Comprehensive Lifestyle Intervention

At the Center for Lifestyle Medicine of the Cleveland Clinic’s Wellness Institute, I and my colleagues use a comprehensive lifestyle intervention for participants with multiple chronic diseases, including anxiety. Our lifestyle prescription includes mind–body approaches consisting of therapeutic restorative Hatha yoga practice and behavioral health coaching, along with cooking, nutrition, and physical activity.

The program, called Lifestyle 180® consists of 72 hours of a group-based intervention over a 1-year period. While not formally designed for treatment of generalized anxiety disorders, each therapeutic lifestyle modality addresses key aspects of anxiety: chronic psychologic stress; poor diet; and physical inactivity.

Patients learn and practice breathing techniques, meditation, and mindfulness practices, and perform simple yoga poses to elicit the relaxation response, the physiologic opposite of the fight-or-flight response. This may enable participants to become more aware of their feelings and thoughts, to recognize old thought patterns that no longer serve them, and release those unhelpful ways of thinking and believing, and thus, reduce psychologic distress and reduce symptoms of chronic stress and anxiety.3–4

Through education and hands-on practice, patients learn how to cook and eat a low-fat, whole-foods (100% whole grain) Mediterranean diet to increase intake of plant-derived antioxidant and anti-inflammatory compounds, and to enhance insulin sensitivity, thus potentially also reducing psychologic distress and anxiety.3–6 Engagement in physical activities—both aerobic and strength training—may also induce improvements in anxiety-related outcomes.7

In a study, participants who implemented these self-care behaviors had clinically and statistically significant improvements in biometric and laboratory outcomes in spite of decreased usage of medications.1 Although state- and/or trait-anxiety status was not formally evaluated, participants reported significantly better mood, and improved perceived stress and overall quality of life.8 In addition, participants, who among other chronic conditions, also have generalized anxiety disorder, used less prescription medications for anxiety (manuscript in preparation).

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Yoga

Anxiety disorders are a major worldwide health problem that affect a large number of individuals every year.1 In the U.S. National Comorbidity Survey Replication, the lifetime prevalence of anxiety disorders was 28.8%.1 Recent studies also suggest that chronic anxiety disorder may increase the rate of cardiovascular-related mortality.2

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Yoga, a form of holistic mind–body medicine, that includes the use of physical postures (āsanas), breathing practices (prānāyāmas), meditations, relaxation techniques, and lifestyle changes based on ancient yogic philosophy, is simple, cost-effective and easy to practice. Yoga reduces stress and anxiety by improving autonomic functions via triggering neurohormonal mechanisms that suppress sympathetic activity through downregulation of the hypothalamic–pituitary–adrenal axis. There is mounting evidence that yoga reduces anxiety symptoms. A systematic review of the effects of yoga on anxiety identified five trials on patients with clinically diagnosed anxiety disorders. The results were consistently positive, including substantial improvement demonstrated in one trial of participants with obsessive–compulsive disorder and in another trial on anxiety levels of patients with various chronic diseases, including hypertension and coronary heart disease.

A study on cyclic meditation in healthy male volunteers showed a reduction in state-anxiety, as assessed by Spielberger’s inventory. In another study on women with anxiety disorder (N = 65), the patients were divided into two groups: (1) yoga (n = 34) and (2) a wait-list control (n = 31). The yoga group received the intervention for 90 minutes, twice per week, for 2 months. There was a significant decrease in state- and trait-anxiety in the yoga group, compared to the control group. Yogic relaxation (Yoga Nidrā) is also a successful therapy for managing both recent and long-standing psychologic disturbances, especially high anxiety levels.

Several yogic practices (performed daily for 60 minutes, for 3 months) may be useful for helping patients manage their anxiety disorders. The practices are as follows:

1. Breathing techniques (Prānāyāma, total ~ 20-minute session)—Hands in and out breathing (10 rounds in 2 minutes); hand stretch breathing (10 rounds in 2 minutes); tiger breathing (10 rounds in 2 minutes); forceful exhalation (Kapalabhati; 20 breaths per minute in 1 minute); alternate nostril breathing (Nādissūdhi; for 5 minutes); left nostril breathing (Chandra Anuloma Viloma; 27 rounds in 5 minutes, 4 times per day); humming bee breath (Bhramari; for 2 minutes); and abdominal breathing in lying–down position for 2 minutes

2. Physical postures (Asanas; 1 minute each, total ~ 15-minute session)—to be performed as follows:
   A. Standing asanas—Surya Namaskāra (Sun Salutation) in slow mode with maintenance of each posture for 10 breaths; hand-to-foot pose (Pūdabhastāsana); and half-waist-rotation pose (Ārdha Kati Chakrāsana; 1 minute each side)
   B. Sitting asanas—half-spinal-twist pose (Ārdhamatsyendrāsana); twisted pose (Vākrasana); hare pose (Shashānāsana); and back-stretching pose (Paschimottanāsana)
   C. Prone asanas—crocodile pose (Makarasana) and cobra pose (Bhujangāsana)

D. Supine asanas—shoulder stand pose (Sarvāngāsana); plough pose (Halāsana); knees-to-ear pose (Karnapidasana); wind relieving pose (Pawannuktāsana); and bridge pose (Setubandhāsana)

3. Meditations—Kundalini Yoga, Om Meditation, and cyclic meditation for 15 minutes, once per day

4. Guided relaxation (Savāsana) and Yoga Nidrā for 10 minutes at the end of asanas and prānāyamas.

References


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**Iyengar Yoga**

Anxiety is a debilitating condition that affects more than 16% of the world’s population at some point in time. Yoga has been shown to reduce symptoms of anxiety, with 19 of 27 published research studies that examined the effect of yoga on anxiety demonstrating significant reductions in subjective measures of anxiety. Yoga is believed to relieve anxiety by turning off the hypothalamic–pituitary–adrenal (HPA) axis and the sympathetic nervous system responses to stress. In a randomized controlled trial, 12 weeks of Iyengar yoga was superior to walk-
ing for improving mood, decreasing anxiety, and increasing brain levels of γ-aminobutyric acid, a neurotransmitter that decreases HPA-axis activation and acts as an anti-anxiety agent, much like a natural form of Xanax® (alprazolam).

From a yogic perspective, a strong nervous system is vital for developing emotional and mental stability, and breath is integral in this development. Slow, relaxed breathing is linked directly to calming the mind and maintaining equanimity, and a healthy diaphragm is essential for a gentle, effortless breath. Forward bends done with the head resting on a bolster or block are calming to the nervous system and help relieve immediate symptoms of anxiety. Supported backbends help increase lung expansion and tone the diaphragm, which are important for developing control of the breath.

An asana and pranayama sequence helps the diaphragm to become toned and elastic, calms the breath, and stimulates blood flow to the cells of the body, thereby strengthening the nervous system and reducing anxiety. The sequence is as follows: Tādāsana; Urdhva Hastāsana in Tādāsana; Uttanāsana (head supported); Prasarita Padottānāsana (head supported); Adho Mukha Śvanāsana (head supported); Utrṭhatī Trikonāsana; Ardha Chandrāsana; Dwispada Viparita Dandāsana on a chair (head supported); supported Utrtrāsana; Virāsana; Adho Mukha Virāsana; Janu Sirsāsana (with a bolster supporting the torso and head); supported Paschimottanāsana; Upavistha Konāsana (sitting upright); Baddha Konāsana (sitting upright); Supta Baddha Konāsana (supported); Supta Virāsana (supported); supported Setu Bandha Sarvangāsana; Viparita Karānī; and Sāvāsana (head and chest supported on a bolster or folded blankets).

Also included are prānāyāmas as taught in Light on Prānāyāma: Prānāyāma Dīpīka5 These are: Ujjasī II and IV and Viśoma II; and Sāvāsana again (flat on ground with weight on the legs).

References


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Short-Term Yoga-Based Lifestyle Intervention

Anxiety, altered personality, and stress, can be associated with chronic conditions such as diabetes, heart diseases, and psychiatric disorders, and result in a poor quality of life. A short-term yoga-based lifestyle intervention to treat anxiety and stress is used in such cases at the Integral Health Clinic, where I work. The Clinic offers a pretested and well-structured intervention that consists of an integrated 10-day program comprised of a set of simple āsanas (physical postures), prānāyāmas (breathing exercises), and/or meditaiton for ~ 1 hour each day.1–4 This is followed by lectures/group discussions regarding disease-specific lifestyle measures, efforts to minimize or eliminate substance abuse, and basics of calming techniques. There is a special focus on coping with stress and anxiety.

I and my colleagues have shown the efficacy of this intervention for treating anxiety in a recent study.1 The study, which included 90 subjects, demonstrated a significant reduction in state- and trait-anxiety (State and Trait Inventory–Y 1 and 2) scores at day 10 versus baseline (72.5 ± 14.7 versus 66.7 ± 13.0, respectively; P < 0.001). In addition, positive subjective well-being (SUBI) scores (factors 1–6) improved significantly (P < 0.01) at day 10 versus baseline. Similarly, personality (neuroticism, extraversion, openness to experience, five-factor, personality inventory–revised [NEO–FF PI–R]) scores improved significantly (P < 0.001) at day 10 versus day 1.

In another study, including 86 patients, I and my colleagues showed that mean level of serum cortisol decreased from baseline to day 10 (149.95 ± 46.07 versus 129.07 ± 33.30 ng/mL, respectively; P = 0.001) while β-endorphins increased from baseline to day 10 (3.53 ± 0.88, 4.06 ± 0.79 ng/mL; P = 0.024) following the intervention.2 In another study we conducted, there was also a significant reduction in oxidative stress following the intervention.4 Overall, the cumulative data show that this brief, yet comprehensive, yoga-based lifestyle intervention is efficacious for reducing anxiety and stress, and the benefit is evident as early as 10 days.

References


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Body Psychotherapy

Body psychotherapy (BPT) is an established form of psychotherapy,1–3 and has demonstrated good efficacy for treating various clinical syndromes.4 While body therapies aim to reduce stress levels associated with heightened anxiety through aerobic exercises or relaxation techniques, BPT engages patients in relational embodied psychotherapy to address the complexity of the underlying psychologic processes involved in anxiety.

Initially, in BPT, therapeutic engagement is facilitated through exploration of body experiences and movement/breathing patterns. Particular attention is paid to bodily equivalents of anxiety, such as muscular tension, increased heart rate, and hyperventilation.

BPT in anxiety relates to the common denominator of hyperarousal, while exploring a range of alternative expressive behaviors relevant to the neuropsychologic axis fear–flight–fight–withdrawal/learned helplessness. Based upon psychodynamic roots in BPT, this includes careful clarification of traumatic memory backgrounds and personal deficits as trigger factors for patients’ fear. BPT is based on the observation that root causes have been dissociated, separating subjective feelings from physiologic reactions.

Patients are guided toward improved reality testing through grounding movements, helping each patient to establish a firm “stand” in the world. This enables an individual to relate to anxiety-provoking thoughts/experiences from a position of self-awareness, thus, being able to tolerate and endure anxiety without being “overtaken” by it.

BPT facilitates shifting of (holding, inward bound) breathing/movement patterns, suggesting a range of expressive body movements (supportive, releasing, directive, etc.) and rhythmic integration. Interventions include direct body contact (self-soothing/protection/shielding) as well as exercises to help a patient confront a perceived threat/aggression/danger in self-defense.

The BPT process enables a patient to reevaluate reality on a complex conceptual and organismic level, while helping to relieve the anxiety syndrome that was bound in negative self-evaluations and disempowerment. Hereby, emphasis is given to “normalize” anxiety symptoms as a necessary, natural, and functional part of organismic functioning to encounter the threat of (inter)personal damage.

References


Traditional Chinese Medicine Psychology Therapies

Traditional Chinese Medicine (TCM) psychology is a discipline based on traditional Chinese culture and TCM theories that are used to study the patterns of psychologic activities while drawing relevant knowledge from modern science, especially modern clinical psychology and psychiatry, to guide clinical practice.1 Among the techniques of TCM psychology for treating anxiety, the moving-to-emptiness technique (MET) is most representative.

MET combines qigong and modern psychology together, mainly using concrete thinking as a way to reduce emotions or solving problems.2 Visualization and qigong meditation are two key elements of MET. In the beginning, the therapist will guide the patient to imagine the problem as a concrete symbol with his or her full scope of imagination. Then the symbol will be put into a “container,” which is imagined for it specially, and the container will be moved to different distances repeatedly. During this process, the symbol will gradually change and may even disappear. The patient’s anxiety will thus be reduced.

MET consists of the following nine major steps:

1. To receive relaxation training
2. To confirm the problem that needs to be resolved
3. To imagine the symbol of the problem
4. To imagine the container where the symbol will be placed
5. To draw the symbol and the container

Transcendental Meditation™

My clinical experience with the Transcendental Meditation (TM) technique began with inmates at a prison. TM significantly reduced the inmates’ spontaneous skin-resistance responses, a physiologic correlate of anxiety1,2—a result that has been replicated many times.3

However, the majority of people to whom I have taught TM were earthquake victims in Armenia who had survived the devastating earthquake of 1989 that killed more than 30,000 people. Thousands were homeless, everyone had relatives and friends who were killed, and/or participated in digging people out of the rubble. Needless to say, virtually the whole nation suffered from post-traumatic stress disorder symptoms, including elevated anxiety.

After a team of 14 practitioners, myself included, taught 30 physicians TM at the Yerevan State Medical University, we offered TM to the general public, and thousands came to ask for it. This was because word-of-mouth had spread quickly that TM truly provided quick and lasting relief from anxiety and grief. We were able to deliver TM to ~20,000 people over 6 months. We taught the standard 4-day course, for 1.5 hours per day, and, after that, the patients were self-sufficient. The results were amazing, with tears rolling down people’s faces during the very first meditation, a shell-shocked person speaking for the first time in months, and a woman frozen with fear who could now leave her room and go outside.

Three meta-analyses have now shown TM to be effective for reducing trait anxiety.4-6 For health care practitioners who would like to offer TM to their patients with anxiety symptoms, these clinicians can simply engage a qualified TM teacher or become TM teachers themselves.

References


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Acupuncture I

In the department I work in, acupuncture has been used to treat patients with anxiety disorders. Shenmen (HT 7), Sanyinjiao (SP 6), Neiguan (PC 6) are commonly used acupuncture points and, in some cases, depending on the patient’s state, several acupoints may be added. In patients with the first onset of anxiety disorders, acupuncture is given over a course of 12 weeks, 2 or 3 times per week, which is considered to be one course of treatment.

In the case of recurrent or long-lasting anxiety, the treatment period can be extended. During acupuncture treatment, stainless-steel disposable acupuncture needles with a diameter of 0.25 mm and a length of 40 mm are inserted into acupoints at a depth of 5–15 mm and the needles remain in each acupoint for 25 minutes. A previous clinical study showed that the scores of state-anxiety index and typical-anxiety index were significantly decreased, compared with before the treatment (P < 0.01).3

Moreover, acupuncture treatment is used in patients with anxiety accompanied by other diseases.2–4 Most patients who have cancer experience anxiety and use of acupuncture for anxiety is increased in these patients. They need the most effective treatment for anxiety.

For example, in one study of patients with liver cancer, acupuncture treatment was performed three times per week for 4 weeks, mainly on 9 acupuncture points: PC 6, Gongsun (SP 4), HT 7, Hegu (LI 4–both sides), Taijihong (LR 3–both sides), Sishencong (EX-HN 1), and Baihui (GV 20).4 After acupuncture treatment, the National Cancer Center score for anxiety was significantly decreased in all of the patients without caus-
ing deterioration of their liver function. This study suggests that acupuncture treatment may be beneficial for patients with liver cancer to reduce anxiety.

References


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Acupuncture II

Anxiety is a protective reaction that may turn into a dysfunction when it becomes chronic or when it interferes with quality of life.1,2 Anxiety disorders include generalized anxiety disorder, panic disorder, social phobia, obsessive–compulsive disorder, and post-traumatic stress disorder. Anxiety may also appear as a comorbid condition in other psychiatric conditions, such as depression.2,3 All of these conditions are highly prevalent in the general population,4–6 and have well-defined conventional treatments, which include drugs (antidepressants and benzodiazepines2,3) and nonpharmacologic measures, such as cognitive–behavioral psychotherapy.2,3

Acupuncture is accepted by modern researchers as an effective modality for controlling manifestations of anxiety.7,8 Nevertheless, the diagnostic approach of Traditional Chinese Medicine (TCM) has some important differences that must be recognized to ensure an adequate choice of acupoints to be stimulated.7

The TCM diagnosis relies on an exact description of each symptom by the patient, including somatic complaints. There are some points that are typically used, such as Yintang (EX-HN 3). Another option is to use five needles inserted on the transition between the forehead and the scalp; this approach has the capacity of calming the mind in any situation. Other points of the meridian’s pathway (Jing Luo) have a similar role, but are chosen according to TCM diagnostic techniques, that correlate with each particular manifestation to a specific internal organ (its Zang-Fu component). For instance, somatic manifestations, such as palpitations, refer the practitioner to the Heart or Peri-cardium meridian points, while fear may refer the practitioner to Kidney meridian points, or breathlessness and sweating may refer the practitioner to the Lung Meridian points.

Acupuncture may be used either alone or in association with modern conventional treatment.4,7 When used in combination, the results of the treatment may be observed earlier, and lower doses of drugs may be prescribed, offering the patient the possible advantage of fewer side-effects.

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Acupuncture and Hypnosis

Every year 18.1% of the U.S. population will experience anxiety that is severe enough to make an impact on day-to-day activities and that is difficult to control.1 Anxiety disorders include generalized anxiety disorder, panic disorder, and post-traumatic stress disorder, in addition to other recognized clinical manifestations of the anxiety state. For the past 3 years, in my daily clinical practice, I have been using a combination
therapy of clinical hypnosis and auricular acupuncture called “hypno-acupuncture” to help treat anxiety.

Auricular acupuncture involves stimulation of points on the ears by penetrating the skin with needles that are then manipulated manually or by electrical stimulation. This kind of acupuncture has been used widely to treat opiate and cocaine addiction, and has also been shown to be effective for treating anxiety. In a randomized controlled trial, 55 adult volunteers were randomized to specific ear acupuncture points versus sham acupuncture points for 48 hours, to assess the efficacy of acupuncture for reducing anxiety. Patients who were given the verum auricular acupuncture were significantly less anxious, compared to those who were given needling on placebo points.

Hypnosis induces a trancelike state, with a heightened focus and concentration and increased susceptibility to hypnotic suggestion. Hypnosis is frequently used to treat pain disorders and insomnia, and as a component of psychoanalysis. This modality has also proven useful for patients with anxiety disorders. In a pediatric clinical trial that included 27 children undergoing bone-marrow aspiration and 22 children undergoing lumbar puncture, hypnosis was found to significantly reduce anxiety and pain in both groups.

Hypno-acupuncture is a novel approach that involves insertion of 2 auricular acupuncture needles into the Shenmen and "relaxation" points in each ear (which were shown in a clinical trial to reduce anxiety) for 10 minutes. This is then followed by a classical hypnosis session that includes induction, deepening, hypnotic suggestions for anxiety reduction, and trance termination, while the acupuncture needles are still in place. I find this approach to be very effective for treating anxiety states, especially panic disorder, and I perform the sessions weekly for 4–6 weeks. At the Center for Integrative Medicine and Wellness and the Department of Medicine at Stamford Hospital, I and my colleagues are currently working on a pilot clinical trial to assess the effectiveness of this new technique.

References


Questions About Preoperative Anxiety

For this interactive feature column, Clinical Roundup, a new question is posed and then answered by experts in the field. In the next issue the Clinical Roundup will focus on how you treat depression in your practice.

Acupuncture for Preoperative Anxiety

Preoperative anxiety is a challenging condition for anesthesiologists. Although several pharmacologic drugs can be used to treat preoperative anxiety, these drugs may have adverse effects such as hypotension, depressed ventilation, drowsiness, dizziness, psychomotor impairment, and paradoxical disinhibition, including aggressive behavior.

In my daily practice at the institution I work at, reducing anxiety is an important task, because anxiety may increase anesthetic and analgesic requirements and may decrease patient comfort. Some anesthesiology departments, such as the one I work in, have busy schedules with many surgical patients per day. Occasionally, departments cannot use anxiolytic premedications because of a lack of personnel and a high turnover, which makes monitoring patients difficult.

Use of an ear press needle acupuncture on the Yintang point (EX-HN 3) for 20 minutes is an effective way to treat preoperative anxiety. This method is a valuable alternative to pharmacologic anxiolysis. The method is easy to learn and does not take much time to apply. The effect begins in seconds and reaches a peak level in several minutes. In highly anxious patients, the GV 20 point can also be needled. In conclusion, needling the Yintang point is an effective and safe way to treat preoperative anxiety.

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