

# RESOURCE NOTES

NO. 40

DATE 08/17/00

## *Equine Infectious Anemia:*

### *Implications for Public Land Managers and Horse Owners*

*by Dr. Charles J. Issel, DVM, PhD,  
University of Kentucky  
Department of Veterinary Science*

#### **Background**

Equine infectious anemia (EIA) is a disease caused by a virus that produces anemia, intermittent fever, and severe weight loss. Horses, ponies, mules, and donkeys are the only known animals affected by the virus. When the virus enters the bloodstream, it invades lymphocytes (white blood cells) that are important in the body's defense against disease. Once an animal is infected with the virus, it is infected for life, regardless of the severity of the symptoms.

At present, there is no vaccine or cure available. Because the virus is highly infectious, the infected animals are usually euthanized. BLM officials have euthanized over 90 wild horses in the Uintah Basin of eastern Utah in the past 2 years because they carried the deadly virus.

Other common names for EIA are swamp fever, mountain fever, slow fever, and Coggins disease.

#### **Discussion**

Initial signs of EIA may include: an intermittent or continuous fever (sudden rise from 100 degrees F. to 105 degrees F.), profuse sweating, rapid breathing, depression, and weight loss even though the animal

continues to eat well. Disease signs occur 7 to 21 days after primary infection.

The initial signs of EIA pass quickly into one of four patterns:

1. Acute cases are more the exception than the rule. These animals rarely survive and can die within 3 to 10 days after the virus enters the bloodstream.
2. Subacute cases can also be very sick and then become chronic. These animals exhibit no signs of the disease for a long time, then progress to a state of continuing weight loss, rough hair coat, and anemia. Relapses of increasing severity are common.
3. Chronic cases may have occasional attacks and develop classic symptoms of the lower legs, chest, and abdomen. These signs will later subside but may never recur. These symptoms commonly develop after stress from hard work, hot weather, pregnancy, or from other diseases.
4. Carrier animals appear to be healthy but harbor the agent of the disease. An animal will carry the virus for its entire life and never show signs of the disease, but it is potentially able to transmit the disease. These animals may develop into acute or chronic cases after hard work, severe stress, or from other diseases.

#### **Infection and Transmission**

EIA is transmitted by the exchange of certain bodily fluids, usually blood, from an infected to a non-infected animal. One mode of transmission is through insect bites. Horseflies, stable flies, and deer flies are blood feeders. A fly, having bitten an infected animal, will have residual blood on its mouth parts. If the fly moves from an infected animal to a non infected animal,

the virus may be introduced into the non-infected animal when the insect pierces the skin of that animal.

The virus is also transmitted by mechanical means. Instruments, such as hoof knives, needles, syringes, etc., that were previously used and contaminated with blood from an infected animal may unknowingly infect a healthy animal.

If the levels of virus in a mare's blood are high enough, transplacental infection of a foal is possible. Approximately 10 percent of foals delivered from infected mares are infected at birth and remain life-long carriers of the virus.

#### **Detection of the Disease**

The AGID test, also known as the Coggins Test, is the most commonly used official test to detect antibodies from the equine blood against the EIA virus. It is extremely likely that an animal that tests positive on one occasion will do so for the rest of its life (except young foals who absorbed antibodies from their positive dam's colostrum). In most states, when an animal is diagnosed as EIA positive, the individual and others on the same premises are placed under quarantine. Those animals, whether wild or domestic, remain under quarantine until all positive animals are either euthanized or test negative.

Four options are available to the owner whose animal has tested positive:

1. Move the positive individual(s) to a location that is preapproved by agricultural authorities, is a minimum of 1/4 mile away from the other equine, and quarantine the individuals at this new location. The 1/4 mile



separation is intended to minimize the contact by biting flies, reducing the risk of infection.

2. Move the positive individuals to an insect-free enclosure; place the individuals under quarantine.
3. Euthanasia with the proper disposal with approval of appropriate agricultural officials and/or accredited veterinarian.
4. Ship to slaughter under procedures approved by agricultural officials and with the appropriate state and federal shipping papers. There are only a few slaughter facilities in the United States that are approved to accept EIA positive horses. If not euthanized or shipped promptly, equids must have a "34A" freeze brand applied to the left side of the neck.

Once infected animals are removed, further testing of the remaining animals (usually at 30 to 45 days) must continue until tests are negative.

### Reducing the Risk of Infection

1. Reduce flies in the barns or stables and pastures as much as possible.
2. Avoid exposing your animal to sick animals.
3. Use a new, sterile needle on each animal. The simple rule of thumb is "one horse, one needle."
4. Clean and sterilize all instruments thoroughly after each use.

This will prevent the spread of disease by knives, needles, and dental and surgical equipment.

5. Do not share saddles, bridles, and other pieces of equipment between any animals with open or bleeding wounds or sores.
6. Do not breed mares or stallions that you suspect or know are infected.
7. Observe your animals daily. At the first appearance of any of the disease signs - fever, depression, or loss of appetite - isolate the sick animal and call your veterinarian.
8. Purchase animals only after they have been tested and found to be free of any evidence of disease. Insist on being furnished with a copy of the test report.
9. Only participate in events (show, sale, rides, etc.) that require prior testing for all animals.
10. Request that all other event managers/promoters require proof of negative EIA status.
11. Establish a routine EIA testing schedule for your equid with your veterinarian.

### Conclusion

EIA is a serious and deadly threat to all horses, burros, ponies, mules, and donkeys. BLM personnel involved in the Wild Horse and Burro program and owners of these animals or other domestic animals should take time to be familiar with this disease and be able to recognize it in the animals they have

responsibility for. Testing is required for BLM animals and equine owners should follow suit. More information can be found at <http://www.aphis.usda.gov/vs/eia/eia.html>.

### Contact

Dr. Charles J. Issel, DVM  
Wright-Marker Professor of Equine Infectious Diseases  
University of Kentucky, Dept. of Veterinary Science  
Gluck Equine Research Center  
Lexington, KY 40546-0099  
or  
Glenn Foreman, Public Affairs  
Utah State Office  
Bureau of Land Management  
324 So. State Street  
Salt Lake City, UT 84111  
phone (801) 539-4023  
fax (801) 539-4013  
email: [gforeman@blm.gov](mailto:gforeman@blm.gov)  
or  
Glade Anderson  
Wild Horse Specialist  
Salt Lake Field Office  
Salt Lake City, UT  
phone (801) 977-4376  
fax (801) 977-4397  
email: [g1anders@blm.gov](mailto:g1anders@blm.gov)

RESOURCE NOTES are intended to be early announcements of technical and informational topics for Bureau of Land Management personnel and some of their customers. Information in this RESOURCE NOTE is based on the opinion and experience of the author and has not been peer-reviewed. Conclusions and opinions expressed herein do not necessarily represent those of BLM. Use of trade names does not imply U.S. Government endorsement of commercial products.

If you have received a copy of or found out about RESOURCE NOTES in an indirect way and would like to be included in future mailings, please send the following:

NAME, TITLE, MAILING ADDRESS and a list of the two or three subject areas that you are most interested in or that most directly relate to your job. Send this information to Phil Dittberner, BLM, RS-140, P.O. Box 25047, Denver, CO. 80225-0047 or [phil\\_dittberner@blm.gov](mailto:phil_dittberner@blm.gov) or FAX 303-236-3508.

If you would like to prepare a RESOURCE NOTE for distribution, or you have an idea and author in mind for a good RESOURCE NOTE, please contact Phil Dittberner at 303-236-1833, FAX 303-236-3508 or [phil\\_dittberner@blm.gov](mailto:phil_dittberner@blm.gov) with the topic and the name of writer, including an address, phone number, and e-mail address.

Thank you for your interest in RESOURCE NOTES.



National Science & Technology Center



Bureau of Land Management