



Review Article

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Alternate System of Medicine in Animals: A Comprehensive Review

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ABSTRACT

Animals, just like humans, can suffer from a variety of health conditions that require medical intervention. While conventional veterinary medicine has been the traditional approach to animal healthcare, alternate systems of medicine have gained significant attention in recent years. This review article aims to provide a comprehensive overview of the various alternate systems of medicine utilized in animals, including their principles, modalities, and potential benefits. Additionally, this review highlights relevant studies and research conducted in the field to support the efficacy and safety of these alternate systems.

Keywords: Herbal medicine, Alternative medicine, Acupuncture, Chiropractic, Homeopathy.

INTRODUCTION

Alternative medicine, also known as complementary and alternative medicine (CAM), is a group of diverse medical and healthcare systems, practices, and products that are not considered part of conventional medicine. Alternative medicine for animals includes traditional Chinese medicine, herbal medicine, homeopathy, acupuncture, chiropractic, and other complementary therapies. There is growing interest in alternative medicine in veterinary medicine due to concerns over the safety and efficacy of conventional drugs and the desire for more holistic and natural treatment options. This article aims to review the current evidence for the use of alternative medicine in animals.

While traditional veterinary medicine has undoubtedly made great strides in improving the health and well-being of animals, alternative systems of medicine are being increasingly recognized as valuable additions to conventional treatments. These alternative therapies can provide a holistic approach to animal healthcare, considering the physical, emotional, and spiritual aspects of the animal. One of the benefits of alternative systems of medicine in animals is that they often have fewer side effects than traditional medications. Additionally, these therapies can be used to complement conventional treatments, leading to better outcomes and faster healing. However, it is important to note that alternative systems of medicine should not be used as a replacement for traditional veterinary care in the case of serious illnesses or injuries. Overall, the growing popularity of alternative systems of medicine in animals reflects a growing awareness of the importance of a holistic approach to animal healthcare.

Herbal Medicine:

Herbal medicine is the use of plants or plant extracts to treat various illnesses. This alternative therapy has been in use for centuries and is still widely used in many parts of the world. In recent years, the use of herbal medicine in veterinary medicine has gained popularity. This article reviews the use of herbal medicine in veterinary medicine, its effectiveness, and safety.

Types of Herbal Medicine:

Herbal medicine can be administered in various forms, including capsules, tinctures, teas, and powders. In veterinary medicine, herbal medicine is commonly used as a complementary therapy to conventional medicine. The most commonly used herbs in veterinary medicine include:

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1. Ashwagandha (*Withania somnifera*): Ashwagandha is a popular herb used in Indian veterinary medicine for its adaptogenic and immunomodulatory properties. It is commonly used to support overall health and enhance resilience in animals. Studies have shown that ashwagandha extracts can improve immune function and reduce stress-related physiological changes in animals [1,2].
2. Aloe Vera (*Aloe barbadensis*): Aloe vera is often used in veterinary medicine for its wound healing and soothing properties. It can help promote the healing of minor wounds, burns, and skin irritations in animals. Studies have shown that aloe vera gel and extracts have antimicrobial, anti-inflammatory, and wound-healing effects in animals [3,4].
3. Peppermint (*Mentha x piperita*): Peppermint is commonly used in veterinary medicine to alleviate digestive issues in animals, such as gastrointestinal spasms, gas, and nausea. It has carminative and antispasmodic properties that can help soothe the digestive system. Studies have demonstrated the potential of peppermint oil and extracts in relieving gastrointestinal symptoms in animals [5,6].
4. Ginger (*Zingiber officinale*): Ginger is used in veterinary medicine to alleviate gastrointestinal upset and nausea in animals. It has been shown to have anti-inflammatory, anti-ulcer and anti-emetic properties, making it beneficial for digestive issues [7,8].
5. Garlic (*Allium sativum*): Garlic is used in veterinary medicine for its antimicrobial and immune-enhancing properties. It can support immune function and help prevent or manage infections in animals. Studies have shown the potential of garlic extracts in enhancing immune response and exerting antimicrobial effects in animals [9,10].
6. Neem (*Azadirachta indica*): Neem is widely used in Indian veterinary medicine for its antimicrobial, antiparasitic, and anti-inflammatory properties. It is used to treat various skin conditions, wound infections, and ectoparasite infestations in animals. Neem extracts have shown significant activity against bacteria, fungi, and parasites in animals [11,12].
7. Triphala: Triphala is a traditional Ayurvedic formulation consisting of three fruits, namely, Amalaki (*Emblia officinalis*), Bibhitaki (*Terminalia bellirica*), and Haritaki (*Terminalia chebula*). It is used in Indian veterinary medicine for its antioxidant, digestive, and immunomodulatory properties. Triphala is commonly used to support gastrointestinal health, improve digestion, and boost immunity in animals [13,14].
8. Tulsi (*Ocimum sanctum*): Tulsi, also known as Holy Basil, is widely used in Indian veterinary medicine for its medicinal properties. It is considered an adaptogen and is used to support overall health and well-being in animals. Tulsi has been reported to possess antioxidant, immunomodulatory, and antimicrobial properties [15,16].
9. Guduchi (*Tinospora cordifolia*): Guduchi, also known as Giloy, is a well-known herb used in Ayurveda and Indian veterinary medicine. It is used as an immunomodulator and has been traditionally used to support immune function and improve overall health in animals. Guduchi extracts have shown immunomodulatory, antioxidant, and antimicrobial effects [17,18].
10. Brahmi (*Bacopa monnieri*): Brahmi is a renowned herb in Ayurveda known for its cognitive-enhancing and neuroprotective properties. It is used in Indian veterinary medicine to support cognitive function and enhance mental well-being in animals. Brahmi extracts have shown potential in improving memory, reducing anxiety, and protecting against oxidative stress [19,20].
11. Shankpushpi (*Convolvulus pluricaulis*): Shankpushpi is a herb used in Ayurveda for its cognitive-enhancing and neuroprotective properties. It is used in Indian veterinary medicine to support brain health, enhance memory, and reduce anxiety in animals. Shankpushpi has been reported to have antioxidant, anti-inflammatory, and adaptogenic effects [21].
12. Turmeric (*Curcuma longa*): Turmeric is known for its anti-inflammatory and antioxidant properties and is commonly used in veterinary medicine to manage inflammatory conditions and support joint health in animals. Studies have shown that the active compound in turmeric, curcumin, can help reduce inflammation and pain associated with arthritis and other inflammatory disorders in animals [22,23].
13. Amla (*Emblia officinalis*): Amla, also known as Indian gooseberry, is a highly regarded herb in Ayurveda. It is rich in vitamin C and has antioxidant, immunomodulatory, and hepatoprotective properties. Amla is used in Indian veterinary medicine to support immune function, improve digestion, and enhance overall health in animals [24,25].
14. Shallaki (*Boswellia serrata*): Shallaki, also known as Indian frankincense, is valued for its anti-inflammatory and analgesic properties. It is used in Indian veterinary medicine to support joint health and manage inflammatory conditions in animals. Shallaki extracts have shown significant anti-inflammatory effects and have been used in the treatment of arthritis in animals [26,27].
15. Gokshura (*Tribulus terrestris*): Gokshura is a well-known herb in Ayurveda used for its diuretic, aphrodisiac, and rejuvenating properties. It is used in Indian veterinary medicine to support reproductive health and improve vitality in animals. Gokshura extracts have shown potential in improving semen quality, reproductive performance, and hormonal balance in animals [28,29].
16. Pudina (*Mentha spicata*): Pudina, also known as spearmint, is a popular herb used in Indian veterinary medicine for its digestive and carminative properties. It is used to support gastrointestinal health, relieve digestive discomfort, and

- improve appetite in animals. Pudina extracts have shown antimicrobial and antiparasitic activity as well [30,31].
17. Amrutha (*Tinospora cordifolia*): Amrutha, also known as Guduchi or Giloy, is a versatile herb used in Indian veterinary medicine for its immunomodulatory and hepatoprotective properties. It is used to support immune function, liver health, and overall well-being in animals. Amrutha extracts have shown immunomodulatory and antioxidant effects, and have been used in the treatment of liver diseases in animals [32].
 18. Milk Thistle (*Silybum marianum*): Milk thistle is often used in veterinary medicine to support liver health and aid in the treatment of liver diseases. Studies have shown that milk thistle extract can help protect liver cells and promote liver regeneration in animals [33,34].
 19. Chamomile (*Matricaria chamomilla*): Chamomile is known for its calming properties and is often used in veterinary medicine to help alleviate anxiety and stress in animals. It has been shown to have anxiolytic and sedative effects in both humans and animals [35].
 20. Echinacea (*Echinacea* spp.): Echinacea is commonly used in veterinary medicine to support the immune system and help fight infections. Studies have shown that echinacea extracts can enhance immune function in animals by stimulating the production of white blood cells and increasing antibody production [36,37].
 21. St. John's Wort (*Hypericum perforatum*): St. John's Wort is commonly used in veterinary medicine as a natural antidepressant and mood stabilizer for animals experiencing anxiety or behavioral disorders. Research has shown that St. John's Wort extract can have antidepressant effects by influencing neurotransmitter levels in the brain [38,39].
 22. Valerian (*Valeriana officinalis*): Valerian is used in veterinary medicine as a natural sedative and relaxant for animals experiencing nervousness, restlessness, or sleep disturbances. Studies have shown that valerian extracts can have sedative effects by modulating GABA receptors in the brain [40,41].
 23. Hawthorn (*Crataegus* spp.): Hawthorn is used in veterinary medicine to support cardiovascular health in animals. It has been shown to have positive effects on heart function and blood flow, and it may help manage conditions such as congestive heart failure. Studies have indicated that hawthorn extracts can have vasodilatory and antioxidant properties, which contribute to their cardiovascular benefits [42,43].
 24. Calendula (*Calendula officinalis*): Calendula is often used in veterinary medicine for its wound-healing properties. It has anti-inflammatory and antimicrobial effects, which can help promote wound healing and prevent infections. Studies have demonstrated the beneficial effects of calendula extracts in accelerating wound healing and reducing inflammation in animals [44,45].
 25. Saw Palmetto (*Serenoa repens*): Saw palmetto is commonly used in veterinary medicine for urinary and reproductive health in male animals, particularly in managing benign prostatic hyperplasia (BPH). It has anti-androgenic effects and can help alleviate symptoms associated with BPH. Studies have shown the potential of saw palmetto extracts in reducing prostate size and improving urinary flow in animals [46,47].
 26. Ginkgo Biloba (*Ginkgo biloba*): Ginkgo biloba is used in veterinary medicine to support cognitive function and improve circulation in aging animals. It has antioxidant and vasodilatory effects, which can benefit brain health. Studies have shown that ginkgo biloba extracts can have neuroprotective effects and enhance cognitive performance in animals [48,49].
 27. Marshmallow Root (*Althaea officinalis*): Marshmallow root is commonly used in veterinary medicine for its soothing and demulcent properties. It can be beneficial for animals with respiratory conditions or digestive irritations. Marshmallow root extracts contain mucilage, which can help soothe inflamed tissues. Although research in veterinary medicine is limited, marshmallow root has been traditionally used for respiratory and digestive support in animals [50].
 28. Dandelion (*Taraxacum officinale*): Dandelion is often used in veterinary medicine as a gentle diuretic and liver tonic. It can support liver and kidney health and promote detoxification. While there is limited specific research in veterinary medicine, dandelion has a long history of traditional use in animals for its beneficial effects on liver and urinary function [51,52].
 29. Astragalus (*Astragalus membranaceus*): Astragalus is used in veterinary medicine to support immune function and enhance overall vitality in animals. It has immunomodulatory and antioxidant properties. Studies have shown that astragalus extracts can enhance immune response and protect against oxidative stress in animals [53,54].

Acupuncture:

Acupuncture is a traditional Chinese medicine technique that involves the insertion of thin needles into specific points on the body to stimulate healing. This alternative therapy has gained popularity in recent years, not only for humans but also for animals. Acupuncture has been shown to be effective in the treatment of various musculoskeletal disorders, respiratory problems, and gastrointestinal disorders in animals. The therapy works by stimulating the release of endorphins, which are natural painkillers produced by the body. It also increases blood circulation and reduces inflammation in animals.

Acupuncture has been particularly useful in horses and dogs. In horses, acupuncture is commonly used for the treatment of musculoskeletal disorders such as lameness, arthritis, and back pain. In dogs, acupuncture is used to treat conditions such as hip dysplasia, spinal cord injuries, and epilepsy. A study conducted on dogs with spinal cord injuries showed that acupuncture improved neurological function and increased the survival rate. A study published in the Journal of the American Veterinary Medical Association showed that acupuncture is

an effective treatment for pain management in dogs with osteoarthritis. The study found that dogs who received acupuncture had a significant reduction in pain and improved mobility compared to dogs who received a placebo treatment [55,56].

Homeopathy:

Homeopathy is a system of medicine that is based on the principle of "like cures like". This system uses highly diluted natural substances to treat various illnesses. Critics of homeopathy claim that it is nothing more than a placebo effect, while supporters claim that it is an effective form of medicine. The effectiveness of homeopathy in animals has also been a topic of debate.

Despite the controversy, there are studies that show the effectiveness of homeopathy in animals. A study conducted on calves found that homeopathy was effective in reducing the severity of diarrhea in calves [57].

Chiropractic:

Chiropractic is a manual therapy that involves the manipulation of the spine and other joints to improve joint mobility, relieve pain, and enhance overall health and well-being. In veterinary medicine, chiropractic is commonly used to treat musculoskeletal problems, such as back pain, neck pain, and joint stiffness. There is limited scientific evidence to support the use of chiropractic in animals, but it may be effective for treating a wide range of conditions, including behavioral problems, digestive disorders, and respiratory infections [58].

CONCLUSION

In conclusion, alternative systems of medicine represent a rich tapestry of healing traditions that have been passed down through generations. In addition to herbal medicine, homeopathy, acupuncture, and chiropractic, there are many other complementary therapies that are used in veterinary medicine. These include massage therapy, hydrotherapy, aromatherapy, and nutritional therapy. These therapies are often used in conjunction with other forms of alternative medicine to enhance their effectiveness and provide a more holistic approach to treatment. While they may diverge from the paradigms of Western medicine, they offer unique perspectives on health and wellness that resonate with millions of people worldwide. However, the integration of alternative medicine into mainstream healthcare requires careful consideration of evidence-based practices, safety standards, and regulatory frameworks. By fostering collaboration, research, and open-mindedness, we can harness the strengths of both conventional and alternative systems to provide comprehensive and patient-centered care.

Conflict of interest

There is no conflict of interest.

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