



## Relevance of the use of Alternative Medicine for Bronchial Asthma: A review

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### ABSTRACT

Alternative systems of medicine include Chinese medicine, Ayurveda, homeopathic, and naturopathic medicine. Chinese medicine emphasizes the balance of qi (“chee”) or vital energy. Within this system, illness is defined as a disturbance in the balance of vital energy. Ayurveda is a system of healing which evolved from teachings in ancient India. Our review mainly focuses on the importance of the severity and control of asthma in the evaluation of patients and their response to treatment. We searched MEDLINE, EMBASE, The Cochrane Library, and the National / International abstracts to identify relevant articles. We limited evidence to alternative medicine for asthma, but we also reviewed observational evidence for safety. Outcomes of interest were overall mortality, exacerbations, quality of life, functional capacity, and primary health care. Lifestyle modifications that effectively lower asthma are: i) increased physical activity, ii) reduction of the impact of environmental factors on asthma such as smoking, air pollution, hazards in schools, day care, the work place, and home, as well as other environmental triggers. Our review suggests that alternative systems of medicine reduce adverse effects and the need for high-impact, high-cost intervention. It is the best way for self-healing and health promotion (salutogenesis rather than pathogenesis) that makes alternative medicine approaches to chronic disease especially attractive.

**Key words:** Acupuncture, air pollution, alternative therapy, family therapy

**DOI:** 10.4103/0975-1483.55754

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### INTRODUCTION

The term alternative medicine has been used interchangeably with complementary medicine, integrative medicine, and unconventional medicine. These names encompass many healing practices outside the realm of allopathic medicine.<sup>[1]</sup> Many people are using complementary and alternative medicine (CAM) therapies to reduce stress, prevent or minimize side effects and symptoms, and support health and healing. CAM includes an array of healing philosophies, approaches, and therapies that embrace a holistic approach to care – treating the mind, body, and spirit. Examples of CAM therapies are support groups,

therapeutic massage, acupuncture, meditation, yoga, art therapy, and music therapy.<sup>[2]</sup> There are many serious challenges facing healthcare authorities worldwide. In the developed countries, these challenges are related less and less to infectious diseases, but increasingly to the so-called “lifestyle diseases.” In the developing countries, however, healthcare challenges are largely allied to poverty, poor sanitation, and chronic malnutrition; factors which provide a fertile ground for diseases such as tuberculosis, hepatitis, malaria, and HIV/AIDS. However, even in these countries, the “diseases of lifestyle” are ominously becoming more prevalent, as increasing numbers of the populace adopt the lifestyle practices which often predominate in Western

societies. The purpose of this review is to investigate this presumption and document trends in alternative medicine prevalence, costs, and treatment.<sup>[3]</sup>

### Family therapy

Psychological factors may have an effect on asthma in children. Sometimes, children with any kind of family problems have severe asthma. In such cases, family therapy has been tried to resolve any family problems. Our review found some evidence from two trials that family therapy (in addition to standard asthma treatments) might help to reduce a child's asthma symptoms, but more research is needed to be certain. Nevertheless, drug therapy alone continues to be the main treatment. Treatment programs that include behavioral or psychological interventions have been developed to improve disturbed family relations of children with severe asthma. These approaches have been extended to examine the efficacy of family therapy to treat childhood asthma in a wider group of patients. This review systematically examines these studies.<sup>[4]</sup>

### Dietary salt

There is a wide geographical variation in asthma prevalence and mortality, especially in technologically advanced countries in the West. One of the major differences between these countries and the less developed ones is dietary habit, particularly salt consumption. Studies, notably by Burney and co-workers (Burney 1987) have shown a strong correlation between table salt purchases and mortality from asthma in men and children, but not women. Similarly, studies that have shown a link between salt consumption and an increase in both subjective and objective measures of asthma symptoms have also demonstrated the same gender difference. However, the reliability and validity of some of the methods used to measure long-term dietary salt intake is questionable and variable. This is partly due to the lack of a standardized measure of dietary salt intake that makes it difficult to compare studies. Sample size, socio-economic status, dissimilar populations, and lack of representativeness of the samples have all been cited as reasons for the inability to compare study results. Therefore, it would be prudent to restrict salt intake with the hope that while reducing the other risks associated with a high dietary intake of salt, there may be some reduction in the severity of asthma.<sup>[5]</sup>

### Bio-resonance system

Energy can be transferred to an organism much more effectively and comfortably through magnetic induction. Applying a Pulsating Magnetic Bio-Resonance System

induces signals that correspond with the electrical activity of the body's cells, nerves, muscle fibers, and blood vessels. By stimulating the electrical activity of individual cells, more energy can be provided to cause a number of positive physiological effects:

- Metabolism - increase in energy and improvement of digestion
- Circulation - increase in blood circulation, improvement in peripheral blood supply, and reduction of hematoma and edema
- Regeneration - enhanced wound and bone healing; increased energy levels and feeling of well-being
- Duration - A ten-minute application is sufficient for most individuals to restore energy levels.
- Frequency - The rate at which the individual's body uses up energy will also determine how often Bio-Resonance should be applied. For example, a sick person with very low energy or an athlete who spends a large amount of energy would need to recharge two to three times per day to ensure an optimal amount of energy for his/her daily requirements.

The effects of Pulsating Magnetic Fields on humans have been researched internationally and there is no doubt today that optimized Pulsating Magnetic Field Systems can be applied for therapeutic purposes. Saldonova *et al.* investigated the effects of pulsatile electromagnetic fields in children suffering from bronchial asthma. They observed that the clinical status of the pediatric asthma patients and their mood became better and hence, they recommended it as complementary therapy.<sup>[6]</sup>

### Acupuncture

Acupuncture has been successfully used in China to treat most illnesses over the past 3500 years, and research has shown that acupuncture can be very effective for respiratory diseases including asthma. The National Institute of Health (USA) has stated that the data in support of acupuncture are as strong as those for many accepted Western medical therapies. One of the advantages of acupuncture is that the incidence of adverse effects is substantially lower than that of many drugs or other accepted medical procedures used for the same conditions.<sup>[7]</sup> Acupuncture can reduce the frequency and severity of attacks: a study conducted at the Department of Anesthesia and Intensive Care in the University Hospital of Vienna showed that over 70% of patients with long-standing asthma reported a significant improvement of their ailments after ten weeks of acupuncture treatment.<sup>[8]</sup> In another study, Scientists at the Second Municipal People's Hospital, Kaifeng City, China studied 192 patients suffering from bronchial asthma, all

of whom were treated by acupuncture. There was a marked improvement in 76.5% of the patients.<sup>[9]</sup>

## Yoga

One of the fundamental philosophical tenets of Yoga, which means "union" (of body and spirit) and is an ancient Indian meditative exercise technique, is that the breath is the most important bodily function that needs to be controlled. The Sanskrit word for breath is "prana" which also means life force or spirit. Thus, control of the breath is crucial for optimal health and well being, and a good place to start when life or health is out of balance. Breathing exercises are extremely helpful for asthmatics because they:

- strengthen respiratory muscles
- eliminate inefficient use of accessory muscles of respiration (such as abdominal or neck muscles)
- replace forceful breathing, which compresses airways, with relaxed breathing
- can reduce hyperventilation by increasing expiration
- can reduce the sensation of breathlessness by increasing the functioning of the diaphragm
- can enhance clearing of airways
- can give you the confidence to withstand breathlessness

To help control an acute asthma attack, the patient should be asked to sit leaning forward with their head on their arms that should rest on a table. Alternatively, the patient can try lying semiprone, with arms and legs slightly bent and relaxed, body and limbs well supported by pillows.<sup>[10]</sup> There is not enough evidence on the effectiveness of yoga in treating chronic obstructive pulmonary disease, asthma, epilepsy, stress reduction, insomnia, diabetes, multiple sclerosis, myopathy, muscular dystrophy, back or neck pain, and other pain syndromes.<sup>[10-19]</sup>

## Neurolinguistic psychotherapy

Neurolinguistic Psychotherapy and Counseling is a specialized form of Neurolinguistic Programming (NLP), which is based on the idea that we 'construct' our own reality. An NLP therapist/counselor works on the basis that each one of us builds our own unique 'models' or 'maps' of the world around us. Although such maps are genuine and real to us as individuals, no one's 'map' is fully able to represent the real world. Most elements of our 'maps of the world' are useful and work well for us, but some of our beliefs and behavior patterns get in the way of our own progress and can make us feel 'stuck' or out of control. Neurolinguistic Psychotherapy and Counseling draws on concepts from many areas of psychology and psychotherapy. It helps us to understand how and why we

do what we do, and to change those behavior and thinking patterns that are unhelpful. It also assists us to develop a greater sense of self-control, recognize our own best qualities and use them well.<sup>[20]</sup>

## Non-violence

Fujiara *et al.* reported that positive correlation between exposure to community violence and a higher burden of childhood asthma. This review has demonstrated that there is sufficient evidence to argue that asthma is the embodiment of exposure to the environmental pollutant of violence in children's lives, both directly and indirectly. There are many pathways through which this experience acts upon the body. Psychosocial stress due to violence directly influences the development and/or exacerbation of asthma through biological responses, such as immune suppression and inflammation by dysregulation of the HPA axis. Psychosocial stress might change the susceptibility of air pollution which has an impact on asthma. Exposure to violence would also change the behavior of caretakers and/or children, such as keeping indoors, skipping medications, and smoking. These changes might induce greater exposure to indoor pollutants and allergens, sedentary lifestyles, and lack of social support, which are considered as risks for asthma. Based on this review, continued research and data gathering are needed to elucidate the complex mechanisms underlying the association of exposure to violence with asthma.<sup>[21]</sup>

## Light therapy

Dr. Richard Brouse, a chiropractic physician, biochemist, certified clinical nutritionist, teacher, and author, says, "The gentle heat of far-infrared helps to detoxify the body, promotes relaxation, and improves circulation. It can also help ease the pain and symptoms of problems such as arthritis, allergies, asthma, injuries, and diabetes. In almost every instance, it seems to reduce pain and speed the healing process. Again, thousands of people have reported wonderful benefits from the use of the Hothouse and many after using it the very first time. Trying to describe what this complete therapy feels like is comparable to trying to describe your most wonderful vacation you were on to your best friend. Words can't describe it, you need to experience it."<sup>[22]</sup>

## Siddha medicine

The leaves of the *Justicia adhatoda* plant contain the alkaloid, vasicine (C<sub>11</sub>H<sub>12</sub>N<sub>2</sub>O), which is responsible for low-level, persistent bronchodilatation, and an essential oil which is

chiefly responsible for expectorant action. The leaves and roots contain other alkaloids—vasicinone, vasicinolone, and vasicol—which may contribute to the bronchodilatory effect through anticholinergic action on the vagal innervations of the bronchi. The bronchodilation effect is considerably increased after atropine administration. Studies have also shown Vasa to be effective in the treatment of amlapitta (dyspepsia) and pyorrhea. *In vitro* growth of several strains of *Mycoplasma tuberculosis* was inhibited by the essential oil at concentrations in the range of 2–20 g/mL. There has also been a report of thrombopoietic (platelet-increasing) activity with vasicine. Traditional Uses: The juice expressed from the leaves and the decoction of the leaves and roots are useful in asthma, bronchitis, and other chronic coughs. Dried leaves are used in dhoomapana (smoking) in the treatment of bronchial asthma. The leaf decoction is an excellent expectorant when decocted with punarnava (*Boerhaavia diffusa*) and then combined with ginger juice and black pepper. Another effective preparation for the treatment of asthma is the decoction of vasa, guduchi (*Tinospora cordifolia*), and kantakari (*Solanum surratense*) mixed with honey. Vasa has also been used to treat skin conditions by combining it with triphala and using the decoction both internally and externally. Vasa is also indicated in the treatment of internal hemorrhage, and is used for this indication as a decoction with haritaki, made into a ghrita, or taken alone as the leaf juice.<sup>[23]</sup> Indications: asthma, bronchitis, cough, local bleeding, thrombocytopenia, pyorrhea

#### Formulations and Dosage

Fresh leaf juice: 5–10 mL tid

Leaf powder: 3–5 g tid

Leaf decoction: 2–3 oz tid

Root powder: 3–5 g tid

Vasaghrita: 7–10 g Bid

Decoction: 1–2 oz bid

#### Homeopathy

A major tenet of homeopathy is the law of similar or 'like cures like' (*i.e.*, a substance can 'cure' in a patient the same set of symptoms it can induce in a healthy individual).<sup>[24]</sup> A plant, mineral, or other product is chosen on the basis that it would, if given to a healthy volunteer, cause the presenting symptoms of the patient.<sup>[25]</sup> When given in a very diluted form, the chosen homeopathic remedy should alleviate these symptoms. Currently, there are over 2000 substances known as remedies in the homeopathic Materia Medica.<sup>[26]</sup> For example, a homeopathic preparation derived from cockroaches may be used to treat a form of asthma characterized by suffocation with an accumulation

of mucus.<sup>[27]</sup> Another manifestation of asthma might be treated with a different preparation. Choosing remedies based on the symptoms rather than the disease itself is an integral part of the holistic approach to treatment by homeopathic practitioners.<sup>[28]</sup> As the remedy in its pure form would likely have some degree of toxicity, it is diluted and shaken (succussed) in a 1:10 (X or D for decimal) or 1:100 (C for centesimal) dilution in a water-alcohol solution. The higher the dilution is, the more potent is the medicine. Insoluble substances are pulverized and formed into pellets with sucrose and/or lactose.<sup>[29]</sup> Highly diluted preparations are greater than Avogadro's number and no longer contain the original molecule. The precise mechanism of action of homeopathic medicines on biological symptoms is still unexplained. For many, the lack of a scientific explanation for homeopathic treatments raises questions about its legitimacy. Some believe that complex interactions occur during dilutions that impart a 'memory' of the original substance to the water molecule. The ongoing debate over its mechanisms of action is beyond the scope of this article.<sup>[30]</sup>

#### Hydrotherapy

Hydrotherapy is the use of water for recuperative and healing purposes. Hydrotherapy treatment is largely considered to be the oldest form of medical treatment known to man. Hydrotherapy tubs and other items of hydrotherapy equipment are still used in modern times for a vast range of therapeutic measures. Along with treating diseases and improving wound healing, circulation, relaxation, digestion, and the immune system, hydrotherapy has been proven to be beneficial for people with acne, anxiety, arthritis, asthma, back pain, burns, chronic fatigue syndrome, constipation, depression, and varicose veins etc. The reviewer suggests that the application of water to treat disease has been used throughout history. It is known that Hippocrates (460–375 BC) used hot and cold water in the treatment of multiple disease states.

1. At present, hydrotherapy is applied to treat a myriad of diseases including musculoskeletal problems. The majority of the evidence on the effectiveness of hydrotherapy to treat the described disease states and 'conditions' comes from small case series/reports and subsequent low level evidence (Level 4).
2. The higher level evidence that was reviewed does not suggest hydrotherapy is effective in treating osteoarthritis, rheumatoid arthritis, ankylosing spondylitis, chronic low back pain, and fibromyalgia or pressure ulcers. There were two papers that did suggest that post ACL reconstructive surgery patients may have better outcomes than those undertaking land-based exercises alone.

- The application of hydrotherapy is not always without risk. There are reports in the literature regarding legionella infections, burn, folliculitis and hypersensitivity pneumonitis which were directly related to the hydrotherapy.<sup>[31]</sup>

### Massage therapy

There are many different types of massage—they all have one aspect in common—they are a holistic, alternative treatment. They bring about an effect on all the systems of the body - digestive, detoxification, respiratory, circulatory, lymphatic, endocrine, and nervous systems. It is thought that many of today's health problems arise from stress. However, most people underestimate the effects of a poor diet which leaves the body less able to cope with stress. Stress upsets the delicate balance and homeostasis of all bodily functions; re-establishing this balance requires a holistic approach. Regular massages can be an effective way of calming the whole system, which can be enhanced with certain essential oils added to the massage oil or cream. Hot Stone Massage Therapy has been used for centuries to relax and treat breathing problems. Ancient Ayurvedic therapy with hot river bed stones melts away stress and tension and draws out impurities from the body. Several studies show positive effects when parents massage their asthmatic children; there is less anxiety and a reduction in the stress [Figure 1].<sup>[32]</sup>

### CONCLUSION

Our review suggests that nearly 80% of the world's population does not have access to modern medicine. Most of the money for health care in the developing world goes to the remaining 20% of the population. Health care costs are predicted to double in the next ten

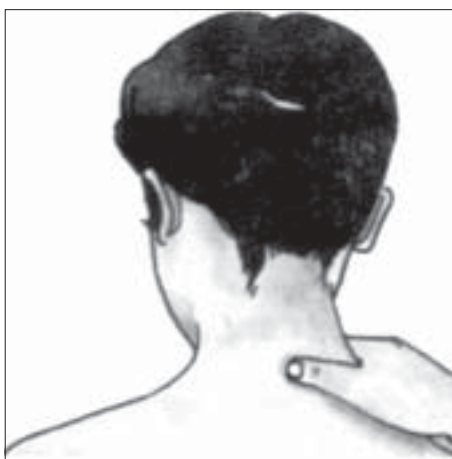


Figure 1: Massage therapy

years. Low-cost intervention such as lifestyle changes, diet, supplemental therapy, and behavioural medicine can be delivered as substitutes for high-cost drugs and technological intervention. All major alternative medicine systems approach illness first by trying to support and induce the self-healing process of the person. Policy makers, politicians, doctors, and third parties must explore variations in asthma care across countries and distinguish between normal variations due to differences in health care systems and cultures, and variations that can be reduced through policies that improve the alternative systems of medicine for asthma care and clinical practice.

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**Source of Support: Nil, Conflict of Interest: None declared.**

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