



Ovine Actinobacillosis

FEBRUARY 2007

Cause	<i>Actinobacillus</i> spp. bacteria
Risk of Exposure in Illinois	Rare
Risk of Transmission to exposed people	Unknown
Mode of Transmission	Bite wound; direct contact
Incubation Period	Human: Variable Animal: Resident bacteria of oropharynx
Clinical Signs-Human	Wound infections with abscess formation on hands and forearms; septicemia ("blood poisoning")
Clinical Signs-Animal	None
Control and Prevention	Good personal hygiene
Comments	None
Additional Information	http://www.cvm.uiuc.edu/courses/path631/Actinobacillus/Actinobacillus.html http://vein.library.usyd.edu.au/sheephealth/Chapter17.html#acti



Ovine Anthrax

FEBRUARY 2007

Cause	<i>Bacillus anthracis</i> bacteria
Risk of Exposure in Illinois	Low
Risk of Transmission to exposed people	High
Mode of Transmission	Ingestion or inhalation of spores; handling contaminated carcass, wool, hide or hair
Incubation Period	Human: Cutaneous form: 3-10 days Inhalation form: 1-5 days Gastrointestinal form: 2-5 days Animal: 3-7 days with a range of 1-20 days
Clinical Signs-Human	Cutaneous form accounts for most human cases-red, raised lesion; blister Pulmonary form - fever; vague sense of ill-being; muscle pain; cough; respiratory distress; sweating; shock; death Gastrointestinal form - fever; vomiting; bloody diarrhea; general ill-being
Clinical Signs-Animal	Acute form - sudden fever; incoordination; tremors; respiratory distress; blood tinged diarrhea; blood in urine and milk; convulsions and *death Peracute form - *sudden death *Failure to achieve rigor mortis after death
Control and Prevention	Vaccinate livestock in endemic areas; vaccinate individuals in high risk occupations; deep burial/burn infected carcass
Comments	Reportable disease in Illinois; if anthrax is suspected, do NOT perform a necropsy; potential bioterrorist agent
Additional Information	http://www.cfsph.iastate.edu/FastFacts/pdfs/anthrax.pdf



Ovine Brucellosis

FEBRUARY 2007

Cause	<i>Brucella melitensis</i> , <i>Brucella ovis</i> bacteria
Risk of Exposure in Illinois	Low (Illinois is currently Brucellosis free)
Risk of Transmission to exposed people	High
Mode of Transmission	Contact with infected animals especially aborted fetuses, uterine fluids or membranes, and urine; inhalation or ingestion; contact with objects capable of harboring bacteria
Incubation Period	Human: 1 week-several months after infection Animal: Variable
Clinical Signs-Human	Fever; headache; chills; generalized weakness; nausea; weight loss; enlarged spleen and lymph nodes; Asymptomatic infections can occur. Symptoms may persist for years either intermittently or continuously.
Clinical Signs-Animal	Abortion (late in gestation); retained placenta; placentitis; impaired fertility in rams; inflammation of the testis or epididymis
Control and Prevention	Wear protective clothing around suspect animals; avoid undercooked meat.
Comments	Reportable disease in Illinois; potential bioterrorist agent
Additional Information	http://www.cfsph.iastate.edu/FastFacts/pdfs/brucellosis_F.pdf http://www.cdc.gov/ncidod/dbmd/diseaseinfo/brucellosis_g.htm



Ovine Vibriosis

FEBRUARY 2007

OVINE CAMPYLOBACTERIOSIS

Cause	<i>Campylobacter</i> spp. bacteria
Risk of Exposure in Illinois	Moderate
Risk of Transmission to exposed people	High
Mode of Transmission	Ingestion (contaminated food/water, fecal-oral); direct contact
Incubation Period	Human: 1-11 days (3-5 days most common) Animal: 3-25 days (although most cases are asymptomatic)
Clinical Signs-Human	Systemic form (<i>C. fetus</i>)-chills; sweats; fever; cough; weight loss; anorexia; vomiting; diarrhea; late term abortion Intestinal form (<i>C. jejuni</i>)-acute diarrhea +/- blood; abdominal pain; vomiting; headache; vague sense of ill-being
Clinical Signs-Animal	Late term abortions; stillbirths; weak lambs; enteritis; infections in sheep are occasionally followed by metritis and death.
Control and Prevention	Dispose of aborted fetuses and placentas promptly; good personal hygiene
Comments	Person to person transmission has been observed.
Additional Information	http://www.cfsph.iastate.edu/FastFacts/pdfs/campylobacterosis_F.pdf http://www.cdc.gov/ncidod/dbmd/diseaseinfo/campylobacter_g.htm



Ovine Chlamydiosis

FEBRUARY 2007

OVINE EAE-ENZOOTIC ABORTION OF EWES

Cause	<i>Chlamydia</i> spp. bacteria
Risk of Exposure in Illinois	Moderate
Risk of Transmission to exposed people	High
Mode of Transmission	Ingestion (fecal-oral); inhalation; direct contact with birthing tissues
Incubation Period	Human: Unknown Animal: Variable
Clinical Signs-Human	Fever; headache; vomiting; abortion; pelvic inflammatory disease; septicemia ("blood poisoning"); kidney dysfunction
Clinical Signs-Animal	Late term abortion often with no previous clinical signs; stillbirths; low birth weight or premature offspring; metritis and retained placenta are uncommon
Control and Prevention	Wear protective clothing and gloves when working with suspect animals; good personal hygiene
Comments	Person to person transmission has been observed.
Additional Information	http://www.cfsph.iastate.edu/FastFacts/pdfs/chlamydiosis_F.pdf



Ovine Cryptococcosis

FEBRUARY 2007

Cause	Fungal
Risk of Exposure in Illinois	Low
Risk of Transmission to exposed people	Low
Mode of Transmission	Inhalation of dry pigeon droppings or spores from the environment; <i>C. neoformans</i> is ubiquitous in the soil
Incubation Period	Humans: Unknown Animal: Unknown
Clinical Signs-Humans	Most cases are asymptomatic; fever; general ill-being; cough; chest pain; headache; weight loss; immunocompromised patients at higher risk
Clinical Signs-Animals	Pulmonary disease; mastitis
Control and Prevention	Pigeon control
Comments	Person to person transmission extremely rare.
Additional Information	http://www.cfsph.iastate.edu/Factsheets/pdfs/cryptococcosis.pdf



Ovine Cryptosporidiosis

FEBRUARY 2007

OVINE CRYPTO

Cause	<i>Cryptosporidium</i> spp. protozoa parasite
Risk of Exposure in Illinois	Unknown
Risk of Transmission to exposed people	High
Mode of Transmission	Fecal-oral route; waterborne; airborne; foodborne
Incubation Period	Human: 1-12 days (average is 7 days) Animal: 4-9 days; oocysts shed for up to 10 days
Clinical Signs-Human	Cramping; abdominal pain; profuse watery diarrhea; anorexia, weight loss; vomiting; headache; immunosuppressed patients exhibit more severe illness
Clinical Signs-Animal	Loss of appetite; mild to severe watery diarrhea; debilitation; feces may contain blood and/or mucus; dehydration; loss of body fat; symptoms most common in young lambs and not affected by conventional antimicrobial therapy; many infections asymptomatic
Control and Prevention	Good personal hygiene, avoid contact with lambs with diarrhea; proper fecal waste disposal
Comments	Person to person transmission has been observed.
Additional Information	http://www.cfsph.iastate.edu/FastFacts/pdfs/cryptosporidiosis_F.pdf http://www.health.state.ny.us/nysdoh/communicable_diseases/en/crypto.htm



Ovine Ringworm

FEBRUARY 2007

OVINE DERMATOPHYTOSIS

Cause	<i>Trichophyton</i> spp.; <i>Microsporum</i> spp. fungi
Risk of Exposure in Illinois	Moderate
Risk of Transmission to exposed people	High
Mode of Transmission	Direct contact with infected animal, or indirect contact with contaminated object capable of harboring fungi
Incubation Period	Human: 7-14 days (can last from several days to few weeks) Animal: 2-4 weeks
Clinical Signs-Human	Fungi generally grow in keratinized tissue such as hair, nails and outer layer of skin; mucous membranes not affected. Itching; "ringworm" lesion; hair loss; inflammation
Clinical Signs-Animal	Common in show lambs; circular, alopecic (hair loss) areas with thick scabs on head and face; self-limiting in healthy lambs
Control and Prevention	Sanitation; good personal hygiene; wear gloves when handling suspect animals or contaminated objects capable of harboring fungi
Comments	Person to person transmission has been observed.
Additional Information	http://www.health.state.ny.us/nysdoh/communicable_diseases/en/ring.htm http://www.cfsph.iastate.edu/FastFacts/pdfs/dermatophytosis_F.pdf



Ovine Giardiasis

FEBRUARY 2007

OVINE GIARDIA

Cause

Giardia spp. protozoa parasite

Risk of
Exposure in
Illinois

Low/Moderate

Risk of
Transmission
to exposed
people

High

Mode of
Transmission

Ingestion (contaminated water, fecal-oral)

Incubation
Period

Human: 1-25 days
Animal: 5-14 days

Clinical Signs-
Human

Sudden onset of diarrhea with foul-smelling stools; abdominal cramps; bloating; flatulence; nausea; fatigue; dehydration; chronic infections may occur.

Clinical Signs-
Animal

Animals may be asymptomatic; lambs-diarrhea or soft stools; poor hair coat; flatulence; weight loss or failure to gain weight

Control and
Prevention

Good personal hygiene; thoroughly cook food; boil contaminated water; chlorine will not kill cysts.

Comments

Person to person transmission has been observed.

Additional
Information

http://www.cfsph.iastate.edu/FastFacts/pdfs/giardiasis_F.pdf
http://www.health.state.ny.us/nysdoh/communicable_diseases/en/giardia.htm



Ovine Leptospirosis

FEBRUARY 2007

Cause	<i>Leptospira</i> spp. bacterial spirochete
Risk of Exposure in Illinois	Moderate
Risk of Transmission to exposed people	High
Mode of Transmission	Ingestion of contaminated water; inhalation; direct contact with urine or through skin lesions; walking barefoot
Incubation Period	Human: 2 days-4 weeks Animal: 3-7 days (variable)
Clinical Signs-Human	Fever; headache; chills; cough; difficult breathing; severe muscle pain or tenderness; reddening of the eyes; jaundice; meningitis; acute kidney failure; abortion
Clinical Signs-Animal	Usually asymptomatic; weakness; anorexia; fever; abortion; stillbirth; weak lambs; infertility; weight loss; blood in urine; jaundice; death
Control and Prevention	Good pasture drainage; protect water supply from animal contamination; wear protective clothing.
Comments	Person to person transmission has been observed.
Additional Information	http://www.cfsph.iastate.edu/FastFacts/pdfs/leptospirosis_F.pdf http://www.cdc.gov/ncidod/dbmd/diseaseinfo/leptospirosis_g.htm



Ovine Listeriosis

FEBRUARY 2007

OVINE CIRCLING DISEASE, LEUKOCYTOSIS

Cause	<i>Listeria monocytogenes</i> bacteria
Risk of Exposure in Illinois	Moderate
Risk of Transmission to exposed people	Low (unless foodborne)
Mode of Transmission	Ingestion; direct contact; aerosol
Incubation Period	Human: Uncertain but considered to range from 3-70 days Animal: 10 days to 3 weeks
Clinical Signs-Human	Flu-like symptoms: fever, diarrhea, headache, muscle aches, and stiff neck; abortion, premature birth or sick newborn; meningitis; asymptomatic fecal carriers common; pregnant women, elderly and immunosuppressed individuals at increased risk
Clinical Signs-Animals	Encephalitis (circling, head pressing, head tilt, incoordination, excessive salivation); abortion late in gestation; septicemia (blood poisoning); sick neonate; depression; anorexia; ocular inflammation; death
Control and Prevention	Use only good quality silage; control rodents; cook meat; good sanitation
Comments	Person to person transmission has been observed.
Additional Information	http://www.cfsph.iastate.edu/FastFacts/pdfs/listeriosis_F.PDF http://www.cdc.gov/ncidod/dbmd/diseaseinfo/listeriosis_g.htm



Ovine Johne's Disease

FEBRUARY 2007

PARATUBERCULOSIS

Cause

Mycobacterium avium (*paratuberculosis*) bacteria

Risk of
Exposure in
Illinois

Moderate

Risk of
Transmission
to exposed
people

Low (uncertain if zoonotic transmission occurs)

Mode of
Transmission

Direct contact; ingestion (routes of transmission not proven)

Incubation
Period

Human: Uncertain
Animal: 1.5-5 years or longer

Clinical Signs-
Human

It has been suggested that Johne's disease is linked to Crohn's disease in humans, which causes chronic inflammatory intestinal disease and diarrhea

Clinical Signs-
Animal

Sheep often develop symptoms at a younger age than cattle and rarely show clinical signs other than emaciation. May have chronic diarrhea unresponsive to deworming and antibiotics

Control and
Prevention

Good personal hygiene

Comments

Reportable disease in Illinois

Additional
Information

<http://www.aphis.usda.gov/vs/nahps/johnes/>
<http://www.cfsph.iastate.edu/Factsheets/pdfs/paratuberculosis.pdf#search=%22johnes%22>



Ovine Sore Mouth

FEBRUARY 2007

OVINE CONTAGIOUS ECTHYMA

Cause	Pox virus
Risk of Exposure in Illinois	Moderate
Risk of Transmission to exposed people	High (disease is called Orf in humans)
Mode of Transmission	Direct contact with lesion or mucous membranes of infected animals; fomites (objects capable of harboring virus)
Incubation Period	Human: 3-7 days Animal: 2-3 days
Clinical Signs-Human	Small, firm papule at site of inoculation progressing to a weeping (can be painful) nodule that develops into a thick crust; low-grade fever; mildly enlarged lymph nodes
Clinical Signs-Animal	Papules, pustules, and vesicles that develop into thick crusts on lips, nose, ears, eyelids, occasionally feet, perineal region, inside mouth; anorexia; lameness; ewes nursing infected lambs may develop lesions on teats and udder
Control and Prevention	Good personal hygiene; wear gloves if lesions are seen.
Comments	None
Additional Information	http://www.cfsph.iastate.edu/FastFacts/pdfs/contagious_ecthyma_F.pdf http://www.ahc.umn.edu/rar/safety.html#orf



Ovine Pasteurellosis

FEBRUARY 2007

Cause	<i>Pasteurella</i> spp. bacteria
Risk of Exposure in Illinois	High
Risk of Transmission to exposed people	Low
Mode of Transmission	Wound contamination; inhalation; ingestion
Incubation Period	Human: Via wound-less than 24 hours (up to 14 days) Animal: Approx. 1-3 weeks after being introduced to stressful situation
Clinical Signs-Human	Local redness; swelling; skin infection and abscess; less commonly chronic pneumonia, meningitis and generalized illness
Clinical Signs-Animal	Symptoms start out vague with slight depression, anorexia and fever; labored breathing and cough may be present; thick nasal discharge; generalized illness
Control and Prevention	Vaccinate livestock; minimize stress; good personal hygiene; avoid bites/scratches
Comments	None
Additional Information	http://www.phac-aspc.gc.ca/msds-ftss/msds117e.html



Ovine Q-Fever

FEBRUARY 2007

Cause	<i>Coxiella burnetii</i> rickettsial bacteria
Risk of Exposure in Illinois	Moderate
Risk of Transmission to exposed people	High
Mode of Transmission	Inhalation (aerosol); ingestion; direct contact- organism is shed in placenta, vaginal secretions, urine, feces, milk; can be spread by ticks
Incubation Period	Human: 2-5 weeks Animal: Variable
Clinical Signs- Human	Most cases are asymptomatic; sudden onset of fever; chills; frontal headache; weakness; muscle spasms; profuse sweating. Less commonly hepatitis, endocarditis (inflammation of the innermost covering of the heart), premature birth, stillbirth, abortion; nonproductive cough or chest pain
Clinical Signs- Animal	Most infections are asymptomatic; reproductive failure may be the only symptom; abortions late in pregnancy; stillbirths; retained placenta; uterine infection; infertility
Control and Prevention	Wear protective clothing/gloves when assisting with lambing if infection is suspected in herd; appropriately dispose of placenta and birthing tissues; good personal hygiene
Comments	Reportable disease in Illinois; potential bioterrorist agent
Additional Information	http://www.cdc.gov/healthypets/diseases/qfever.htm http://www.cfsph.iastate.edu/FastFacts/pdfs/qfever_F.pdf http://www.cdc.gov/ncidod/dvrd/qfever/index.htm



Ovine Rabies

FEBRUARY 2007

Cause	Rhabdovirus
Risk of Exposure in Illinois	Low
Risk of Transmission to exposed people	High
Mode of Transmission	Direct contact with infected saliva into break in skin or mucous membranes; animal bite
Incubation Period	Human: 10 days-3 months (up to years; depends on location of bite/exposure) Animal: 10 days-6 months
Clinical Signs-Human	Headache; fever; general ill-being; abnormal behavior; weakness or paralysis; difficulty swallowing; delirium; convulsions; death
Clinical Signs-Animal	Restlessness; anorexia or increased appetite; any abnormal behavior or neurological signs (ataxia, incoordination, aggression, paralysis, etc.) fever; death
Control and Prevention	Wear gloves when handling suspect animals; vaccination program for animals and individuals at high risk
Comments	Reportable disease in Illinois; seek medical attention immediately if exposure is suspected; person to person transmission has been observed.
Additional Information	<p>http://www.cfsph.iastate.edu/FastFacts/pdfs/rabies_F.pdf http://www.health.state.ny.us/diseases/communicable/zoonoses/rabies/index.htm</p>



Ovine Salmonellosis

FEBRUARY 2007

SALMONELLA

Cause	<i>Salmonella</i> spp. bacteria
Risk of Exposure in Illinois	Moderate
Risk of Transmission to exposed people	Moderate
Mode of Transmission	Ingestion (fecal-oral); contaminated food and water; direct contact
Incubation Period	Human: 12 hours-3 days Animal: Highly variable; often symptoms do not appear until the animal is stressed; common 1-5 days
Clinical Signs-Human	Varies from self-limiting gastroenteritis to generalized illness; vomiting; watery diarrhea; low grade fever; abdominal pain
Clinical Signs-Animal	Dehydration and generalized illness which may lead to death; persistent soft feces or diarrhea; weight loss; mild fever; inappetence; asymptomatic infections common
Control and Prevention	Wash hands after contact with animal feces; wear protective clothing when working with diarrheic lambs; cook meat thoroughly.
Comments	Person to person transmission has been observed.
Additional Information	<p>http://www.cfsph.iastate.edu/FastFacts/pdfs/nontyphoidal_salmonellosis_F.PDF</p> <p>http://www.health.state.ny.us/nysdoh/communicable_diseases/en/salmon.htm</p> <p>http://www.cdc.gov/ncidod/dbmd/diseaseinfo/salmonellosis_g.htm</p>



Ovine Tetanus

FEBRUARY 2007

Cause	<i>Clostridium tetani</i> bacteria
Risk of Exposure in Illinois	Low
Risk of Transmission to exposed people	High if open wounds on skin
Mode of Transmission	Direct contact; penetrating wound
Incubation Period	Human: 8 days (ranges from 3 days-21 days) Animal: Variable (3 days-3 weeks)
Clinical Signs-Human	Headache; muscle stiffness in jaw (lock jaw) followed by stiffness in neck; difficulty swallowing; rigidity of abdominal and back muscles; spasms; sweating; fever; death
Clinical Signs-Animal	Muscle stiffness; lack of coordination; inability to eat or drink; bloat; death
Control and Prevention	Immunization; appropriate treatment of wounds; wear gloves when working with affected animals.
Comments	Tetanus vaccination recommended for farm workers
Additional Information	<p>http://www.hehd.clemson.edu/msp/general_zoo.html http://www.health.state.ny.us/nysdoh/communicable_diseases/en/tetanus.htm</p>



Ovine Toxoplasmosis

FEBRUARY 2007

Cause	<i>Toxoplasma gondii</i> protozoa parasite
Risk of Exposure in Illinois	Not transmitted from sheep to humans except in meat; exposure to feces of definitive host is high on livestock farms.
Risk of Transmission to exposed people	High
Mode of Transmission	Ingestion of undercooked meat; fecal-oral transmission from cats on farm
Incubation Period	Human: 5-23 days Animal: Suspect similar to humans
Clinical Signs-Human	Infection is common but clinical illness is low; flu-like symptoms: fever, headache, weakness; fetal death; congenital abnormalities; encephalitis; immunocompromised patients are at high risk.
Clinical Signs-Animal	Adult sheep usually asymptomatic; infection during pregnancy: abortion, stillbirths, mummification or resorption of fetus; Lambs: fever, dyspnea, incoordinated, weak, unable to nurse
Control and Prevention	Cook meat thoroughly; good personal hygiene; avoid contact with cat feces, esp. if pregnant.
Comments	Person to person transmission only <i>in utero</i>
Additional Information	http://www.cfsph.iastate.edu/FastFacts/pdfs/toxoplasmosis_F.pdf http://www.cdc.gov/ncidod/dpd/parasites/toxoplasmosis/factsheet_toxoplasmosis.htm



Ovine Scrapie

FEBRUARY 2007

OVINE TSE

Cause	Prion
Risk of Exposure in Illinois	Low
Risk of Transmission to exposed people	Negligible
Mode of Transmission	Ingestion
Incubation Period	Human: Several years (for transmissible spongiform encephalopathies) Animal: 3-8 years
Clinical Signs-Human	Confusion; personality changes; behavioral changes; weakness; muscle spasms; changes in vision; death
Clinical Signs-Animal	Behavioral disturbances; isolation; hyperexcitability; high-stepping or hopping gait; fixed stare; ataxia followed by wasting and paralysis; excessive scratching and chewing; most animals die 2-6 weeks after onset of symptoms
Control and Prevention	Necropsy sheep with neurological signs.
Comments	Reportable disease in Illinois; potential bioterrorist agent; person to person transmission has been observed
Additional Information	http://www.cfsph.iastate.edu/Factsheets/pdfs/transmissible_spongiform_encephalopathy.pdf#search=%22scrapie%22 http://www.animalagriculture.org/scrapie/AboutScrapie/FactSheet.htm



Ovine Tuberculosis

FEBRUARY 2007

Cause	<i>Mycobacterium</i> spp. bacteria
Risk of Exposure in Illinois	Low (Illinois is currently TB free.)
Risk of Transmission to exposed people	High
Mode of Transmission	Ingestion (unpasteurized milk or dairy products); inhalation; aerosol; direct injury to skin/mucous membranes
Incubation Period	Human: 4-6 weeks Animal: Variable
Clinical Signs-Human	Clinical signs depend on route of infection and may be asymptomatic; cough; cervical adenitis (inflammation of lymph node or gland in neck); genitourinary infection (organs of reproduction and urination); lesions in bones and joints; meningitis; pneumonia; may be severe in immunosuppressed patients.
Clinical Signs-Animal	Chronic condition; may be asymptomatic; weakness; anorexia; weight loss; enlarged lymph nodes; bronchopneumonia; difficulty breathing; diarrhea; death
Control and Prevention	Depopulate positive herds; test/treat human cases
Comments	Reportable disease in Illinois
Additional Information	http://www.cfsph.iastate.edu/FastFacts/pdfs/bovine_tuberculosis_F.pdf



Ovine Yersiniosis

FEBRUARY 2007

Cause	<i>Yersinia</i> spp. bacteria
Risk of Exposure in Illinois	Unknown
Risk of Transmission to exposed people	Unknown
Mode of Transmission	Ingestion of food or water contaminated by feces of carriers; infection of rodents transmitted to humans by bite of infected fleas; direct contact with infected blood or tissues
Incubation Period	Human: 2-8 days Animal: Uncertain
Clinical Signs-Human	Mimics clinical signs similar to appendicitis; fever; abdominal tenderness; anorexia; vomiting; enteritis with diarrhea; respiratory illness
Clinical Signs-Animal	Acute septicemia; enteritis with diarrhea; fever; abortion; may be fatal; asymptomatic carriers possible
Control and Prevention	Prevent fecal contamination of food and drinking water; good personal hygiene
Comments	Potential bioterrorist agent; Person to person transmission has been observed.
Additional Information	<p>http://vein.library.usyd.edu.au/sheephealth/Chapter12.html#yers http://www.avma.org/public_health/biosecurity/plague_facts.asp http://www.health.state.ny.us/nysdoh/communicable_diseases/en/yersin.htm http://www.cdc.gov/ncidod/dbmd/diseaseinfo/yersinia_g.htm http://www.fw-ac-deptofhealth.com/PDF/TB_Clinic/CommDiseases/Yersinioisis.pdf</p>