anti Tobacco Campaign



Medicine

➤ Normal habit ⇔ Disease

World Health Organization ICD-10
F17.2 Tobacco Dependence Syndrome

➤ Diseases caused by tobacco



Anti Tobacco Campaign



Official restriction on smoking (e.g. smoking banned on buses, airline flights, in indoor places)



Tax policy

Anti Tobacco Campaign



SOFRIMENTO



O Ministério da Saúde adverte:
A dependência da nicotina causa
tristeza, dor e morte.



PARE DE FUMAR
DISQUE SAÚDE
0800 61 1997

MORTE



O Ministério da Saúde adverte:
O uso deste produto leva à morte por
câncer de pulmão e enfisema.



PARE DE FUMAR
DISQUE SAÚDE
0800 61 1997



Marlboro Lights

SURGEON GENERAL'S WARNING: Quitting Smoking Now Greatly Reduces Serious Risks to Your Health.

10 mg "tar," 0.8 mg nicotine av. per cigarette by FTC method.

© Philip Morris Inc. 1999

The advertisement features a bright yellow-orange background. In the upper left, there is a small image of a Marlboro Lights cigarette pack. The main title "Marlboro Lights" is written in large, white, serif font. Below the title, three silhouettes of cowboys on horseback are shown riding away from the viewer towards a horizon. The scene is framed by a wooden fence on the left and right.

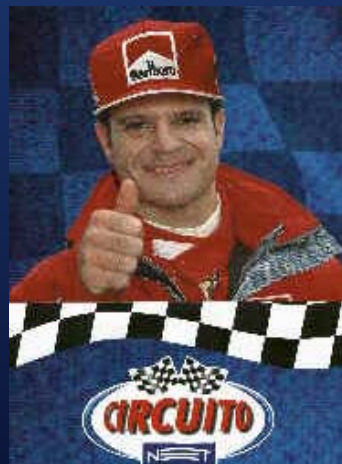
Come to where the flavor is.

Marlboro Red or Longhorn 100's — you get a lot to like.

Warning: The Surgeon General Has Determined That Cigarette Smoking Is Dangerous to Your Health.

17 mg "tar," 1.1 mg nicotine av. per cigarette by FTC method.

The advertisement shows a man in a cowboy hat, red shirt, and brown vest standing in front of a wooden building. He is holding a cigarette in his mouth. In the foreground, there are two packs of Marlboro cigarettes: a red pack of Marlboro Red and a white pack of Marlboro 100's. A lasso is visible in the lower right corner.





April 2009



August 2009



The New York Times

The New York Times Bans Cigarette Ads

April 28, 1999, Wednesday

By DOREEN CARVAJAL (NYT);
Business/Financial Desk

Joining a small group of newspapers, The New York Times will ban cigarette advertising in its pages, effective Saturday.

The newspaper decided to impose the ban because of concerns about the harmful effects of cigarette smoking, said Nancy Nielsen, a spokeswoman for The New York Times Company. "Deciding on the acceptance of advertising often means we have to weigh the pros and cons of competing and sometimes conflicting values," Ms. Nielsen said, adding that "we don't want to expose our readers to advertising that may be dangerous to their health."

Besides health risk...



HORROR



O Ministério da Saúde adverte:
Este produto causa envelhecimento precoce da pele.



PARE DE FUMAR
DISQUE SAÚDE
0800 61 1997

FUMAÇA TÓXICA



O Ministério da Saúde adverte:
Respirar a fumaça deste produto causa pneumonia e bronquite.

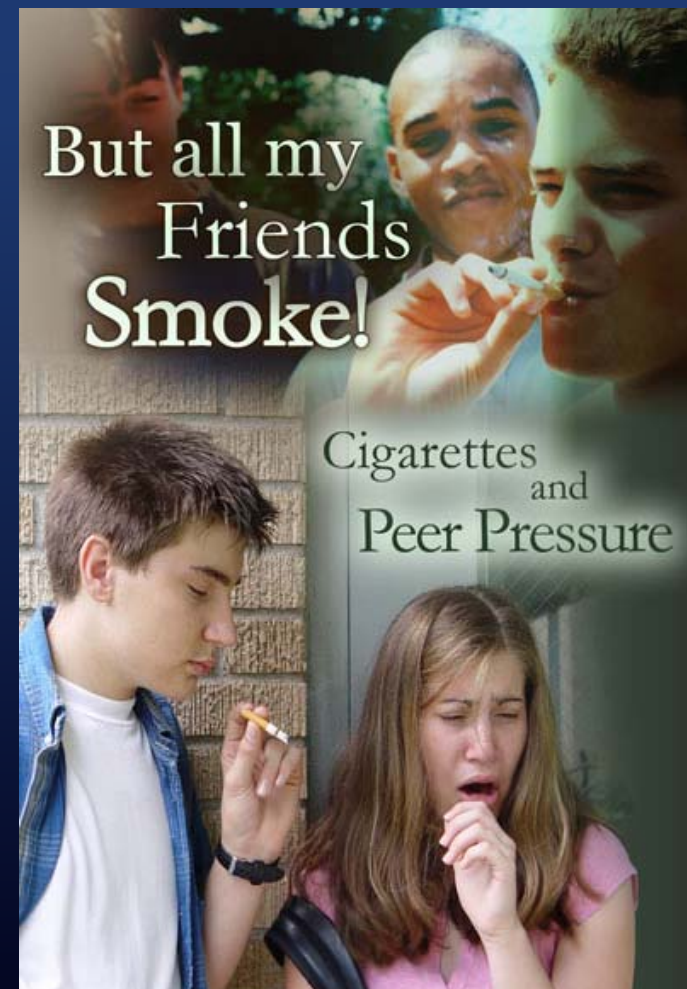
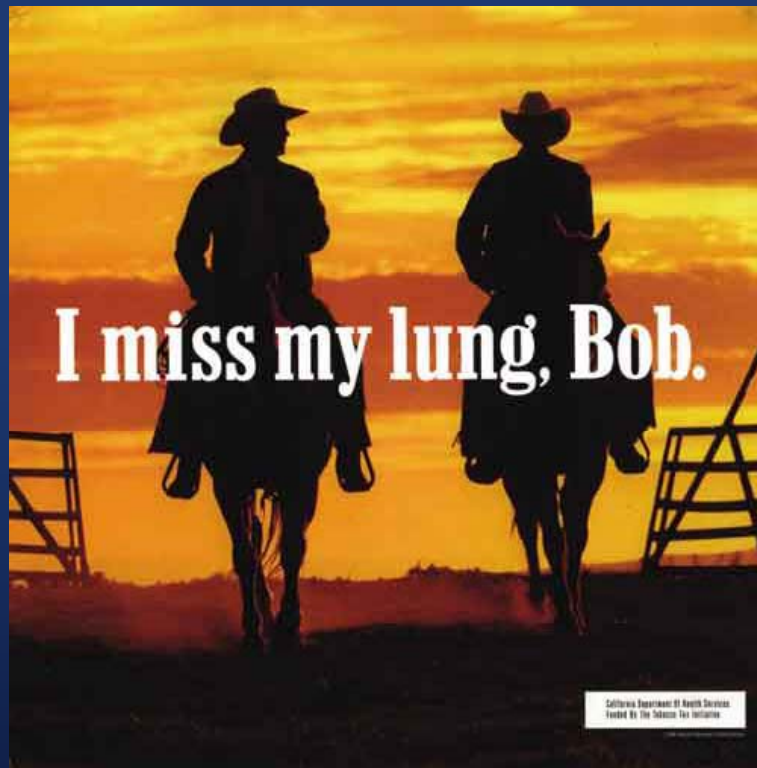


Opinion Leaders



London, June 4 - Actor Russell Crowe, who gave up smoking a day before Sunday's World Anti-Tobacco Day, is trying hard to stay away from cigarettes





Social pressure



- Peers
- Public in general
- Job

Diverse Health Educational & Communication Strategies for Diverse Populations



Scientific references

Laws – Public health surveillance

Official campaigns

Social marketing

Health Journalism

Change in arts/ entertainment representation

Opinion Leaders

Social pressure

Social mobilization



*“My father was bitten by the
bats, he lived for 110 years,
now you are inventing a
disease from this?!!”*

(Habitant of Pará)

To change public perception

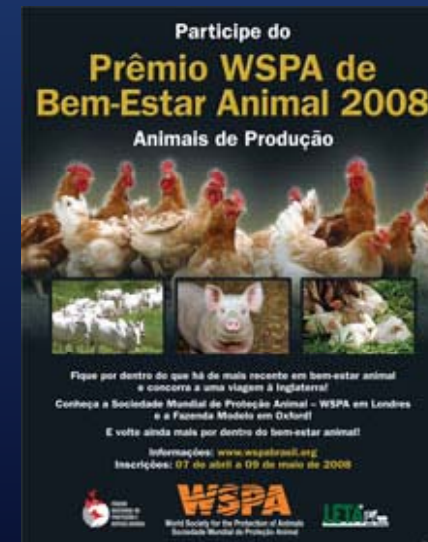


Disease outbreaks

- The **emergence or re-emergence** of zoonotic disease is complex and multifactorial, driven by factors which include:
 - Microbial adaptation
 - Ecology
 - Global climatic anomalies
 - Human demographics and behaviour
 - International travel and trade
 - Agricultural practices, technology and industry.

One world, one health

Animal welfare



Sociedade Mundial de Proteção Animal

Animal welfare



Maria Thereza Bonilha Dubugras
UNIFESP/ Escola Paulista de Medicina

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