



I CONFERENCIA DE
ACTUALIZACIÓN
EN PEDIATRÍA
ALAPE 2011

Pets as Pests

Meg Fisher, MD

Declaración de potenciales conflictos de interesesa

Regarding this presentation the following relationships could be perceived as potential conflicts of interest:

 **No potential conflicts of interest to declare**

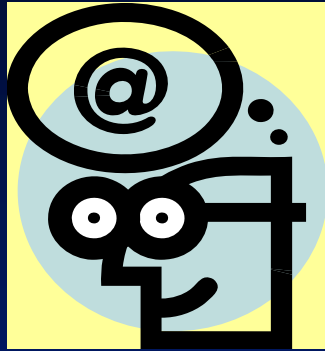
Disclaimer



Pets and Children



Sharing space
and so much
more



Objectives

Counsel family regarding
selection of pets

Initiate antibiotic therapy for an
animal bite



Pets – Why Worry?



More than half of families keep pets

Over 130 million pets in the USA

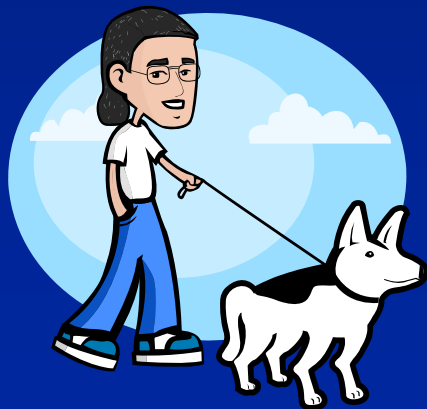
Variety of species has increased



Pets - Pros



Love
Comfort
Company



Teach responsibility

Pets - Con



Trauma

Allergic reactions

Infection





Bacterial pathogens

Salmonella

Campylobacter

Yersinia

Francisella

Brucella

Pasteurella

Leptospira

Borrelia

Afipia

Bartonella

Many, many more

Salmonella - nontyphoidal

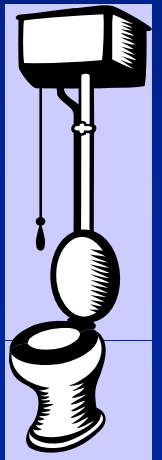
Gram negative enteric bacilli

Pets: reptiles, snakes, turtles, rodents

Often food borne: chicken, eggs, other

Fever, Gastroenteritis, Focal

Short incubation: 6 to 48 hours





Salmonella

Gastrointestinal: foul diarrhea, cramps

Extraintestinal: blood, urine, CNS, bone

Diagnosis: culture stool, body fluid

Therapy: supportive

Antibiotics for extraintestinal infection

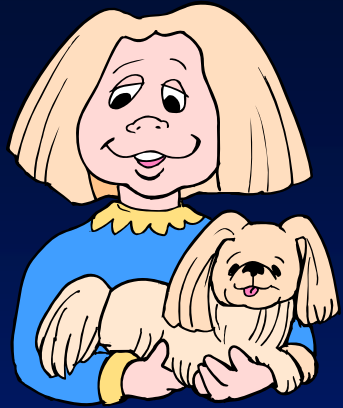


Salmonella Prevention

Hand hygiene following contact with pets

Counsel immunocompromised patients

Counsel those with hemoglobinopathies



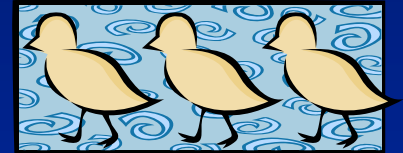
Campylobacter species

Motile, comma-shaped gram-negative

Pets: puppies, kittens, hamsters, chicks



Food: chicken, turkey



Gastroenteritis, Abdominal pain, Fever

Extraintestinal: Guillian Barre syndrome

Campylobacter



Diagnosis: stool culture

Therapy: supportive

Macrolides shorten illness and carriage

Prevention: hand hygiene



Cat Scratch Disease

Afipia felis, Bartonella henselae

Fleas, cats, kittens

Asymptomatic bacteremia in cats

Inoculation papule

Regional adenopathy





Cat Scratch Disease



Fever, malaise, adenopathy

Suppurative adenitis in 20 to 30%

Encephalopathy: seizure, coma

Osteolytic lesion, Thrombocytopenia

Systemic, Fever of Unknown Origin



Cat Scratch Disease

Diagnosis: clinical usually

Serology, pathology, skin test not used

Therapy: supportive

Antibiotics: azithromycin, quinolones, +

Prevention: not practical



Animal Bites



Pasteurella multocida, oral anaerobes,

S. aureus, *S. pyogenes*

Pathogen inoculated from mouth or skin

Cellulitis, Adenitis, Osteomyelitis

Diagnosis: clinical, culture

Rat Bite Fever



Streptobacillus moniliformis

Spirillum minus

Illness: Flu-like syndrome,

Rash, Arthritis

Animal Bites - Therapy

Clean wound vigorously

Tetanus and rabies prophylaxis

To close or not?

Amoxicillin/clavulanate

Prevention: educate patients and parents





Tetanus Prophylaxis

Consider for bites

If less than 3 prior doses, Td or Tdap

If 3 or more doses, no immunization

Reservoirs of Rabies

Raccoons

Dogs

Bats

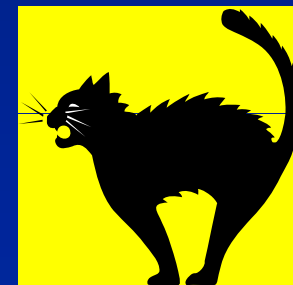
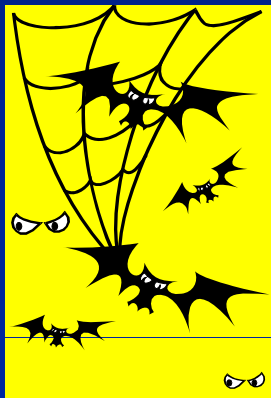
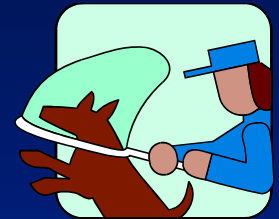
Cats

Skunks

Ferrets

Foxes

Coyotes





Rabies Prophylaxis

Dogs, cat,
ferret

Healthy?

Observe

Sick?

Prophylaxis

Unknown

Consult

Wild carnivore

Prophylaxis

Rodent, rabbit

Usually none

Animal Bites - Therapy

Clean wound vigorously

Tetanus and rabies prophylaxis

To close or not? - individualize

Amoxicillin/clavulanate

Prevention: educate patients and parents





Parasites

Ancylostoma

Dipylidium

Dirofilaria

Echinococcus

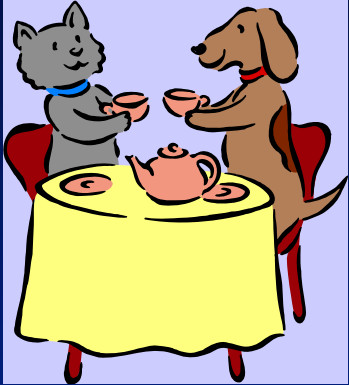
Toxocara

Toxoplasma

Others



Visceral Larval Migrants



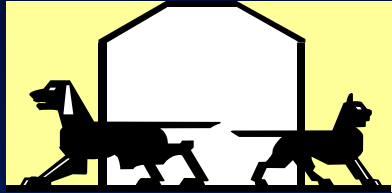
Toxocara canis, Toxocara cati

Dogs and cats

Ova passed, mature in soil, ingested,
hatch, cross wall, migrate

Most not ill, Some flu-like

Eye lesion: r/o retinoblastoma



Toxocara



Clinical diagnosis

Eosinophilia, elevated isohemagglutinins

Specific serology

Therapy: supportive

Mebendazole, albendazole

Toxoplasmosis



Toxoplasma gondii

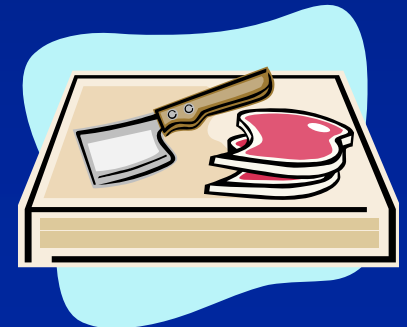
Cat is the nature host



Encysts in muscles of many animals

Ingest oocyst in soil or cyst in meat

Encysts in a variety of sites





Toxoplasmosis

Most asymptomatic

Mononucleosis like syndrome

Severe illness in compromised host

Congenital: usually asymptomatic at birth
but progressive chorioretinitis

Toxoplasmosis

Serology or histology



Therapy: no antibiotics for older
Congenital or compromised host:
pyrimethamine and sulfadiazine

Or clindamycin



Prevention: avoid kitty litter, cook meats

Animals and Other Agents



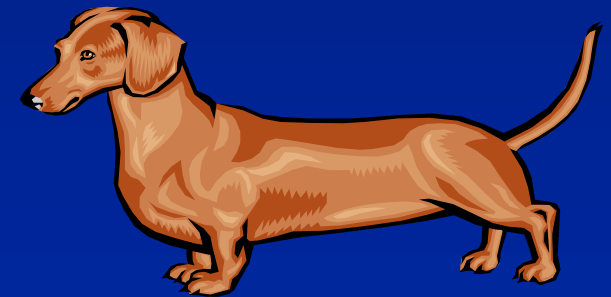
Lymphochoriomeningitis virus, rabies

Trichophyton, Microsporum

Chlamydophila psittaci, Rickettsia

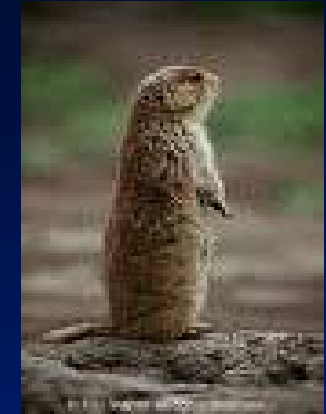
rickettsii, Ehrlichia canis

Many, many more





Monkeypox



Orthopox

Cluster in Midwest, prairie dogs

Vesicular lesion, Adenopathy

West Africa rodents



Ticks

Ixodidae

Argasidae

Vectors

Reservoir

Bites



Tick Removal



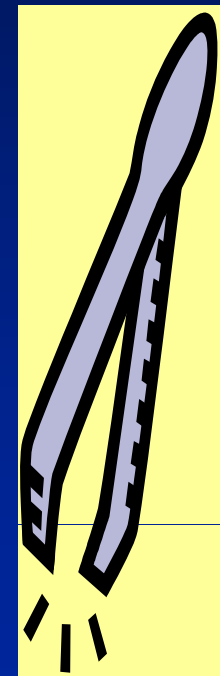
Hot match

Alcohol

Petroleum jelly

Fingernail polish

Grasp and pull out





Select A Pet



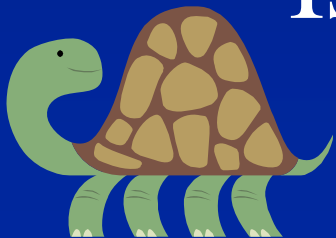
Exotic animals generally not ideal pets

Wild animals not good pets

Reptiles, turtles carry risk of *Salmonella*

Consider the child's developmental level

Is the child immunocompromised?



The End



<http://www.cdc.gov/healthypets/>