

Reducing Infection Risk in Neonatal Foals

Infection is one of the most common problems that arise in neonatal foals. While most are born without any trouble, about 50 percent of foals brought to the WSU Veterinary Teaching Hospital come in for treatment due to complications relating to infections they acquired early in life. Even with treatment, mortality still occurs in 20 to 30 percent of infected foals, so knowledge of how to prevent infection is an important part of the birthing process.



It may take up to three hours for a foal to stand and find its mother's udder. Because of this, an owner may want to strip three to four ounces of colostrum from the mare's udder and feed it to the foal as soon as it begins to suckle through a bottle, Dr. Hines said.

"This can be done even before the foal stands, so the first material ingested is antibody rather than bacteria from the environment," she said. "Another method to prevent infection includes dipping the foal's umbilicus or navel

in a disinfectant, such as a 0.5 percent chlorhexidine solution several times after it is born."

If these steps are taken and the newborn still shows signs of distress, it is best to immediately call a veterinarian to evaluate the problem. "One thing for owners to keep in mind is that at least half of infected foals do not have a fever," Dr. Hines said. "If the call is made even the next day, it may be too late for a sick foal to recover."

Though it is generally best to foal a mare in her home environment, where she is acclimated to the organisms indigenous to the area, an owner can call the hospital about its high-risk mare and foal management services if his or her mare needs special attention. For more information about reducing infection or consulting the hospital about neonatal or emergency care, contact Dr. Hines or Dr. Melissa Debra Sellon at 509-335-0711.

position to assess changes in their horses because they know them best and should be aware of those behaviors that can be signs of mild to moderate pain and shouldn't be ignored, especially if they go on for any length of time," Dr. Sellon said. "Owners should trust their instincts about what is normal and not normal behavior for their horse.

"Pain management is very beneficial, not just from a humane standpoint, but because if you control pain, it is likely that you will facilitate healing after major surgical procedures."

For more information about WSU equine pain management studies, contact Dr. Debra Sellon at 509-335-0711.

Want to know more about our equine clinical services, research, and accomplishments, or maybe just directions to the college?

Then check out our equine Web site at

www.vetmed.wsu.edu/depts-equine

or the WSU Veterinary Teaching Hospital Web site at

www.vetmed.wsu.edu/depts-vth/equineServices.asp.

Also feel free to call 509-335-0718 for equine appointments or 509-335-0711 for emergency care.

continued from front

"The horses who received butorphanol had a much more normal score," Dr. Sellon said. "We were very excited at the differences we saw because it suggests that those abnormal behaviors in horses after surgery really are, at least in part, due to pain."

RESULTS

Even though the study is yet to be published, Dr. Sellon is already seeing the benefit of her and her colleagues' work. The use of more powerful pain medication has become routine at the WSU Veterinary Teaching Hospital, and after presenting the study results at a number of meetings, surgical veterinarians around the country are putting Dr. Sellon's findings into practice.

In addition, the WSU veterinary college received another grant from the Morris Animal Foundation to begin a new equine pain management study in horses that undergo arthroscopic surgery.

"If we do a better job at managing pain, the horses lose less weight, go home earlier, are less stressed, and may actually heal better," she said. "That sort of beneficial effect has been shown in people, dogs, rats, laboratory animals, and all kinds of species, and we as a profession should not ignore horses."

Owners can also take an active role in recognizing when their animal is in pain. "Owners are often in the best



Dr. Debra Sellon and friend

New Discoveries in Pain Management for Horses

A symptom as simple as standing very still and not responding to human interaction is one of the many ways your horse may be trying to tell you that he or she is in pain, said Dr. Debra Sellon, an associate professor in equine medicine at the Washington State University College of Veterinary Medicine.

"It can be difficult to recognize pain in horses, and sometime the signs they show are really pretty subtle," she said, including after a major surgery like a colic operation.

But thanks to a joint study conducted by the veterinary colleges at WSU and North Carolina State University, horse owners and equine veterinary practitioners may have an easier time diagnosing when a horse is in pain and finding new ways to manage it.

In the study, 31 horses treated for colic from 2000 to 2002 were analyzed at the WSU and NCSU veterinary teaching hospitals, all with consent from their owners. The horses were evaluated after abdominal surgery to learn what level of pain they were in after surgery and how they responded to additional pain medication.

All animals were treated with a pain reliever called Banamine® (flunixin meglumine), used after colic surgery by most equine veterinary practices. Half the horses also received the powerful narcotic, Torbugesic® (butorphanol).

"The difference in behavior was dramatic between the ones that got butorphanol and the ones who didn't," said Dr. Sellon, who headed the study.

Dr. Sellon began the project, funded by the Morris Animal Foundation, after critical-care specialists at NCSU did a pain management study on dogs that had come out of spay surgery. After learning about behavioral indicators of pain for dogs, Dr. Sellon began to study how veterinarians diagnosed pain in horses.

OLD METHODS

"I asked surgeons from all over the country about what they did for pain management after colic surgery," she said. "Most of them said they treated horses with Banamine, which is similar to aspirin or ibuprofen.

"In most other species, that class of drug isn't considered really sufficient to manage pain after major abdominal surgery, so I began to ask how they recognize when a horse is in pain."

A common response was that veterinarians looked for classic symptoms and signs of colic pain in horses, such as pawing the ground, looking back at their flanks, or repeatedly laying down and getting up, she said. But if horses were quiet and standing in their stalls, then it was assumed that they were not in pain.

"And yet, if you look at them, their behavior is very different from normal horse behavior," Dr. Sellon said. Despite the fact that the classic signs of pain are used to diagnose how a horse feels before surgery is performed, Dr. Sellon decided those signs might not be the best pain indicators after surgery.

NEW TREATMENT

"We did a sort of innovative behavioral analysis on the horses by looking at their stress hormones, their heart rate, how long they had been in the hospital, how much weight they lost, and some other things," she said.

"Everyone in the study was blinded, so we didn't know which of the horses were receiving butorphanol and which ones weren't," Dr. Sellon said. "But in the end, the horses who got butorphanol lost less weight after surgery, were in the hospital for a shorter period of time, had lower cortisol levels, which is a major stress hormone, and their behavior was markedly different."

The researchers analyzed behavior by two different methods. First, they videotaped horses in their stalls for a period of time to analyze later and also used a quick work-sheet method to score different behaviors. Examples of scored behaviors included classic pain signs, position of the horse's head and ears, location of the horse in the stall, whether or not it was walking around in the stall or standing very still, and how the horse reacted to a bucket of feed.

continued on back



IN THIS ISSUE

- Services and Treatment Options
- Hospital Switchboard Phone Numbers
- Meet Our Interns
- First WSU MRI Conference
- Reducing Infection Risk in Foals



From the Chair of WSU's Veterinary Clinical Sciences...

Richard M. DeBowes, DVM, MS, Diplomate ACVS

Welcome to the first edition of *Equine News*. As the chair of the Washington State University Department of Veterinary Clinical Sciences, I invite you to enjoy our newsletter and familiarize yourself with the people and programs that comprise the equine health care services available at our College

of Veterinary Medicine. As we embark on this new venture in communications, we hope to bring you new information regularly throughout the year so that you may become more familiar with your regional College of Veterinary Medicine and its clinicians, research, services, and health care team.

SERVICES AND TREATMENT OPTIONS...

The WSU Veterinary Teaching Hospital offers a full range of services to the horse-owning public. These are available both as primary care services and advanced medical care. Clients can request an appointment directly or may be referred by their local veterinarian. Services available include the diagnosis and treatment of **equine lameness and infectious diseases, neurological evaluations, sports medicine assessments, including high-speed treadmill evaluations, advanced orthopedic and soft-tissue surgery, and high-risk mare and foal management.** Supporting the equine medical and surgical faculty are board-certified veterinary clinicians with unique competencies in **cardiology, anesthesiology, oncology, neurology, imaging sciences, and theriogenology** or reproductive medicine. We also offer **24-hour emergency care services** for those patients who need advanced care at any hour of the day or night.

The WSU Veterinary Teaching Hospital is an outstanding facility staffed with world-class faculty and equipped with the best technology currently available. Maybe that is why some refer to it as the Northwest's "Mayo Clinic for Animals." Although the hospital is only eight years old, the WSU equine group has a long and proud history of contributions to equine medicine and surgery, with notable prominence in sports medicine, infectious disease and immunology, advanced cross-sectional imaging with our **CT and MRI capabilities**, and advanced surgical competencies that include **arthroscopy, laparoscopy**, and techniques for **spinal fusion**. Combined efforts by our faculty and staff, applied to the traditional university missions of clinical service, teaching, and research, have made our faculty national and international leaders in equine medicine and surgery.

WSU EQUINE ADVISORY BOARD...

While we are justifiably proud of our equine program, we also realize there is always room for improvement. With the goal of excellence in mind, our equine faculty and administrators invited individuals from across the equine industry to serve as an Equine Advisory Board to the college. This dedicated group of active horsemen and women are well positioned in the equine industry and able to provide us with clear guidance of what is needed to elevate our program to the next level of both prominence and customer service. Together, we are working to develop a closer relationship with equine

stakeholders by serving as a conduit for information between the college, referring veterinarians, and the horse-owning public. The group also advises the equine section about industry needs, health studies, and other issues of importance that affect horses and their owners. As advocates and advisors to our program, the group is fully engaged in promoting and advancing our shared interests of supporting and sustaining the equine health care service and research programs at WSU, programs that contribute significantly and positively to horse health throughout the Northwest and nationally. Because the board is enthusiastic about communicating with horse owners, we will feature our members in subsequent issues of *Equine News* so that you may become familiar with these important equine leaders.

WSU EQUINE EXPO...

During this past year, our veterinary college was fortunate to be the recipient and focus of the incredible vision and energies of Nancy and Bob McGahan, WSU Equine Advisory Board members who almost single-handedly organized and led the promotion and production of the first-ever Horse Conference and Equine Expo at our College of Veterinary Medicine. The event was an enjoyable and informative program, in which more than 300 people attended a one-day open house last October at the WSU Veterinary Teaching Hospital. A judging clinic, an array of equitation demonstrations, equine health and husbandry displays, and client information lectures were presented to the general public. The event was extremely well received and will be offered again on **September 25, 2004**. From equipment and horse tips to equine health-related presentations by our veterinary faculty and health care team, this program has it all. We hope to see you there this fall!

As you read through this and subsequent newsletters, I know you will find stories of interest to you and others about the special interests, competencies, and treatment options available for you at the WSU Veterinary Teaching Hospital. The health and medical care of your horse is important to us. Should a medical situation arise in which you need the care and abilities of our health care team...we are here for you and your horse. Your encouragement, support, and generous donations help us keep the quality of our program high and have positioned us to continue to provide high-quality health care to Pacific Northwest horses. To those of you who have donated money, time, and encouragement in support of our program, we offer our sincere thanks and appreciation. You have made a difference for our students, our patients, and horsemen and women around the Northwest. To those of you who are considering supporting our program, take confidence from the excellence of our team and their record of accomplishment that donations to our college and its equine program will be applied with integrity and used to advance our world-class programs.

Happy Trails,

Richard M. DeBowes
Professor of Surgery and Chair
Veterinary Clinical Sciences
Washington State University
509-335-0738

Meet Our Interns...

If you bring your horse to the WSU Veterinary Teaching Hospital, odds are that you will meet one of our two outstanding interns in equine medicine and surgery. They are here to receive specialty training in equine medicine and surgery for one year under the mentoring guidance of our faculty senior clinicians. These positions are offered at select universities and private practices across the United States and Canada and, as such, are highly competitive. Our interns are chosen for their outstanding skills, abilities, and knowledge. They are involved in nearly every case that comes through our doors and crucial to the hospital's operation.

DR. JINGER DOE



Dr. Doe came to WSU after earning her DVM degree in 2003 from Ohio State University. She earned her undergraduate degree from the University of Nevada at Reno in 1999. Her major area of interest is in large-animal internal medicine, especially equine, camelid, and food animals.

Dr. Doe grew up in rural northeastern Nevada in a town called Spring Creek. She has always enjoyed horses, cattle, and sheep, and since entering veterinary school, she has also worked with and developed an interest in llamas and alpacas. After her internship, Dr. Doe plans to gain a large-animal medicine

residency before either joining a private practice or pursuing a research/teaching position.

"I wanted to learn from some of the most respected large-animal practitioners and have access to state-of-the-art diagnostic and treatment modalities," she said about her decision to come to WSU. "I have always enjoyed working with horses and other large animals and look forward to a future career in internal medicine."

DR. RYAN PENNO



Dr. Penno graduated with his DVM degree from the Ontario Veterinary College at the University of Guelph in Ontario, Canada, where he also earned his undergraduate degree. Dr. Penno is especially interested in equine lameness and surgery and enjoys arthroscopic surgery and advanced radiologic studies.

Dr. Penno grew up in the small town of Arnprior in Ontario. He has been interested in horses since grade school and got his start working with them during high school by volunteering at a local equine veterinary practice. Since then, he has gained a

tremendous amount of experience and been involved in several research projects during his veterinary training. He plans to return to Canada after his internship to work in private equine veterinary medicine.

"The diverse caseload of the WSU Veterinary Teaching Hospital allowed me to improve my technical and problem-solving skills under the guidance and supervision of the excellent faculty and staff at the college," he said.

WSU MRI Conference Highlights Equine Musculoskeletal Problems and Injuries

Medical imaging and horse experts from around the world gathered in Coeur d' Alene, Idaho, in January for the first-ever comprehensive meeting to discuss magnetic resonance imaging (MRI) advancements for horses.

A relatively new field for veterinary medicine, MRI technology allows veterinarians to get an unsurpassed look at injuries to equine athletes, including both bone and soft-tissue injuries.

"It's a groundbreaking event in the sense that we're bringing some of the top radiologists and equine surgeons together to see problems in horses with MRI that in the past were difficult, if not impossible, to discover without exploratory surgery," said Dr. Russ Tucker, chief of medical imaging at the WSU veterinary college who organized the event.



A horse having its legs examined in MRI

The conference was the "first annual" course of its type and filled to capacity almost immediately. The MRI system, common in human medicine, uses magnetic energy instead of X-ray radiation to produce a series of images of both bone structure and soft tissues. The keynote speaker was Dr. Charles Ho, a leading authority in the use of MRI in human musculoskeletal imaging who helped to bridge the knowledge gap between common human athletic injuries and injuries found in equine patients.

WSU's veterinary college pioneered the use of MRI in live horses in 1996 and is one of only a few veterinary hospitals in the world equipped with this technology. These advancements have rapidly moved WSU to the forefront of veterinary medicine in the evaluation of lameness and neurological disorders in recent years.

"We are fortunate to have an MRI unit that allows us to evaluate lame horses," said Dr. Robert Schneider, chief of large-animal surgery at WSU who also helped to organize the event. "The information we have gained is of interest to equine practitioners and has changed the diagnosis and treatment of horses with lameness problems that cannot be readily diagnosed from traditional radiographs. This course was very well received by the attendees, and we hope to offer it again each year in the future."

Would you like to visit the Veterinary Teaching Hospital?

Please join us for the WSU College of Veterinary Medicine's **Open House** between 10 a.m. and 4 p.m., Saturday, **April 17**. We will have tours, exhibits, and informative displays hosted by our student clubs and classes. It's a family affair and loads of fun!

WSU Veterinary TEACHING HOSPITAL SWITCHBOARD

Main Number/Switchboard.....	509-335-0711
Equine Appointments	509-335-0718/509-335-0719
Agricultural Animal Appointments	509-335-0741
Small-Animal Appointments	509-335-0751/509-335-0752
Dean's Office	509-335-9515
Department Chair	509-335-0738
Fax Number	509-335-3330
Billing	509-335-0816
Pharmacy	509-335-0736
People-Pet Partnership Program	509-335-4569
Pet-Loss Hot Line.....	509-335-5704