Acupuncture Useful in Our Modern-Day World

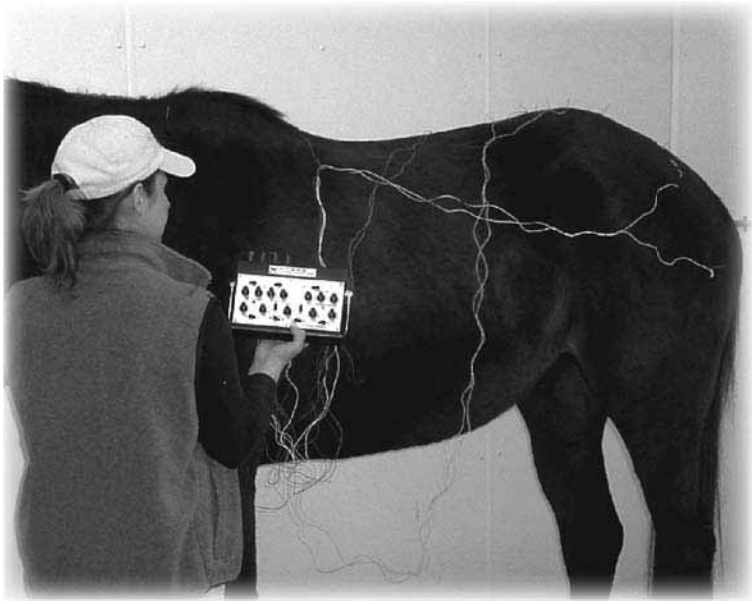
by Christine Woodford, DVM

Acupuncture has been used for over 3000 years to treat humans and animals in China. Acupuncture is defined as stimulating a particular point on the body with a particular method to produce a therapeutic effect. Acupuncture points are located throughout the body on acupuncture meridians. These points can be located with an ohmmeter because they have decreased electrical resistance and increased electrical conductivity. They are typically in areas with high density of free nerve endings, blood vessels, lymphatic vessels and mast cells.

The most common stimulating methods for acupuncture include dry needling (small, sterile, steel needles), aqua-acupuncture (injecting fluid into a point), moxibustion (an herb called Moxa is burned near the point), and electroacupuncture (electrical stimulation is delivered through a dry needle attached to an electroacupuncture machine). Several clinical studies have been performed to show the efficacy of acupuncture. In 2005, a study by the University of Florida compared the effects of electroacupuncture to conventional pain relief therapy for control of chronic back pain in horses. The study showed that electroacupuncture significantly reduced back pain after three treatments and the pain relief lasted for at least two weeks after the last treatment.

Electroacupuncture can induce natural pain control and anti-inflammatory mechanisms. A pulsating electrical current is passed through the needles to the acupuncture points and along the acupuncture meridians. Research has shown the frequency, intensity, and type of electronic pulse can be adjusted to stimulate a variety of physiological responses. Initially, electroacupuncture produces local numbness in the area the current is applied. After about 20 minutes of stimulation, generalized opiate-mediated analgesia is produced as endogenous opioids (natural pain relievers) are released in the cerebral spinal fluid and serum. This helps to relieve pain throughout the body. If the electroacupuncture is applied longer, the nervous system, endocrine system and immune system are stimulated. Serum levels of endorphins, serotonin, enkephalins, norepinepherine, and cortisol levels are increased after prolonged acupuncture therapy. These neurotransmitters, hormones, and immunomodulators stimulate the body to heal itself.

Acupuncture produces integrative physiological changes in several tissue and organ systems throughout the body. Acupuncture also affects muscle and soft tissue. Initially the muscles may contract around the needles. After 10-20 minutes of acupuncture treatment, the tissue will relax and muscle spasms will be released. Acupuncture causes increased blood flow, tissue perfusion, and increased local tissue immune status. Clinical trials indicate that acupuncture therapy can be effective on muscloskeletal problems (osteoarthritis and back pain), gastrointestinal, respiratory, reproductive and neurological disorders, performance enhancement and prevention of disease.



Dr. Woodford, demonstrating Electro-Accupuncture

The overall goal of acupuncture is to stimulate internal anti-inflammatory and pain relief mechanisms to balance the body, facilitate tissue repair, and prevent injury or disease. Acupuncture is minimally invasive and involves very few risks as compared to more conventional forms of therapy.

Dr. Woodford graduated Summa Cum Laude from Creighton University in Omaha, NE in 1994 with a Bachelors of Science Degree in Chemistry. She then received a Master of Science in Organic Chemistry from the University of Wisconsin-Madison in 1996. In 2002, Dr. Woodford graduated with honors from Iowa State University and received her Doctorate in Veterinary Medicine.

With an interest in lameness and performance horses, Dr. Woodford is pursuing academic studies in alternative therapies. In 2006, Dr. Woodford became certified in Animal Chiropractic by the American Veterinary Chiropractic Association. She is currently studying Equine Veterinary Acupuncture at the Chi Institute in Florida.