

ALTERNATIVE MEDICINE



OVERVIEW

- Alternative medicine, also referred to as complementary or integrative medicine, encompasses many practices which are not part of standard or “western” medical practice. These include homeopathy, herbal medicine, acupuncture, chiropractic, laser therapy, essential oils, crystals and Bach’s flowers. Various other practices exist but are not discussed in this chapter.
- Alternative medicine may be used alone or in complement to western medical practices.
- Specific training on each discipline is necessary for safe and effective treatment.
- Use of complementary therapies may be beneficial when western medical remedies are not available or have proven to be of poor efficacy. In cases where traditional drug usage is limited, such as organic farming, use of alternative medicine is especially advantageous
- Alternative medical treatments can be used to treat animals for acute, non-surgical conditions when use of drugs with meat or milk withdrawals is not advisable or when slaughter is imminent.
- Use of alternative therapies may be limited in the production medicine setting as many treatments are based on individual animal disorders and are difficult to apply at the herd level.

DIAGNOSTIC PROCEDURES

A full physical examination following both western medical and alternative medical concepts is required prior to initiation of treatment. Both western and alternative medicine examination results should be analyzed together to formulate a diagnosis. Additional information provided by alternative medicine such as acupuncture or homeopathy includes determination of the patient’s type, temperament, element association, evaluation of the tongue, pulse diagnosis and palpation of sensitive areas along meridians.

HERBAL MEDICINE

- Use of herbs for the treatment of disease. The plants and minerals used for animal consumption can be purchased by veterinary suppliers. The therapeutic activity of herbs can be viewed through multiple lenses and biases. From a pharmacological perspective, there are active chemical compounds contained in plants as well as fundamental nutritional components including: vitamins, minerals, flavonoids, carotenoids, sugars, and amino acids.
- Some chemical components found in herbs may exhibit antagonistic or synergistic effects, effecting metabolism and/or absorption in the body. While these interactions are not common, reference materials are available to mitigate unwanted actions either herb to herb or in conjunction with pharmaceutical therapy.
- Treatment can be established by prescribing one single plant (simple) or by implementing a polypharmacy formulation. Formulation should be considered if the condition is complex with multiple issues and symptoms. Formulation should also be implemented, to help reduce adverse effects or support other signs of disease that may not completely fit the clinical picture of the patient.
- Principles of treatments may be based on TCVM. This evaluation requires an extensive intake involving both questioning and physical examination that includes both tongue and pulse assessment.

- While empirical treatment for a particular condition can be a starting place, the strength of the medicine is in its ability to custom fit medicinals to dovetail an individual's issues and symptoms.

Herbal Medications: considerations and examples

- Chinese herbal medications are sometimes administered as a complement to acupuncture or as single treatments. Oral doses should be 2-3 times greater than those listed for horses due to rumen or first compartment metabolism.
- Some diseases have been targeted with herbs, such as parasitism, mastitis, and various digestive problems. Caution should be taken as there are no established withdrawal times for any food producing species. Herbal remedies should only be administered by trained individuals.
- Parasite control:
 - Birdfoot trefoil (*Lotus corniculatus*), Chicory (*Cichorium intybus*), Sulla (*Hedysarum cononarium*), Sainfoin (*Onobrychis vicifolia*) have been shown to have some effect at reducing parasite load or fecal egg counts.
- Mastitis control:
 - Panax ginseng administration, as an immune system tonic, has been associated with increased response against *S. aureus* mastitis and reduced somatic cell count.
 - *Persicaria senegalense* leaf powder administration may reduce subclinical mastitis.
 - A commercially available herbal intramammary product has shown positive results on a small scale for treatment of mastitis (Masfrigo®, Vet Hon, China)
- Digestive problems:
 - Bitters (gentian, quassia, quakerbutton, cinchona and cascarilla, nux vomica) have been used for digestive problems in ruminants. Nux vomica (bitter) with ginger, peppermint, sassafras, fennel, coriander, cloves, asafetida (carminatives) can also be used to increase peristalsis and expulsion of gas.
 - Diarrhea can be controlled with plant derived substances such as tannic acid, gallic acid, kino, krameria, gambir, geranium, hematoxylon, Rhus glabra, and Quercus rubor.

ACUPUNCTURE

- See chapter entitled "Acupuncture"
- The use of acupuncture in pet or small ruminants is more common than in production systems
- Different types of acupuncture such as dry needle acupuncture, electroacupuncture, hemoacupuncture and moxibustion can be used in ruminants
- Acute and chronic conditions of all nature can be treated
- Commonly treated conditions are arthritis, lameness, dystocia, bloat, and downer animals

CHIROPRACTIC

- Discipline that focuses on diseases of the musculoskeletal system and the nervous system and their effect on the general health of the animal
- It is based on 33 principles (Stevenson, 1927) quoting the presence of forces within matter whose reduction in transmission may cause disease processes
- The role of chiropractic practice is to coordinate these forces by affecting the sensory input to the cerebral cortex from neuromuscular signaling. The most common therapeutic procedure is "spinal manipulation," also called "chiropractic adjustment". The purpose of manipulation is to restore joint mobility by applying a specific, high velocity, controlled thrust, by hand or instrument, that is directed at a specific articulation. Manipulation or adjustment of the affected joint can restore mobility and alleviate pain and muscle tightness
- A neurologic and orthopedic evaluation must be performed in conjunction with a posture and gait analysis. Finally, static and motion palpation of the spine and extremities are necessary to identify the target location.

- Chiropractic adjustment can be useful in the case of a single, acute, traumatic event (downer animals, musculoskeletal injuries) or repeated stresses such as poor spinal or neck posture. A common example of a repeated stress injury in ruminants is lumbosacral damage in rodeo bucking bulls.
- Chiropractic treatment is commonly used in horses. Similar guidelines can be applied to ruminants to help reduce back pain or injuries

HOMEOPATHY

- Homeopathy, developed by Dr. Samuel Hahnemann in the late 1700's, revolves around four fundamental principles. The cornerstone principle is 'Similia similibus curentur' meaning 'Let like be cured by like'. This principle leads to the treatment of diseases through administration of highly diluted drugs that themselves, at normal concentrations, can produce a condition similar to the disease that is sought to be cured. Substances undergo several stages of dilution, which are called "potencies", with drugs being diluted up to 10^{-60} times. The toxic power of the solution is reduced at each stage with a log scale increase in curative power.
- The second principle is the use of a single remedy. Only one homeopathic remedy is to be used at one time, as they are based highly on the individual and their current physical, mental, and emotional state.
- The third principle is administration of the minimum dose. This principle attempts to minimize side effects and adverse reactions by closely monitoring the patient's response to the treatment to guide dose and frequency.
- The final principle is the use of succussion to potentiate remedies. At each stage of dilution, substances undergo succussion, which involves forceful shaking to activate the solution.

There is currently no scientific explanation of the homeopathic curative phenomenon

In homeopathic philosophy, illness is defined as the product of the individual's own reaction to a disease influence. Therefore physicians assess for etiological agents as well as historical influences, constitutional properties (the patient's response to external influences), and mental factors.

- Homeopathic remedies can be targeted to specific organs (ex: Nux vomica- liver), the specific pathological condition or may be prescribed taking into consideration the "nature" of the individual. Certain homeopathic substances may be used to facilitate or regulate specific metabolic function or induce detoxification.
- Nosodes or dynamized micro- therapeutics, which are remedies produced by affected bodily fluids, can be used in acute pathological conditions. Prevention of diseases or reduction of risk of spread of diseases can be attempted with nosodes used at a herd level (Oipodopurinum in foot rot or digital dermatitis).

Homeopathic remedies: examples

Please refer to Materia Medica for a complete list of treatments. The following is meant to serve only as a brief outline of homeopathic remedies for some diseases common to ruminants.

- Fever: Aconitum napellus, Antimonium tartaricum, Belladonna, Pyrogenium
- Pneumonia/respiratory conditions: Aconitum napellus, Antimonium tartaricum, Bryonia, Lycopodium clavatum, Pyrogenium, Phosphorous
- Bloat: Carbo vegetabilis, Lycopodium clavatum, Nux vomica
- Trauma/ injury: Arnica Montana, Hypericum perforatum, Calendula, Rhus Toxicodendron, Ruta graveolens, Symphythum
- Edema: Apis mellifica
- Diarrhea: Arsenicum album
- Mastitis: Aconitum napellus, Bryonia alba, Calcarea carbonica, Calcarea phosphorica, Carbo vegetabilis, Hepar sulphuris, Mercurius solubilis, Phytolacca americana, Silica, Urtica urnens

- Joint ill: Hepar sulphuris
- Navel ill: Hepar sulphuris, Silica
- Dystocia or fetal mal positioning before calving: Caulophyllum thalictroides, Pulsatilla nigricans
- Metritis: Caulophyllum thalictroides, Pulsatilla nigricans, Pyrogenium, Sabina, Sepia
- Retained placenta: Caulophyllum thalictroides, Sabina, Sepia
- Ketosis: Lycopodium clavatum, Nux vomica
- Calf diphtheria: Mercurius cyanatus
- Foot rot: Hepar sulphuris

LASER THERAPY

- Laser therapy is the stimulation of cutaneous points with a noninvasive and non-painful low-power (5–30 mW) helium neon or laser. The laser is emitted by diode device which operates at 630– 670 nm
- Laser therapy can be used in large animal as an alternative to dry needle acupuncture for the stimulation of acupuncture points or for wound healing.
- Laser therapy is used as an anti-inflammatory, analgesic and to promote tissue healing. Experimental studies demonstrate its ability to activate tissues at a cellular level by activating the respiratory chain, red ox chains and secondary messengers.
- Portable equipment is available commercially. Types of laser, emission parameters and depth for each desired effect and treatment to achieve needs to be understood prior to use.
- Disadvantages include limitations in treating larger areas for wound healing (especially in large animals).

ESSENTIAL OILS

- Essential oils are distilled aromatic compounds obtained from plants.
- Oils are first diluted in a carrier oil before being topically applied.
- Although large animals may be less sensitive than small animals, essential oils must be used with caution due to photosensitivity and phytoestrogenic effects exhibited in humans secondary to the use of some essential oils (i.e., citrus oils and tea tree oil respectively).
- The potential residues within meat and milk makes their use questionable in food-producing animals.
- Uses include: fly repellants, natural teat sprays, wound care, and trauma.
- Due to the above precautions, essential oils should only be used by trained individuals.

BACH'S FLOWERS

- 39 remedies obtained by flowers and extracted into an alcoholic vehicle. They are more commonly used in companion large and small ruminants and do not have large use in production animals. The remedies can be given orally or to a group of animals via drinking water
- “Rescue remedy” is a formula of 5 ingredients that is used in extreme situation of fear, stress and shock. Its use could be justified as welfare input during animal processing like surgical trauma, disbudding procedures, foot trimming or stress of handling.

CRYSTALS

- Involves the application of crystals or gemstones to facilitate healing of certain conditions or promote increase in energy. The bright strong colors are usually believed to boost energy. There is no scientific explanation for their mechanism of action
- There are several types of different stones with special functions and meaning

- The crystals can be applied to the animal or in close proximity. Care must be taken when using crystals as some contain toxic compounds such as lead and arsenic as well as elements such as copper and sulfur.

PROFESSIONAL ASSOCIATIONS AND TRAINING PROGRAMS

- See acupuncture topic for acupuncture training programs
- American Veterinary Chiropractic Association: <http://animalchiropractic.org/>
- College of Veterinary Integrative Therapies: <http://www.civtedu.org>
- Chi Institute: <http://www.tcvm.com/>
- Pitcairn Institute of Veterinary Homeopathy - <http://www.pivh.org/>



MISCELLANEOUS

SEE ALSO

- Acupuncture

ABBREVIATIONS

TCVM: Traditional Chinese Veterinary Medicine

SUGGESTED READING

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