Equine Anthrax

JUNE 2015

Cause	*Bacillus anthracis* 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 or hair
Incubation Period	Human: Cutaneous form: 3-10 days Inhalation form: 1-5 days Gastrointestinal form: 2-5 days Animal: 3-7 days (can range from 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	Common symptom septicemia with enteritis and colic; bloody diarrhea; edematous lesions especially on throat and neck; subcutaneous swellings; animals may die within 1-3 days, but can survive up to one week ***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	If anthrax is suspected, do **NOT** perform a necropsy; reportable disease in Illinois; potential bioterrorist agent
Additional Information	http://emergency.cdc.gov/agent/anthrax/index.asp http://www.cfsph.iastate.edu/Factsheets/pdfs/anthrax.pdf http://www.cfsph.iastate.edu/FastFacts/pdfs/anthrax_F.pdf

Equine Brucellosis

JUNE 2015

Cause	*Brucella* spp. 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 lymph nodes and spleen. Asymptomatic infections can occur. Symptoms may persist for years either intermittently or continuously.
Clinical Signs-Animal	Infection often localizes in bursae of neck and can lead to chronic suppuration (fistula withers); inflammation of the testis; inflammation of the epididymis; infection is often latent or dormant.
Control and Prevention	Wear protective clothing around suspect animals and use cautious vaccination techniques.
Comments	Reportable disease in Illinois; potential bioterrorist agent
Additional Information	http://www.cdc.gov/brucellosis/ http://www.cfsph.iastate.edu/FastFacts/pdfs/brucellosis_F.pdf http://test28.biocom.arizona.edu/animalcare/pdfs/ZoonoticDiseases.pdf

Equine Cryptosporidiosis

JUNE 2015 | EUQINE CRYPTO

Cause	*Cryptosporidium* spp. protozoa parasite
Risk of Exposure in Illinois	Rare
Risk of Transmission to exposed people	High
Mode of Transmission	Fecal-Oral; waterborne; airborne
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 not affected by conventional antimicrobial therapy; feces may contain blood and/or mucus; dehydration and loss of body fat.
Control and Prevention	Good personal hygiene, avoid contact with foals, especially foals 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.cdc.gov/parasites/crypto/

Equine Ringworm

JUNE 2015

DERMATOPHYTOSIS

Cause	*Trichophyton* spp.*; Microsporum* 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 objects capable of harboring the 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-Animals	Most lesions found in areas of contact with saddle or other tack; itchy, exudative/oozing lesions with hairless, thickened skin
Control and Prevention	Sanitation; good personal hygiene; wear gloves when handling suspect animals or contaminated objects capable of harboring the fungi.
Comments	Person to person transmission has been observed.
Additional Information	http://www.cfsph.iastate.edu/FastFacts/pdfs/dermatophytosis_F.pdf http://www.cdc.gov/healthypets/diseases/ringworm.html http://www.health.state.ny.us/nysdoh/communicable_diseases/en/ring.htm

Equine Encephalitis

JUNE 2015

VEE, WEE, EEE

Cause	Virus
Risk of Exposure in Illinois	Rare
Risk of Transmission to exposed people	Not directly transmitted from horses to people
Mode of Transmission	Mosquito vector; Originates in birds.
Incubation Period	Human: 1-15 days Animal: 1-14 days
Clinical Signs-Human	***EEE***: Fever, headache, conjunctivitis, cough, sore throat, vomiting, photophobia ***WEE***: Usually asymptomatic or mild illness with fever, headache, vomiting, anorexia and general ill-feeling ***VEE***: Usually mild illness with fever, general ill- feeling, headache, sore throat, vomiting. If pregnant, fetus may be affected.
Clinical Signs-Animal	***EEE and WEE:*** Fever; depression; drowsiness; paralysis; anorexia; circling; mild to moderate neurologic signs such as paralysis and convulsions; death; asymptomatic infections can occur ***VEE:*** Symptoms can range from an animal being asymptomatic to fever, colic, anorexia, neurologic signs and death
Control and Prevention	Mosquito control; vaccination program
Comments	Reportable disease in Illinois; Mortality Rates in horses: WEE: 20-40%, EEE: 50-90%, VEE: 50-80%; potential bioterrorist agent
Additional Information	http://www.cfsph.iastate.edu/Factsheets/pdfs/easter_wester_venezuelan_equine_encephalomyelitis.pdf

Equine Giardiasis

JUNE 2015

GIARDIA

Cause	*Giardia* spp. protozoa parasite
Risk of Exposure in Illinois	Rare (infections infrequent in horses)
Risk of Transmission to exposed people	High
Mode of Transmission	Ingestion (contaminated water, fecal-oral); flies possible vectors
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	Adult animals may be asymptomatic; young animals may have diarrhea or soft stools, poor hair coat, flatulence, weight loss or failure to gain weight
Control and Prevention	Good personal hygiene; 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 http://www.cdc.gov/parasites/giardia/

Equine Glanders

JUNE 2015

Cause	*Burkholderia mallei* bacteria (formerly known as *Pseudomonas mallei)*
Risk of Exposure in Illinois	Rare (has not been diagnosed in US)
Risk of Transmission to exposed people	Low (has not been diagnosed in US)
Mode of Transmission	Inhalation; direct contact; ingestion; through skin abrasions
Incubation Period	Human: 1-14 days Animal: 6 days- many months (2-6 weeks common)
Clinical Signs- Human	***Septicemic Form***: fever, chills, muscle pain, chest pain, jaundice, diarrhea, increased heart rate ***Pulmonary Form***: pneumonia, pulmonary abscesses, pleural infusion, cough, fever, dyspnea, skin abscesses ***Localized Form***: nodules, abscesses and ulcers in mucous membranes, skin, and/or subcutaneous tissues ***Chronic Form***: multiple abscesses, nodules or ulcers in skin, liver, spleen or muscles
Clinical Signs- Animal	***Acute Form****:* high fever, cough, inspiratory dyspnea, thick nasal discharge, ulcers on nasal mucosa, enlarged lymph nodes ***Chronic Form****:* coughing, malaise, unthrifty, weight loss, intermittent fever, purulent nasal discharge often from one nostril, swelling of joints, enlarged lymph nodes, swelling of joints, painful edema of legs ***Laten Formt****:* nasal discharge, occasional labored breathing, may only have lesions in lungs
Control and Prevention	PPE (personal protective equipement) during exam and necropsy; no vaccine available; good quarantine and disinfecting practices
Comments	Reportable disease in Illinois; person to person transmission has been observed.
Additional Information	http://www.cdc.gov/nczved/divisions/dfbmd/diseases/glanders/ http://www.cfsph.iastate.edu/FastFacts/pdfs/glanders_F.pdf

Equine Hendravirus

JUNE 2015

MORBILLIVIRUS

Cause	Hendra virus
Risk of Exposure in Illinois	Rare (has only been diagnosed in Australia)
Risk of Transmission to exposed people	Moderate
Mode of Transmission	Direct contact with fluids such as urine and oral cavity from infected animals
Incubation Period	Human: Unknown Animal: 8-16 days
Clinical Signs-Human	Fever; muscle pain; headaches; vertigo; inflammation of the lungs; encephalitis; death
Clinical Signs-Animal	Fever; anorexia; depression; difficulty breathing; increased heart rate; sweating; nasal discharge; death within 1-3 days of onset of clinical signs
Control and Prevention	Virus sensitive to heat and disinfection (1% sodium hypochlorite/bleach)
Comments	Reportable disease in Illinois; potential Bioterrorist Agent
Additional Information	http://www.cfsph.iastate.edu/FastFacts/pdfs/hendra_F.pdf http://www.cdc.gov/ncidod/dvrd/spb/mnpages/dispages/Fact_Sheets/Hendra_Nipah%20Fact%20Sheet.pdf

Equine Leptospirosis

JUNE 2015 | LEPTO

Cause	*Lepto spp.* bacterial spirochete
Risk of Exposure in Illinois	Low
Risk of Transmission to exposed people	Moderate
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; difficulty breathing; severe muscle pain or tenderness; reddening of the eyes; jaundice; meningitis; acute kidney failure; abortion
Clinical Signs-Animal	Often asymptomatic in horses; ocular disease most common; fever; liver, kidney, cardiovascular disease; abortion
Control and Prevention	Pasture drainage; protect water supply from animal contamination; wear protective clothing.
Comments	Person to person transmission has been observed.
Additional Information	http://www.cdc.gov/leptospirosis/index.html http://www.cfsph.iastate.edu/FastFacts/pdfs/leptospirosis_F.pdf http://coloradodisasterhelp.colostate.edu/prefair/disease/dz/Leptospriosis.html

Equine Rabies

JUNE 2015

Cause	Rhabdovirus
Risk of Exposure in Illinois	Rare
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	Distress and extreme agitation (which may resemble colic symptoms); unexplained paralysis or behavioral changes; 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	http://www.cfsph.iastate.edu/FastFacts/pdfs/rabies_F.pdf http://coloradodisasterhelp.colostate.edu/prefair/disease/dz/Rabies.html

Equine *Rhodococcus equii*

JUNE 2015

Cause	*Rhodococcus equii* bacteria (formerly known as *Corynebacterium equii*)
Risk of Exposure in Illinois	Moderate
Risk of Transmission to exposed people	Only seen in immunosuppressed patients
Mode of Transmission	Inhalation; natural habitat is soil.
Incubation Period	Human: Unknown Animal: Variable; thought to be related to maternal antibodies
Clinical Signs-Human	Pneumonia in immunocompromised individuals; enlarged lymph nodes; fever of unknown origin; bloody diarrhea
Clinical Signs-Animal	Most common in young foals. fever; depression; difficult breathing or abnormal breathing patterns; weight loss; young animals may fail to grow; coughing; enteritis
Control and Prevention	Reduce dust; properly ventilate housing
Comments	None
Additional Information	http://www.vetmed.wisc.edu/pbs/zoonoses/rhodococcus/rhodococcusindex.html http://wwwnc.cdc.gov/eid/article/3/2/97-0207_article.htm

Equine Salmonellosis

JUNE 2015

Cause	*Salmonella* spp. bacteria
Risk of Exposure in Illinois	Moderate
Risk of Transmission to exposed people	High
Mode of Transmission	Ingestion (fecal-oral); contaminated food and water; direct contact
Incubation Period	Human: 12 hours-3 days Animal: In horses severe infections can develop acutely (6-24 hours); otherwise 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	Abortion in mares; severe enteritis; weight loss; arthritis in colts
Control and Prevention	Wash hands after contact with animal feces; wear protective clothing when working with diarrheic foals.
Comments	Person to person transmission has been observed.
Additional Information	http://www.cdc.gov/salmonella/ http://www.cfsph.iastate.edu/Factsheets/pdfs/nontyphoidal_salmonellosis.pdf

Equine Tetanus

JUNE 2015

Cause	*Clostridium tetani* 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 in swallowing; rigidity of abdominal muscles; spasms; sweating; fever; death
Clinical Signs-Animal	Muscle stiffness; ears are pricked; tail held out stiffly; muscle spasms; convulsions; possible 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	http://www.health.state.ny.us/nysdoh/communicable_diseases/en/tetanus.htm http://www.cdc.gov/vaccines/pubs/pinkbook/downloads/tetanus.pdf http://wwwnc.cdc.gov/travel/yellowbook/2012/chapter-3-infectious-diseases-related-to-travel/tetanus.htm

Equine Vesicular Stomatitis

JUNE 2015

Cause	Rhabdovirus
Risk of Exposure in Illinois	Low
Risk of Transmission to exposed people	High
Mode of Transmission	Animal contact; contact with objects capable of harboring virus; insect vectors; aerosol
Incubation Period	Human: 1-6 days (30 hours average) Animal: 2-8 days
Clinical Signs-Human	Rare transmission- most often in lab setting; flu-like symptoms lasting a few days
Clinical Signs-Animal	Horses are affected the most severely; short febrile illness with excessive salivation and blister-like lesions in the mouth, dental pad, tongue, lips, nostrils, and hooves; drooling; lameness; often recover in 1-2 weeks
Control and Prevention	Good sanitation and quarantine practices; on farm insect control; disinfection program
Comments	Reportable disease in Illinois
Additional Information	http://www.cfsph.iastate.edu/FastFacts/pdfs/vesicular_stomatitis_F.pdf http://coloradodisasterhelp.colostate.edu/prefair/disease/dz/Vesicular%20Stomatitis.html

Equine West Nile Virus

JUNE 2015

WNV

Cause	Flavivirus
Risk of Exposure in Illinois	Low
Risk of Transmission to exposed people	Not directly transmitted from horses to people
Mode of Transmission	Mosquito vector
Incubation Period	Human: 2-15 days Animal: 5-15 days in horses; unknown in other species
Clinical Signs-Human	Usually infections are asymptomatic; fever; body aches; listless; swollen lymph nodes; occasional rash; severe cases-encephalitis; meningitis; tremors; convulsions; natural immunity often occurs after infection. Most uncomplicated cases will resolve within a few days to a week.
Clinical Signs-Animal	Encephalitis; ataxia; lethargy; anorexia; weakness of limbs; partial paralysis; death; usually no fever
Control and Prevention	mosquito control; vaccination program
Comments	Reportable disease in Illinois
Additional Information	http://www.cfsph.iastate.edu/Factsheets/pdfs/west_nile_fever.pdf http://coloradodisasterhelp.colostate.edu/prefair/disease/dz/West%20Nile%20Virus.html http://www.health.state.ny.us/diseases/west_nile_virus/