



Iatrogenic vs Natural Transmission

What is Iatrogenic Transmission?

Iatrogenic transmission of infectious disease refers to the spread of a pathogen, (bacteria or virus) through a medical procedure or treatment such as a blood transfusion, reuse of needles or IV sets, or by touching a wound on an infected horse and then handling another horse. Iatrogenic spread of Equine Infectious Anemia (EIA) and Equine Piroplasmosis is often due to the reuse of needles or syringes without sterilization.

What is Natural Transmission?

Natural transmission refers to the spread of a pathogen through direct contact transmission (horse-to-horse contact), by indirect contact transmission (contact with a contaminated surface), by means of an insect vector such as biting flies, mosquitoes, by ticks, or via aerosol spread (contaminated droplets spread by coughing or sneezing that are then inhaled or come in direct contact with the eyes, nose, or mouth). Respiratory diseases such as Equine Herpesvirus and Equine Influenza are often spread by direct contact transmission, contact with contaminated surfaces, contaminated water sources and/or aerosol spread. Arboviruses, such as West Nile Virus, Eastern Equine Encephalitis, and Western Equine Encephalitis are viruses that are transmitted by biting insects and cannot be spread by direct contact or from an infected horse to humans or visa versa.

How can I Prevent Iatrogenic Transmission?

Always use new or sterilized equipment for medical procedures:

- Needles and syringes for both IV (intravenous) and IM (intramuscular) injections are **single use only**.
 - Use a new hypodermic needle for every injection on every horse. Never reuse a needle on multiple horses.
 - Once a needle has been used on a horse, never use that needle to draw up more medication from a bottle.
 - Once a needle has been used, dispose of the needle in a sharps container.
 - Never use the same syringe on more than one horse. Never draw up medication for multiple horses using the same syringe. Never use the same needle **or** syringe to draw up medication from a bottle more than once.
- IV sets are also **single use only**.
 - Never use the same IV set on multiple horses. Once an IV set has been used for a horse, it must be discarded.
- Use new disposable gloves when performing a medical procedure on a horse, then discard them and wash your hands.
 - This includes cleaning and treating open wounds, cleaning sheaths, treating wounds in the mouth or eyes, removing sutures, and when handling sick horses.
- Clean and sterilize medical equipment between use.
 - Hemostats, tweezers, clipper blades, tattoo tools, dental tools, stomach tubes, endoscopes and all other equipment that comes into contact with blood, nasal

discharge or feces should be thoroughly cleaned and sterilized before being used on another horse and well as any equipment used to clean, debride, or treat wounds.

How can I Prevent Natural Transmission?

- To prevent the spread of infectious diseases by direct transmission keep horses from touching each other as much as possible.
 - Keep turnout groups consistent and separate groups from each other.
 - Don't allow horses to touch each other in common areas like wash racks or tie rails.
 - New horses should be isolated for up to 21 days when they arrive at a new facility and monitored for signs of disease before being allowed to come in contact with other horses.
 - Never allow your horse to touch another horse at a show or event.
- Indirect transmission of infectious disease can occur when horses touch contaminated surfaces or when humans handle a sick horse and then handle another horse without taking precautions.
 - If a horse shows clinical signs of illness, scrub and disinfect all equipment and surfaces it may have come in contact with including tack, grooming supplies, halters, leads, buckets, stalls, tailers, etc.
 - Use Personal Protective Equipment (PPE) when handling sick horses. PPE includes disposable gloves, coveralls and, boot covers.
 - Be sure to wash hands or use hand sanitizer after handling horses not resident to your farm or sick horses.
 - Do not allow horses to drink from communal water sources at shows and events.
 - Don't allow horses to chew on or lick surfaces such as walls or arena rails.
 - Do not share cleaning cloths between horses.
 - Do not allow horses to touch buckets, trunks, walls, stall doors, etc, in a new facility.
 - Disinfect farrier tools often. Farriers working in known quarantine barns should disinfect tools between horses and change clothes and wash their hands after leaving the quarantine facility.
- Prevent infection of diseases spread by insect vectors by controlling the environment and keeping your horses up-to-date on vaccinations.
 - Environmental control
 - Use insect repellents frequently; re-apply after rain.
 - Keep horses in at night when possible, and apply insect repellent.
 - Empty and clean water sources at least once a week.
 - Remove feces from paddocks or pens at least twice a week.
 - Compost manure and soiled bedding or have it removed from the operation frequently.
 - Eliminate or minimize standing water.
 - Stock tanks or ponds with mosquito-feeding fish.
 - Eliminate brush piles, gutters, old tires and litter.
 - Remove all equipment in which standing water can collect.
 - Vaccinate all horses for preventable diseases (<https://aaep.org/guidelines/vaccination-guidelines>).
 - Complete annual vaccinations.
 - Discuss the need for specific vaccinations with your veterinarian.

For more information on specific diseases go to (<http://equinediseasecc.org/disease-information>).