

Natural Body Therapies

Jay A. Seitz*

Neurocognitive Therapeutics, LLC, 100 Washington Street, Gloucester, MA, USA

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*Corresponding author: Dr. Jay A. Seitz, Neurocognitive Therapeutics, LLC, 100 Washington Street, Gloucester, MA, USA. Tel: (917) 209-9623; E-mail: drjseitz@mac.com

Abstract

One of the most effective ways to relieve stress, irrational thoughts, and negative feelings as well as alleviate many kinds of medical conditions is through so-called body therapies. Sports and dance are the most common examples, but there are others. Instructed therapies such as the Alexander technique, the Feldenkrais method of body awareness, and Pilates all work the body systematically through the mind-brain-body matrix. So does the many varieties of therapeutic massage and Yoga as well as other Eastern practices such as Tai chi and buteyko or the use of breathing exercises. I examine these various natural body therapies relying on published reviews emanating from the Cochrane Reviews and the Australian Government Department of Health Review of Natural Therapies.

Introduction

One of the most effective ways to relieve stress, irrational thoughts, and negative feelings as well as alleviate many kinds of medical conditions is through so-called body therapies. Sports and dance are the most common examples, but there are others. Instructed therapies such as the Alexander technique, the Feldenkrais method of body awareness, and Pilates all work the body systematically through the mind-brain-body matrix. So, does the many varieties of therapeutic massage and Yoga as well as other Eastern practices such as Tai chi and buteyko or the use of breathing exercises. Just about all of these methods are taught therapies and involve the use of various kinds of instruction realized through movement, action, and activity [8].

On the other hand, stress and a sedentary lifestyle, poor diet and nutrition, excessive weight, and exposure to pathogens and toxicants (alcohol, tobacco) are major risk factors for a number of medical conditions including cardiovascular disease (CVD), cancer, diabetes and metabolic disorders, mental and brain health, arthritis and musculoskeletal conditions, respiratory conditions, attentional issues, insomnia, and smoking cessation [9]. Do body therapies have a positive effect on these conditions? All of the therapies I will discuss below are physical or bodily therapies that involve movement of the whole-body, trunk, limbs, face or breath.

Yoga

The Indian tradition, of which Yoga is a part, dates back to 5000 B.C.E. and is rooted in Ayurvedic medicine or “knowledge

of longevity.” Ayurvedic medicine emphasizes mental, physical, social, and spiritual harmony. One’s state of mind is made up of a balance of three mental principles: Sattva (the mind’s natural state), *tamas* (a focus on external objects), and *rajas* (a focus on action). A predominance of *tamas* and *rajas* suppresses *sattva* and causes the mind to be more “efficient” improving mental health. The body’s *dosas* (*vata*, *pitta*, and *kapha*), however, work together to sustain physical health and are representative of the five central elements of both the universe and the human body (earth, water, fire, air, and space). *Vata* directs action, *pitta* directs transformations, and *kapha* stabilizes the two. The balance or imbalances of the *dosas* maintain physical health or create disease. Treatment involves stimulation of the five senses (music, massage, and the use of aromas), purification (enemas and emesis or vomiting), and the use of medicines, which can be either actual physical substances or *certain thoughts or beliefs* all aimed at balancing the *dosas*.

Yoga is a mind-body practice that combines breathing techniques, physical postures or *asanas*, and meditation to re-establish mind-body balance and improve overall health. It has eight dimensions including *pranayama* or breathing, *asanas* or postures, and *dhyana* or meditation. Yoga has many styles of practice including Hatha yoga, Bikram or hot yoga, Vinyasa, and Ashtanga yoga. These various styles focus on different elements of breathing, physical postures, and meditation as well as the amount of intensity of the exercise.

Ashtanga yoga is an intense and difficult yoga to learn and often devotees take 4-5 classes a week. It is often referred to as power yoga. The role of the instructor is to guide movement as well as assist in correcting the postures, limb and trunk alignments and adjustments, and breathing. The flow of the sequence of postures is referred to as *vinyasa* and is another central aspect of training. It involves a set of subskills including smoothly executing individual postures, proper limb and trunk alignment, and appropriate breathing. The latter typically involves inhaling for 10-15 seconds and then exhaling for 10-15 seconds, but in unison with the posture and in flow with the sequence of *asanas*. These are the major skill sets. The complexity in the practice of yoga probably rivals learning the Argentine tango [7].

Like dance [1,3,4,5,6], yoga involves complex movement skills and is thought to help in stress reduction and it may even be an effective strategy in the prevention of cardiovascular disease, among other disorders. Both the Cochrane Review [2] and the Australian Government Department of Health Review of Natural Therapies[3] were consulted, and the results appear below. Cochrane is a non-profit, non-governmental organization (NGO) that compiles evidence-based findings in many areas of medical research. In 2015, the Australian Government did a major survey of natural therapies focusing on clinical efficacy, safety, quality, and cost effectiveness. The studies were examined by experts from independent organizations who did systematic reviews of the literature and made available their findings to the public.

Cochrane Review. Yoga had positive effects on diastolic blood pressure (the part of the cardiac cycle when the heart refills with blood), HDL or good cholesterol, triglycerides (markers of atherosclerosis), but unclear effects on LDL or bad cholesterol. There is some evidence that yoga improves back-related function after three to six months of regular practice and may be slightly effective for low back pain. Mind-body interventions including yoga and hypnotherapy may have some benefits for the management of anxiety during pregnancy. There was no evidence, however, that meditation-based activities like yoga are helpful with disorders such as ADHD that involve chronic levels of hyperactivity, inattention or impulsiveness. Nonetheless, exercise therapy, including yoga, may reduce fatigue in patients with multiple sclerosis.

Australian Government Department of Health Review of Natural Therapies. There was weak evidence that yoga has positive benefits for individuals diagnosed with depressive disorders. There was insufficient evidence to draw any definite conclusions for other clinical conditions including arthritis and musculoskeletal conditions, cancer, cardiovascular disease, insomnia, menopause, mental health conditions, neurological conditions, ADHD, pregnancy and labor, renal disease, respiratory conditions, smoking cessation, and type 2 diabetes and metabolic syndrome.

Alexander Technique

The Alexander technique is a form of mind-body therapy that is designed to correct poor posture and bring the body into appropriate alignment through a succession of movements to help it function more effectively and reduce pain. Through individualized assessment and a series of progressive, calibrated lessons, the patient releases undesired tension in the body (head, neck, and spine) and begins to improve postural tone and neuromuscular coordination. Lessons are made up of hand contact by the instructor, as well as verbally-guided movement while standing, lifting, walking, sitting, and lying down. It reportedly produces relaxation and may help individuals with asthma breathe more easily.

Cochrane Review. The Alexander technique has been prescribed to individuals with asthmatic symptoms that are caused by air pollution, allergies, pollen, and stress. The technique purportedly

improves breathing because during an asthma attack the bronchial airways become constricted resulting in breathing issues, such as coughing and wheezing. However, there was a paucity of evidence demonstrating the efficacy of the Alexander technique over traditional medication (inhalers) for asthma to reduce symptoms.

Australian Government Department of Health Review of Natural Therapies. The Alexander technique may be effective in alleviating disability and pain in individuals with low back pain. This effect may last for up to three months, but the longer-term effectiveness is unknown. However, improvements that are statistically significant have been reported for the intensity and length of pain measured in median number of days, extent of disability, and persistent positive mood when compared to nursing care, self-help groups, and physical exercise. For other clinical conditions such as neck pain, chronic musculoskeletal pain, asthma, post-traumatic stress disorder, and generalized anxiety disorder there was no conclusive evidence.

Feldenkrais Method

The Feldenkrais method attempts to improve posture, breathing, and movement by combining gentle touch with hands-on verbal instruction. Individuals are taught to focus on their breathing and movement with the aim of bringing mindfulness to these activities and thus adopting new habits. Through these practices, individuals are said to experience an improvement in their overall sense of well-being. There are two formats for teaching the Feldenkrais method. Functional Integration requires one-on-one, hands-on sessions during which the practitioner gently moves the patient into various positions. Awareness Through Movement, on the other hand, teaches individuals using recorded instructions either individually or in a group setting. Pedagogical instruction is often conducted standing, sitting in chairs or lying on a carpet.

Cochrane Review. No extant studies available.

Australian Government Department of Health Review of Natural Therapies. Only studies of women with work-related complaints of the neck and shoulder, people with chronic low back pain, and older individuals at risk of falling have been reported in the literature. Randomized clinical trials reported a positive effect favoring Feldenkrais compared to no treatment, sham, or one's usual activities. The studies, however, were small and statistically underpowered and the level of confidence in the evidence was low. There is also a paucity of evidence regarding the effectiveness of Feldenkrais for the improvement of health outcomes for other clinical conditions. The Feldenkrais method is intended to re-train the brain to improve posture and movement with the goal of improving quality of life. The effectiveness of Feldenkrais for improving health outcomes in people with chronic musculoskeletal pain (neck, shoulder, or knee), fibromyalgia, motor skills in patients after stroke, post-traumatic stress disorder, and adults with generalized anxiety disorder, is unknown.

Pilates

Joseph Pilates (1883-1967) was a physical trainer of German origin who came to believe by his mid-teens that posture, breathing, and lifestyle components were key to mental and physical health. After arriving in the US in 1925, he set up shop in New York City and focused on his work with students including many modern dancers and ballerinas. In his mind-body practice, he emphasized the trunk postural muscles of the core as highly important for supporting and aligning the spine and the key to overall balance of the body. He taught breath awareness and accentuated the primacy of the abdominal and deep torso musculature. His method comprises about 500 exercises using specially constructed equipment and floor mats. Exercises focus on centering and strengthening the core musculature, control of postural integrity, precision in application of the exercises, and mental and physical concentration. He also placed great emphasis on isometric resistance in which there is contraction of the musculature without moving the joints. This is similar to executing a Yoga plank (posture) that emphasizes muscles in the core or holding a weight in a fixed position over time. There is also significance given to stabilizing muscles that improve posture and condition the body. The putative benefits of the Pilates method include enhancement of coordination and strength, flexibility and balance, symmetry and definition of the musculature of the body, increased range of motion, and improvements in one's proprioceptive sense. Thus, one might assume that the Pilates method would be of therapeutic benefit to individuals with musculoskeletal conditions or even those individuals with Parkinson's disease affecting balance.

Cochrane Review. The Pilates method is somewhat effective for low back pain and disability in the short and intermediate term as well as demonstrating improvement in overall functioning. However, it is probably no more effective than other forms of physical exercise for pain and disability, which as it turns out, may in some cases, be more effective in both the short and intermediate term.

Australian Government Department of Health Review of Natural Therapies. The Pilates method may help some adults with low back pain and improve overall health outcomes. But, for other clinical conditions such as being overweight or obese, breast cancer, falls prevention in older adults, stress, and urinary incontinence in women, there is little evidence to support its use given the dearth and quality of currently available studies.

Tai Chi

The Chinese tradition of healing dates back to 4500 B.C.E. and is rooted in the Taoist philosophy that the body is a miniaturized version of the universe. While change is common to both, it is represented in the body by a flow of energy called "qi." Lack of qi makes one susceptible to illness because of constantly evolving circumstances that make one unable to deal with either changes in the environment (an argument with a spouse) or changes within the self (angry feelings). The balance of energetic forces distributed throughout the body is represented by the polar opposites of ying and yang. If these energetic forces are

unbalanced, it is because qi has been blocked and treatment consists of redistributing qi throughout the body. To restore mental and physical balance, treatment consists of nutritional changes to one's diet, exercise such as Tai Chi, as well as adopting a correct psychological attitude.

Tai Chi or Taijiquan as it is known, is a mind-body practice that originated in China and encompasses relaxation, deep breathing, and slow and gentle physical movement. There are many different styles of Tai Chi, but each is based on the same underlying principles. In addition to movement of the body in various postures, the practice of Tai Chi also focuses on mental concentration and deep breathing. Tai Chi is often practiced in groups as well as individually and outdoors. It has been used to treat musculoskeletal conditions such as rheumatoid arthritis.

Cochrane Review. There is evidence that Tai Chi has a number of benefits for the body particularly those with rheumatoid arthritis. It improves the range of motion of the knee, hip, and ankle. But it does not rehabilitate joint tenderness, grip strength, swollen joints or an individual's ability to perform daily chores. There was some evidence, however, for better functional capacity and pulmonary function in chronic obstructive pulmonary disease (COPD).

Australian Government Department of Health Review of Natural Therapies. There is evidence that Tai Chi has some positive health benefits for improving muscle strength in late-age adults as well as enhancing quality of life in individuals with cardiovascular disease, hypertension, and osteoarthritis including accompanying pain. On the other hand, there is little extant evidence to suggest that Tai Chi is effective for reducing Type 2 diabetes or in preventing falls in older adults.

Buteyko (Breathing Exercises)

The Buteyko breathing technique was invented by a Russian physician, Konstantin Pavlovich Buteyko (1923-2003), for the treatment of asthma and other respiratory conditions. The technique is an instructional process in which patients are initially coached in controlled shallow breathing through the nose followed by holding the breath at the end of the exhalation.

Not surprisingly, breathing exercises have been taught for various conditions in Western and Eastern cultures for hundreds, if not thousands, of years. Anecdotally, mind-body practices emphasizing breathing exercises suggest an alleviation of symptoms of asthma.

Cochrane Review. Six of eleven studies assessing lung function demonstrated a favorable difference for breathing exercises for asthmatic symptoms. Generally, no adverse effects were reported, and the treatment was deemed safe and well-tolerated.

Australian Government Department of Health Review of Natural Therapies. The reduction of bronchodilator use, in patients with asthmatic symptoms through use of the Buteyko breathing technique, is often accomplished in practice, but there is little or no effect on core asthma symptoms or pulmonary function. Thus, there is little support for use of the technique in managing the overall symptoms of asthma.

Therapeutic Massage

The Greek tradition of medicine is associated with the teachings of Hippocrates and his followers including Galen, a prominent Roman physician, starting around 400 B.C.E. Central to health was the balance of the four humors (blood, phlegm, yellow and black bile) and the balance of the four elements (air, water, fire, earth). Each humor had a different origin in the body (heart, head, gall bladder, spleen, respectively) and were renewed by food and water. Health and disease resulted from their imbalance. For instance, excessive black bile caused melancholia or depression and produced various forms of malignancy. Humors were generated, blended, and transformed by way of the body's internal fire or cauldron, which originated in the left ventricle of the heart. The humors gave rise to the four temperaments or what is now referred to as character or personality. These sanguine, phlegmatic, choleric, and melancholic temperaments, moreover, were believed to be affected by the seasons of the year. Treatment consisted of restoring the balance of the humors through a proper conduct of life that included appropriate food and drink, suitable daily activities and living conditions, proper exercise, the quality of one's sleep, engagement in healthy sexual activity, as well as psychological understanding of oneself and others.

Therapeutic massage as practiced in Western cultures involves manipulating or kneading the musculature of the body or other soft tissues for improving health and well-being. It is a form of manual therapy that involves applying pressure to the muscles, ligaments, tendons, and fascia or sheaths of fibrous tissue—generally collagen—that enclose, attach, and stabilize various muscle groups. There are many forms of therapeutic massage, but they all vary around the amount of pressure and touch as well as the intensity of the intervention.

Cochrane Review. Therapeutic massage had some benefits in alleviating low back pain and improving function in the short-term but not in the long-term. There was no evidence, however, for the alleviation of pressure ulcers caused by constant friction or pressure. However, massage for mechanical neck pain provided alleviation of both tenderness and pain in the short-term. This is significant because neck pain is quite common and massage—manipulating the soft tissues surrounding the neck with the elbow, arm, and hand—is generally effective.

Australian Government Department of Health Review of Natural Therapies. Therapeutic massage was effective in the short-term, but not long-term, for chronic low back pain and in short-term relief of pain in patients with acute low back pain. In preterm infants, it is effective for promoting weight gain and reducing the length of stay in the hospital.

To briefly summarize, all three ancient traditions (Ayurvedic, Chinese, and Greek) emphasize health as consisting of:

1. A balance of substances
2. The individual integrated into the larger social and physical world
3. Prevention as the goal of medical knowledge
4. The individual's ability to self-heal
5. Treatment conceptualized as treating the whole person

Unfortunately, there are limited studies of the effectiveness of natural body therapies for mind-body disorders including brain health and medical conditions [10]. Almost all of these therapies involve extensive learning and practice to gain the health and exercise benefits. Much value would be accrued if future researchers looked more deeply and systematically at a broad range of natural body therapies.

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