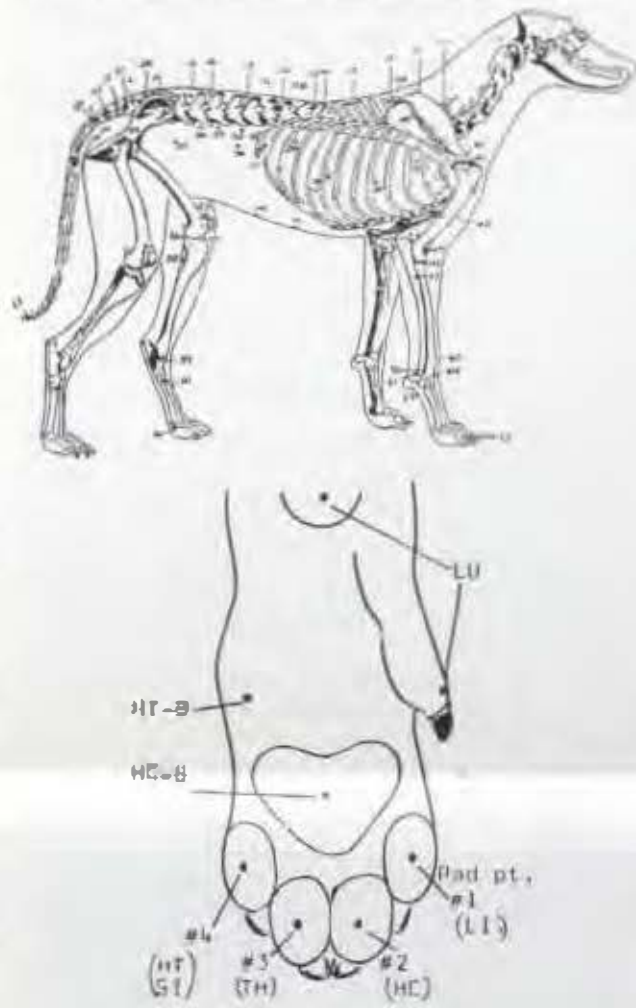
Small Animal Veterinary Acupuncture

Practiced in China for more than 4,000 years, acupuncture recently has been accepted by Western medicine and veterinary medicine as an additional avenue of treatment. Dr. Meredith L. Snader, a practitioner from Chester Springs, Pennsylvania explained that in China acupuncture treatment is commonly used to treat disease in humans, food animals, horses and beasts of burden.

Acupuncture is deeply rooted in Chinesephilosophy. It is thought that the body, its organs and their function interact and react to each other to maintain a balance, "yin yang," and that disease results when this balance is upset. The Chinese believe that acupuncture can be used to manipulate the body's basic dynamic energy to redirect its flow and restore the balance. Elaborate charts showing the acupuncture points for the different organ systems were developed. Location of the acupuncture points is based on the ancient belief of the body's energy flow and the organ interaction.

Researchers have found that the designated acupuncture points have distinctly different electrical properties. They show a diminished electrical resistance, and they have a greater density of neuroreceptors than adjacent tissue. Most of the points are near major nerve trunks and manipulation can have an effect on different areas of the body. Research has shown that acupuncture stimulation, even a single needle insertion, excites nerve cells and synapses in the spinal column that have an inhibitory effect on pain. Pain sensations are blocked out by stimulating an acupuncture point. It has been shown that acupuncture causes cells in the brain and the spinal column to produce certain morphine-like, painkilling substances, and that stimulation of specific acupuncture points can increase the production of hormones. It has also been demonstrated that acupuncture can change the level of white blood cells in the body. The mechanism of these phenomena is not clearly understood and research is continuing in an effort to explain it.

The traditional tools of the acupuncturist are fine, dull needles, ranging in length from 1/4 to 8 inches. They are made of steel, silver, or gold, depending on their purpose. The needles are inserted at the point



or points and then manipulated either slowly or fast, depending on the desired effect. Because the needles are dull, they push the tissue apart and little or no bleeding results from the insertion. Other acupuncture tools are tiny gold beads which are inserted under the skin, or small steel balls which are taped to an area to provide pressure. The contemporary acupuncturist also utilizes electric current, laser beams and ultrasound. Injections of air or water may also be used. In some cases, the needles may be heated.

Dr. Snader said that acupuncture can be used in place of anesthesia, and that the Chinese employ it for such complex procedures as open heart surgery. However, such use is limited in animals as they will not stay in one position too long. Also a great number of people are needed manipulate the needles, hold down the animal, and perform the surgery.

In Western veterinary medicine acupuncture is not used for treatment of viral or bacterial infections. Rather it is employed for chronic pain problems which have not responded to other treatments such as drugs or surgery.

Frequently it is a treatment for horses with lameness problems. Dr. Snader applies it with success for dogs and cats with arthritis, dogs with herniated discs and for animals which have chronic bouts of bloating (without torsion). It has been used to control lick granuloma, epilepsy and to treat megaesophagus in the dog. Dr. Snader explained that the Chinese acupuncture charts do not include charts for dogs, these were developed recently by Western veterinarians by transferring known acupuncture point locations to the anatomy of the canine. The majority of Dr. Snader's patients are horses, though she treats a good number of dogs and cats. Dr. Snader is the executive director of the International Acupuncture Society, a world-wide organization for veterinarians with about 200 members.

Threat of Rabies Puts Livestock at Risk

A dramatic rise in animal rabies cases in the Philadelphia suburbs poses a serious threat to unvaccinated domestic livestock and owners should be certain to have their animals inoculated against the fatal disease, a University of Pennsylvania veterinarian warns.

"We are seeing an alarming number of cases this year of farm animals with rabies," said Jonathan Palmer, assistant professor of medicine at Penn's Large Animal Hospital at New Bolton Center in Chester County. "Just as owners of cats and dogs are urged to vaccinate their pets against rabies, owners of horses, cows and sheep are reminded to do the same."

Horses, cattle and sheep should be vaccinated at three or four months of age, and again when they are a year old. The animals require booster shots every year.

Palmer said that livestock generally contract a form of rabies known as the "dumb form." Unlike the "furious form," where affected animals exhibit very aggressive behavior, animals with the dumb form do not show such marked symptoms.

"Livestock with rabies will usually appear depressed," Palmer said. "The animals will not show normal activity, and it is very clear they are sick. While they may not bite, they still may shed the virus and possibly transmit it to humans and other livestock."

If the horse or cow develops the less common furious form, it may become very excitable and unusually aggressive to people and other livestock.

Once rabies has been diagnosed, the animal must be destroyed, Palmer said.

"It is important for those in the livestock industry to realize that vaccinating livestock not only protects people, but guards against losses among their valuable animals," he said.

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Dr. Gustavo Aguirre installs the plague at The Laboratory for Ocular Ultrastructure at the Veterinary Hospital of the University of Pennsylvania on May 31. The laboratory contains the electron microscope and other sophisticated equipment of the Inherited Eye Disease Studies Unit. The generous support of the Frances V.B. Seebe Trust made this laboratory possible.

Dr. Aguirre and Mrs. Patti Telegan, research specialist, at the electron microscope.