

Yoga Therapy

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In times of stress, yoga can be used as an excellent form of relaxation therapy. Practicing yoga allows a person to reduce the unhealthy and damaging effects of external “noise” and the internal chatter that can lead people to replay negative situations over and over again in their heads. Those who do yogic exercise tend to be more health conscious and seem to be more “in touch” with their bodies, having a sense when something is wrong physically. Persons who experience excess tension and cumulative stressors tend to be more susceptible to conditions such as cardiovascular disease and cancer (3, 4). The health and fitness professional can use yoga as an excellent tool to assist clients in attaining a balance in their lifestyle and exercise regimen. The stress-reducing effects of yoga therapy can quiet the mind, increase concentration, and build body confidence. Many athletes and professional teams in the NHL, NFL, and major league baseball are utilizing yoga as a tool to sharpen sports performance. The overall benefits of yoga are far reaching. This form of exercise offers a new dimension of physical fitness.

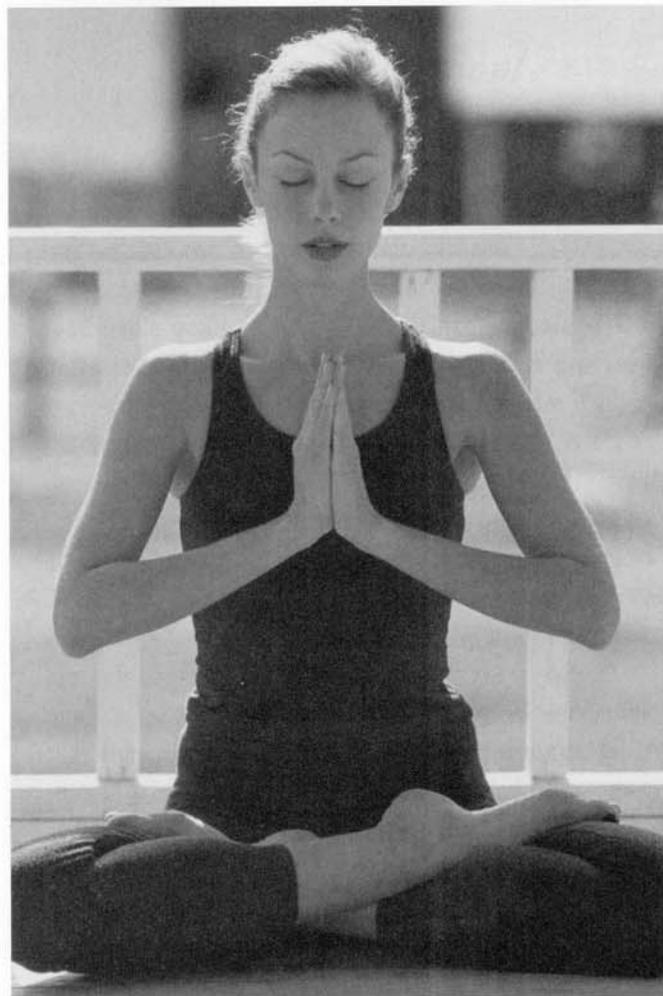
It is a well-established fact that exercise can bring about beneficial psychological and physiological changes that reduce stress (4,6,8). Stress is associated with increases in cortisol secretion, blood pressure, heart rate, blood glucose levels, myocardial ischemia, and decreased immune function (3,4). Yoga can enhance flexibility, build strength, align the musculoskeletal system, reduce elevated blood pressure, aid in cancer treatment, and lessen breathing difficulties.

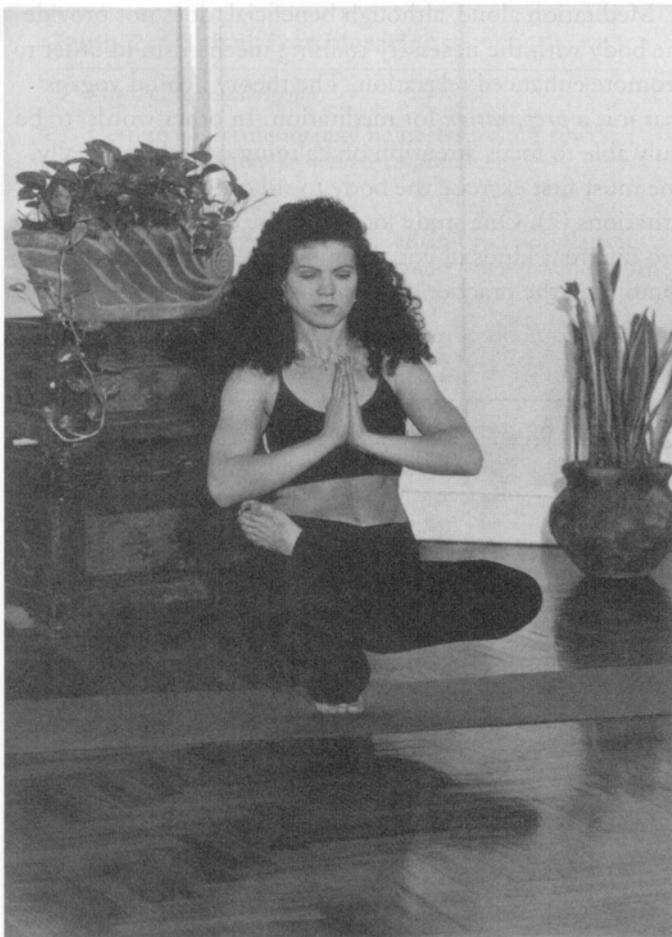
Yoga is the ancient practice of meditative exercise (1, 2). It has been used for centuries as an effective way to calm the body and enhance concentration. The word yoga means union, or literally “to yoke.” It is an Indian art that was brought to the United States in the late 1800s and piqued the interest of individuals such as Thoreau and Emerson. This article focuses on Hatha yoga (the physical aspect of the practice). The word Hatha comes from “Ha” and “tha” meaning the right and left. Yoga is a joining of the right and left sides of the body to promote a state of balance. Other translations of the word Hatha exist but all lead to a union of opposites, like “Ha” = sun and “tha” = moon. Yoga is

not a religion, although it does have a philosophical basis that many consider spiritual. It is based on principles of self-care (1).

Breathing Techniques

Yoga employs different breathing practices depending on the style practiced and desired effect. It is believed that a proper flow and balance of energy (Prana), which is carried by the breath, will aid physical and spiritual health. The practice of pranayama (a form of yogic breath control) may help participants slow down their rapid breathing patterns, learn to breathe more deeply, and relax. Yoga is thought to stimulate the same nervous system “meridians” as acupuncture. The postures are designed to facilitate the flow





of energy through coordinated movement (8). The coordination of movement with rhythmical breathing is thought to release energy blockages in the body that cause disease and dysfunction (2).

Some forms of yogic breathing can easily be performed while driving, standing in line at a store, or whenever one needs to “calm down.” Merely bringing attention to the breath may assist a person in relaxation by aiding them in noticing tightened muscle groups and recognizing poor body mechanics. When the process of inhaling and exhaling comes into full awareness, it is difficult to ignore the way the body is aligned. Focusing on the breath tends to make one aware of the ability of the rib cage to expand and often causes a postural realignment to support deep breathing (1, 2). Persons with cardiorespiratory disease, such as congestive heart failure, who avoid activity because they have difficulty breathing may benefit from the use of yogic breathing techniques (9). If nothing else, the patient is forced to pay greater attention to his or her breathing and gain a heightened awareness of the breathing process.

“Open up and Say ‘Ha...’”

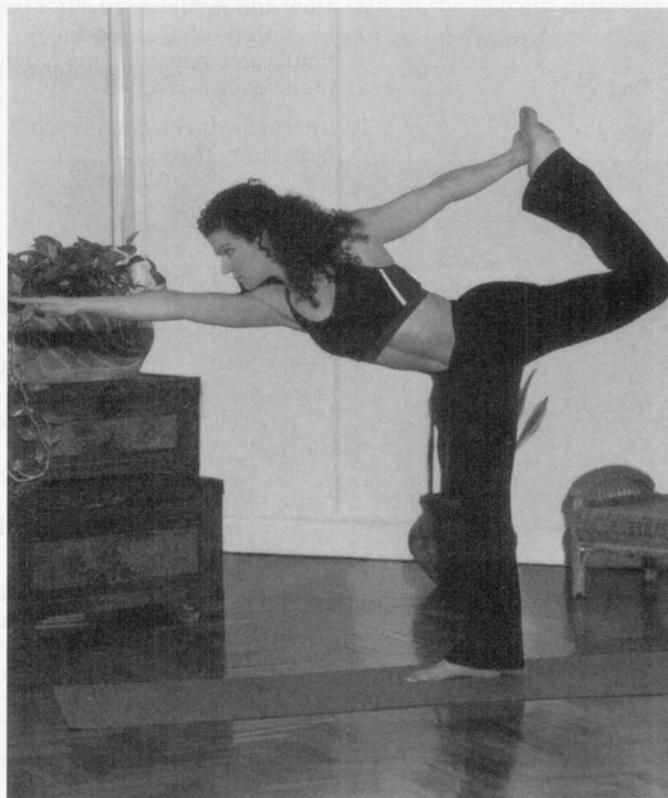
Ujjayi Breathing

NOTE: DO NOT PERFORM THIS EXERCISE IF YOU SUFFER FROM CARDIAC ABNORMALITIES SUCH AS SLOW HEART RATE (Bradycardia), OR SERIOUS DYSRHYTHMIAS! Consult with your physician as to whether or not this is an appropriate exercise for you.

1. Close your eyes and sit upright with spine straight. Place the legs in easy crossed-legged position or in a *straddle* position that does not “pull” on the inner thighs.
2. Inhale through the nose. Pull the air deep into your lungs, allowing the abdominal muscles to relax and go “fat.”
3. Exhale through the mouth while whispering “ha.” Focus on the place where the breath originates in the back of the throat.
4. Continue to breathe this way; do not actually vocalize the “ha”—allow the throat to relax.
5. Clear your mind and focus on the breathing—practice for as long as you are comfortable.

Why Not Meditation Alone?

It has long been known that exercise can bring about beneficial physiologic changes that lead to increased body confidence, enhanced performance of activities of daily living (ADL),



decreased risk of injury, and weight loss (5,6). The changes seen as a result of regular physical activity stem from improving cardiorespiratory and musculoskeletal functioning. Practicing yoga on a regular basis brings an individual more “in tune” with the body and gives accompanying mindfulness to physical limitations imposed by illness or injury. Yoga students report a new awareness regarding posture and body mechanics in ADL. This may help to explain how yoga therapy can reduce injuries and promote healing.

Meditation alone, although beneficial, does not provide the body with the necessary training mechanism in order to promote enhanced relaxation. The theory behind yoga is that it is a *preparation* for meditation. In other words, to be truly able to focus attention on calming oneself internally, one must first exercise the body to rid oneself of external irritations (2). One study looked at the difference between two different kinds of yoga techniques: one that was active, combining the practice of yoga postures interspersed with

Table 1. YOGA Styles

Style	Aspects	Appropriate Population
Ananda	<ol style="list-style-type: none"> 1. Deep relaxation in postures 2. Purpose of asanas is preparation for meditation 3. Process enhanced by use of affirmations 	<ol style="list-style-type: none"> 1. Those seeking both physical and spiritual practice 2. Used to heighten self-awareness preparation for meditation
Ashtanga* (Power Yoga) *Not to be confused with the 8 limbs of yoga	<ol style="list-style-type: none"> 1. Rigorous practice 2. Continual flow of postures (Vinyasa system). 3. Begins with sun salutation series 	<ol style="list-style-type: none"> 1. Athletic individuals who want a vigorous “active” yoga routine 2. Thermoregulatory concerns as heat is used 3. Those with back or joint problems may have difficulty
Bikram’s hot yoga	<ol style="list-style-type: none"> 1. Performed in a heated (>80°F) room 2. 26 poses performed twice 3. Class begins and ends with breathing 4. Precise practice 5. Final “shavasana” (posture is for relaxation) 	<ol style="list-style-type: none"> 1. Beginners through advanced practitioners 2. Caution for persons with heat intolerance*
Iyengar	<ol style="list-style-type: none"> 1. Precise and dynamic 2. Slow and moderate practice pace 3. Uses props such as blocks 4. Pranayama breathing <i>not</i> taught until proficiency is reached 	<ol style="list-style-type: none"> 1. Good for those wanting to build strength and balance 2. Inversions may not be appropriate for all (esp. persons with eye disorders or hypertension).
Kripalu	<ol style="list-style-type: none"> 1. Internally directed approach 2. Noncompetitive 3. Meditation in motion 4. Uses “wisdom of the body” 	<ol style="list-style-type: none"> 1. Very deliberate and mild to moderate practice 2. It can be adjusted to suit many different levels of ability
Kundalini	<ol style="list-style-type: none"> 1. Special breathing techniques emphasized 2. Works to awaken “coiled energy” in the sacrum 	May not be appropriate for all physical conditions.†
Restorative	<ol style="list-style-type: none"> 1. Focus is on the healing of specific body parts 2. Postures are held for longer periods of time 3. Teacher may assist student in getting into posture 4. Props such as blankets and cushions may be used 	<ol style="list-style-type: none"> 1. Slow paced, appropriate for most people 2. Particularly good for older individuals with medical conditions. 3. Some focus on “meditation” whereby one becomes more aware of his or her body
Viniyoga	<ol style="list-style-type: none"> 1. Step-by-step approach to asanas 2. Form sacrificed for proper breathing 3. Often taught privately 4. Instructors well-versed in therapy 	<ol style="list-style-type: none"> 1. Good for the injured, with a physician’s clearance 2. Posture applications are very precise

*People currently receiving chemotherapy are particularly at risk for problems with thermoregulation.

†Caution with cardiac abnormalities such as bradycardia; the constant emphasis on some of the breathing techniques during postures may lower heart rate or induce dysrhythmias!

Table 2. Clinical Considerations

I. Clinical Considerations

Certain adjustments may be necessary to provide a safe environment in which to practice.

A. Adaptations

When working with a diseased/injured population, adjustments can be made to make yoga practice both safe and efficacious!

Make use of seated postures using floor, chairs, etc.

Alter the pattern of breathing—**AVOID BREATH RETENTIONS!**

Encourage an awareness of balance and kinesthetic perception.

For detailed asana adaptations, consult with a reputable text such as ref. 2.

B. Contraindications

Generally *inversions*, lowering the head below the level of the heart by turning upside down (headstand and shoulderstand), should not be practiced in persons with the following conditions:

- Glaucoma
- High blood pressure
- Pregnancy
- Menstruation
- Cardiac abnormalities

rest periods, and one that was simply lying in “shavasna,” where one assumes a supine “relaxation” position throughout the entire time. What was discovered was that the yoga postures interspersed with relaxation reduces oxygen consumption, breathing frequency, and breath volume significantly more than relaxation alone (10).

Directing Clients to a Yoga Practice

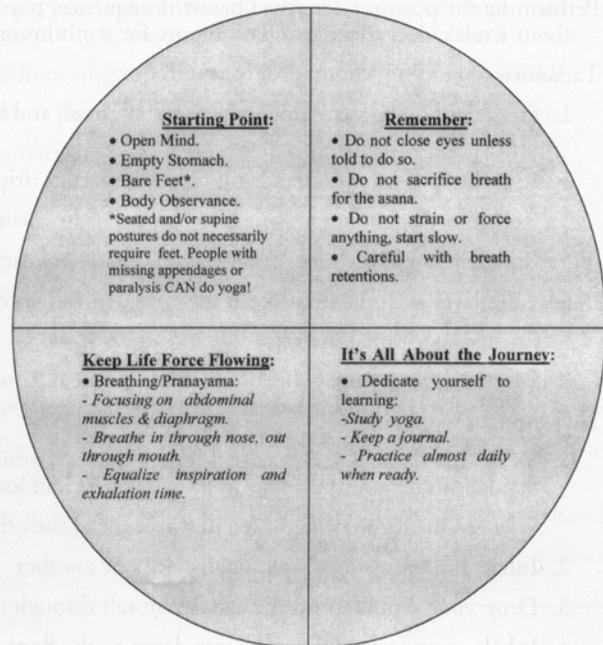
There are many yoga styles practiced today. To find a style that is appropriate for the group you are instructing, the health and fitness professional should experience a variety of yoga styles under many different teachers to attempt to understand each particular style and what each has to offer (see Table 1).

Clinical Considerations

Patients suffering from cardiovascular disease can benefit enormously from beginning and maintaining a regular yoga practice. Yoga practice has been shown to help support positive lifestyle changes that may decrease coronary artery disease risk factors (4). Reports of decreased blood pressure

Table 3. Guidelines for Practice

Yoga is a never-ending learning process for the student and teacher alike. What follows represents some KEY guidelines for those undertaking a yoga practice.



as a result of the relaxation that accompanies yoga practice are common (2). More impressively, it has been documented that regular yoga practice is indicated as a factor for a significant reduction in the percent diameter stenosis in the coronary arteries as determined angiographically (4).

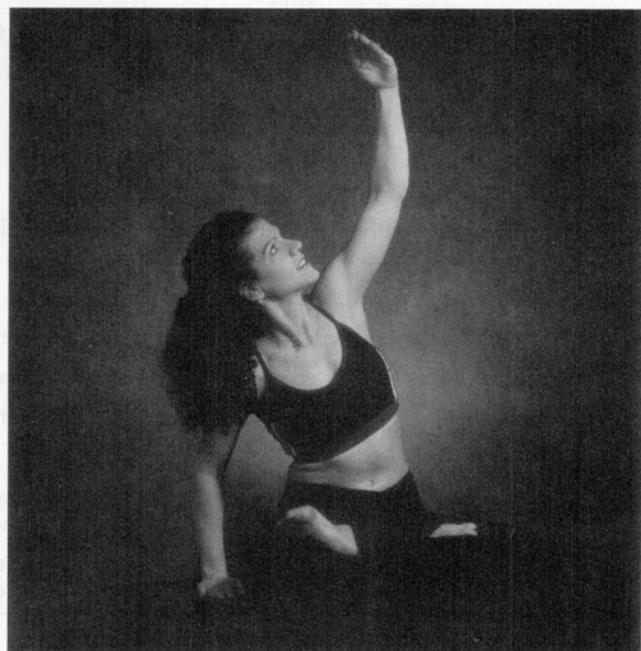


Table 4. Relaxation Asanas (Poses)

Performing the postures described below in sequence, paying special attention to the breath and body alignment, can bring about a relaxation effect. Hold each pose for a minimum of five inhalations/exhalations each (about half a minute).

Tadasana—Standing Mountain Pose

1. Stand with your feet completely together, heels and base of big toes touching; weight centered through the front of the heels.
2. Arms at your side (no hands on hips!), fingertips drip down to the floor.
3. Roll your thighbones off one another, pelvis in “neutral” alignment.
4. Broaden your collarbones and roll your shoulders back.
5. Chin level with the floor, keep the crown of the head spiraling upward, spine straight.
6. Engage abdominal muscles.
7. Breathe with the ujjayi breath, in through the nose—out through the mouth with a slight “ha” sound.

Side-Stretch/Warm-up

1. Sit in “Sukhasana” (easy crossed-legged pose). If your hips are higher than your knees place a towel-roll or folded blanket under your buttocks to level out hips and knees.
NOTE: One leg may be placed out in front of the other if this is too uncomfortable.
2. Inhale both arms overhead, palms face one another.
3. Drop your shoulders on the exhale. Sit tall through the crown of your head.
4. Inhale again, exhale the right arm down to the floor.
5. As you breathe, you inhale and stretch the left arm to the ceiling—exhale and press the right hand into the floor. Stretch the rib cage area, freeing up the intercostal musculature.
6. Raise right arm up on an inhale after five breaths.
7. Repeat on the second side.

Ardha Chandrasana—Half-Moon Pose

1. Stand in “tadasana” to begin.
2. As you inhale, lift right arm up at side—palm facing the floor. When you reach shoulder height, rotate right palm up. Bring hand reaching over top of head, fingers going toward the opposite side.
NOTE: Palm will ALWAYS face the floor, thus the reason it is rotated upon reaching shoulder level!
3. Left arm slides down the thigh, reaching the fingertips toward the floor.
4. Imagine your body is being pressed between two panes of glass, keep shoulders and hips aligned.
5. Breathe for five cycles. Repeat on the second side.

Child’s Pose

1. Sit “Japanese Style” buttocks/hips on top of heels.
NOTE: You may place a towel roll or small folded blanket between buttocks and heels if necessary—the buttocks should rest on top of the heels at all times!
2. Raise arms overhead, inhale and fill the lungs.
3. Slowly exhale and lower arms to ground in front of the body, keeping buttocks/hips on the heels.
4. Palms stay outstretched, forearms off the floor. Forehead reaches toward the floor. Gaze is directed at the floor.
5. Breathe here for five cycles, letting the belly sink into the tops of the thighs.

Spinal Twist

1. Sit on floor with legs straight out in front of you, in Dandasana (staff pose), then bend the left leg so that heel comes in contact with the right buttock and the knee stays on the floor.
2. Place right foot on the floor with a bent right knee, so that ankle of the right leg touches the left knee that is still flat on the floor (right ankle can extend just in front of left knee).



Table 4. Relaxation Asanas (Poses) (Continued)

3. Inhale and reach left arm straight up into the air, move the right knee out of the way with the biceps of left arm and press the elbow of the left arm against the knee—grasp the knee of the left leg with the palm of the right hand.
4. Gently wrap right arm behind your back, either rest it on the floor or grasp the inner thigh of the left leg if possible.
5. Turn your head to the right and twist your face and shoulders to the right. Look out of the corner of your right eye.
6. Breathing may become difficult at first, with every inhalation release the posture slightly and then twist deeper with every exhalation.

Shavasana—Relaxation Pose

1. Lie on your back, heels together, toes apart, arms at your side with the palms facing up. Arms should be in a slight “A-Frame” position with the shoulders rolling back into the ground.
2. Keep the eyes closed, sinking them deep into their sockets.
3. Relax all the facial muscles.
4. Breathe deeply, allowing the belly to “go fat,” lifting it with every inhalation—lowering it with every exhalation.
5. Use this time to connect within yourself. Thank your body for allowing you this chance to use it in the practice of yoga. Connect with yourself.
6. Think *ONLY* of the present moment, practice a hand gesture or “mudra” with the thumb and first finger of each hand touching—relax all the other fingers.
7. When through, roll to your side into the fetal position and rest for a few minutes before getting up.

When dealing with cancer patients, yoga affords the opportunity to lessen the deleterious effects of cancer therapy and can aid the patient post-treatment (2). Cancer therapy can deplete emotional and physical reserves by stressing the patient physically with chemotherapy and radiation, and mentally by leaving the patient feeling helpless. The physical yoga poses can help reduce joint stiffness, the loss of flexibility, decreased motor and sensory nerve function, and muscular myopathies associated with anti-cancer therapy (7). In addition, the relaxation benefits of yoga can keep patients focused on the positive during and post-treatment (2).

There are adaptations of yoga practice for cancer and cardiac patients to ensure safety and effectiveness (2). Extreme care must be taken with those undergoing chemotherapy, hypertensive patients, and those who have recently undergone coronary artery bypass grafting and other surgical interventions. It is best if the yoga instructor has a clinical understanding of a particular disease, as well as the corresponding medical treatments, in order to adapt postures and provide a safe environment for patients to practice in (see Table 2).

Teacher Training

Yoga is a very broad term that encompasses hundreds of different styles, and often the qualifications for teachers are not standardized. Certification of instructors is desirable; however, yoga certification standards vary widely. Often, a

teacher who has 10 or 20 years of yoga experience, but no certification may be more competent than one who has recently completed a certification course. It is advisable to do a little research on your own, visiting a class or two and observing once before participating. A national movement is under way for a “gold standard” certification. One can learn more about minimum standards for yoga teachers by visiting the Yoga Alliance’s site on the web at www.yogaalliance.org. Although many fitness instructors are well educated about human physiology and anatomy, it is never a good idea to attempt to teach yoga classes without a solid background in yoga. It is suggested that one have a strong, committed personal practice of yoga before embarking on a teaching career. Teaching yoga requires a much different mindset than traditional group exercise leadership and should not be attempted haphazardly. You can find a good yoga class in much the same way you might find a good doctor or dentist, by asking a friend or family member who is enrolled in yoga classes. One also has the option of practicing on their own, using any number of videotapes or printed resources. Although yoga practice is highly individualized, there are social aspects to a class setting. It is advisable that those wishing to start a yoga program should attend class before embarking on a home practice. The trained eye of a competent instructor can ensure safety and effectiveness in the postures (see Table 3).

The benefits of a yoga practice are far-reaching. Yoga therapy is an excellent complimentary treatment to regular medical care. This form of exercise is a good addition to a cardiorespiratory fitness regimen to promote strength, flexibility, and enhanced kinesthetic awareness. When done on a regular basis, yoga can be an effective tool for stress reduction. The practicing of postures interspersed with shavasana (relaxation pose) can provide enormous physiologic benefit. Even doing just a few simple postures for about 15 to 20 minutes, three days per week along with shavasana can result in a calmer mind and more relaxed body. Descriptions of an easy asana (posture) sequence are included in this article, which can be performed by persons of varying fitness levels and physical abilities (see Table 4). The art and practice of yoga offers tremendous opportunities to further one's fitness level and reduce stress. As health and fitness professionals, we are obliged to be able to recommend this beneficial practice in order to help our clientele achieve the best physical condition possible.



Donna Mueller works both as a part-time Adjunct Instructor in the Department of Exercise Science at Florida Atlantic University and full-time as an Exercise Physiologist in the Cardiology Department at the Cleveland Clinic Florida. Before relocating to South Florida, Ms. Mueller spent over two years in Philadelphia teaching yoga to cardiopulmonary patients and cancer patients at Mercy Community Hospital and Fox Chase Cancer Center, respectively. Her areas of interest include prevention of disease through lifestyle change and health promotion through physical activity. Ms. Mueller has coauthored articles for Preventive Medicine and the Journal of Applied Physiology.

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Condensed Version and Bottom Line

Those who practice yoga, which is an excellent tool for relaxation, find themselves more attuned to their minds and bodies. As a health fitness professional, you can use yoga to assist your clients in attaining balance in their life and reaching their fitness goals. What may be surprising to the uninitiated is that whereas traditional forms of exercise can produce many well-documented positive results, the low-impact practice of yoga has far-reaching benefits including enhanced flexibility, increased strength, reduced blood pressure, and an aligned musculoskeletal system. As a teacher, you must master and understand a broad range of styles and techniques. Certification is desirable, but because yoga standards vary widely, years of experience could stand in for merely completing a course. Research on your part is needed to determine what would be best for you and your clients.