



## Yoga and tai chi

### Pathways to health and wholeness

Imagine that you found something you could do for about 20 minutes each morning that reduced stress and gave you a deep sense of calm and peace.

At the same time, this calming activity also helped you build strength, stay limber, improve your balance and other aspects of your health, such as immune function and blood pressure.

The great news is that several pathways to this kind of inner and outer balance already exist. They have been developed and refined through practices over many centuries and include:

- Yoga
- Tai chi (TIE-chee)

To many adults in America, these activities may sound strange and foreign. But to many in China and India — and increasingly in the United States — these activities are simply an efficient, low-impact way to maintain mental clarity and physical fitness.

Just as you might venture away from your normal diet to try cuisine from a different culture, it may be worth your time to try a form of exercise and relaxation from a different culture. As with new foods, you may find something with yoga or tai chi that you like — and that enhances your health, your enjoyment of life and your ability to connect with yourself and everything around you. Practicing in a group also can give you a sense of community that bonds you to other people, which may be beneficial to your health.

Yoga and tai chi classes that teach the art of breathing, meditation and posing are offered nearly everywhere — from trendy health clubs in big cities to community education classes in small towns. If you're looking for more do-it-yourself techniques for a calmer, more peaceful attitude, you may wish to give one of these classes a try.

### All-inclusive exercise

The February 2009 Special Report on “Lifelong exercise” covered five different and important kinds of exercise — aerobic, strength training, core stability, flexibility and balance. An important advantage of practices such as yoga and tai chi is that they bring these elements together into a unified form of exercise.

For instance, as you age, you may stop using your arms above your head. Practicing tai chi involves moving your arms above your head. Likewise, as you've aged you may have developed a narrower stance. Tai chi involves a conscious awareness of your stance, alignment and balance, with attention to footwork so that you know at all times where your feet are in relation to your body. ♦





### Tips for safe yoga

Check with your doctor before starting a new yoga program. This is especially important if you have certain health conditions, such as joint problems. Also talk to your doctor if you have had a recent surgery or medical procedure, or a history of low back or neck pain. You may need to avoid certain yoga positions because of the undue strain it may cause.

Also see your doctor before you begin yoga if you have any of the following conditions or situations, since complications can arise:

- High blood pressure that's difficult to control
- A risk of blood clots
- Eye conditions, including glaucoma
- Osteoporosis
- Artificial joints

Experts have identified modifications to certain yoga poses for people who have arthritis or other health conditions. These adaptations can be as simple as modifying a move so that it can be done while sitting in a chair.

If you decide to take a yoga class, let your teacher know about any injuries or health challenges you have so that your practice can be modified accordingly. Combining your regular home practice with a weekly yoga class enables a teacher to oversee your efforts.

Don't ignore pain. It's your body's way of warning you that you're doing too much. Learn to distinguish between pain and discomfort.

Practiced on a regular basis, routines such as yoga and tai chi may help reverse some of the changes of aging — such as restricted and narrower movements — and help you to develop a renewed sense of balance and stability.

### The benefits

People come to practices such as yoga and tai chi for different reasons. Some are simply curious. Some seek a broadening of their experience. Others are looking for specific health benefits.

Practicing these arts has been shown to lead to improved health. Certain benefits — particularly in stress reduction — can be seen in as little as one day. In fact, stress reduction and inner calm are important early gains that may both attract you to the practice and sustain your interest in continuing on a regular basis.

Within the first few days of these practices, some people report better sleep and improvements in digestive health — such as better bowel function and decreased constipation. You may start to notice other significant benefits after about 10 to 12 weeks of regular practice.

A study of yoga and people who experience migraines found that those doing yoga had less frequent and less intense headaches than did those taking medication. In addition, those who practiced yoga experienced improvement in anxiety and depression. Yoga and tai chi also have other potential positive effects, including improved bone density, cardiovascular health and lowered blood pressure.

Typically, 20 to 40 minutes a day can provide the majority of the benefits from these practices. This is enough time for your mind to slow down.

You may come to one of these practices looking for specific medical benefits, but end up also getting a broader and more life-changing experience. When you adopt practices such as yoga or tai chi with a focused intent to move forward in your life, it can lead you to a higher state of balance with the world and with your inner self. This state of adaptability is also called resiliency.

It's said that your perception of the outer world reflects your inner world, and your inner world is influenced by your outer world.

### Health and yoga

The word “yoga” comes from the language of the yoga tradition (Sanskrit) and means to yolk or unite. Yoga has been evolving for many centuries and includes a spectrum of physical and mental disciplines.

Hatha yoga is the type of yoga that many people think of when they hear the word. Hatha yoga unites breathing with physical movement to create subtle change on all levels of your body. The word “hatha” can be translated as the union of sun and moon.

Yoga postures can be done in a very rigid, structured manner or in a more gentle way. If you wish to practice yoga, it's important to find what manner best matches your fitness level and health restrictions.

Hatha yoga involves the use of many different body postures — called asanas — held for various lengths of time and done in a sequence. While yoga can help you gain flexibility, it's much more than that.

Yoga strengthens and relaxes and can revitalize your mind, body and spirit. There are three phases to a yoga posture:



### Cat and cow stretches

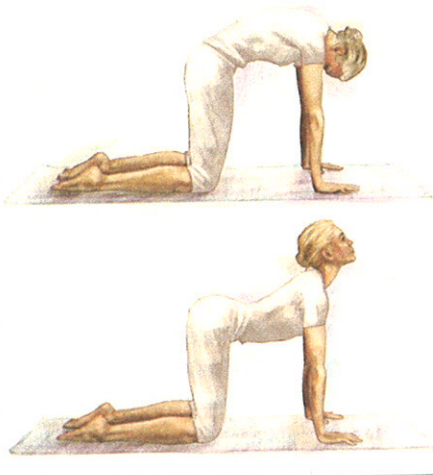
In yoga, cat and cow emphasize the main movements of your spine. To do these:

- Get down on your hands and knees, with your hips over your knees and your shoulders over your hands, palms down with your fingers spread. Your neck and back should form a straight line. Draw your belly gently in.

- Exhale into cat by tucking your tailbone under, drawing your belly in toward your spine and arching the mid-back up like a cat, tucking your chin into your chest.

- Inhale into cow by pressing into your palms, lifting your tailbone, letting your belly and midspine sink toward the floor as you press your chest forward, looking up toward the sky. Although your gaze is slightly up, don't throw your head back.

Coordinating your breath and motion, go smoothly from cat to cow, repeating several times. Holding the cat stretch releases tension from your upper back and neck.



- Entering
- Holding
- Releasing

In yoga, there's awareness of the ingoing and outgoing breath. You move into a yoga posture using this rhythm and flow of the breath. Breath awareness is a powerful technique that not only allows you to pace yourself, but also cultivates awareness of the present moment.

With the help of a trained instructor, you can gradually learn to find and then gently extend the limit of your flexibility by using your breath during a yoga pose. During such an exercise, you may feel both pleasure and discomfort as your body awareness is heightened. But be aware that going too far with a yoga pose can cause significant pain or injury.

The purpose of yoga isn't to push past the edge into pain, but to rest upon the edge, accepting your body as it is. When you can be aware of internal tensions and relax, flexibility increases naturally with minimal stress.

### Learning postures

Each yoga posture is different for each individual. Some are well suited to beginners and people with various medical conditions. Others are quite rigorous and can be potentially harmful if you have underlying medical problems. Sometimes — especially at the beginning of your yoga study — you may be able to hold a posture only for a few breaths. Over time, this may increase to several breaths or minutes.

A yoga posture is intended to create a dynamic tension between muscular energy, lengthening and relaxation. In even the most restorative poses, there's an element of activity or engagement somewhere in the body. Generally, it can take five full breaths to fully realize the benefits and changes of a posture. Start at 10 to 15 seconds and try to work up to 30 to 60 seconds.

Don't force a posture, but rather allow your body to gradually become more flexible and stronger. Over time, it's usually possible to move deeper into the posture than was initially possible. This creates a shift in both mind and body that can bring you benefits on several levels.

While in a yoga or tai chi posture, use small, slow-motion movements. These are called micromovements. These slight swaying and shifting variations on the posture allow you to develop increased awareness and release more tension from wider areas in your body.

Generally, in yoga and tai chi, as you inhale you will experience a natural rising sensation in your body — while lengthening your spine or extending your legs. When you exhale, you may experience a sinking energy that brings you more deeply into the pose.

Let your breath rock your body and guide it into the pose from the inside out. Learning to listen to your body — your body's wisdom — is one of the main benefits of a deepening yoga practice. Use a good quality yoga mat and use props such as a chair or block freely. Enjoy the practice and don't judge yourself.

It's generally best to move out of a posture in a conscious, deliberate and slow manner. Proceed to end the posture and move into a neutral posture. Take a few moments to feel the relaxed state before moving to the next posture. This allows the benefits of the pose to take effect.



## Corpse pose

The corpse — also known as lying-down meditation in tai chi — is usually the last pose of your yoga practice, although it can be used on its own to help create relaxation.

In this pose, you lie on your back with your legs extended and your feet a comfortable distance apart. Let your toes fall out to the sides. Place your arms a comfortable distance from your body, palms up and fingers relaxed. Rock your head to relax the muscles of your neck before bringing your head back to center and elongating the neck by tucking in the chin. Next, release the chin tuck and allow your head to rest on the floor.

Close your eyes and allow each part of your body to seemingly sink into the floor. Focus your attention on each breath you take, watching and feeling each breath before beginning to lengthen your exhalations, but doing so naturally.



After doing this for several minutes, release any conscious control of your breathing. Then, starting with your feet, invite each body part to relax.

Silently repeat to yourself a phrase such as “I am inviting my feet to relax.” Then, when you are ready to move on, repeat a phrase such as “My feet are totally relaxed.”

Use the same process with your ankles, calves, knees, thighs, and so on, up your body and down your arms to your fingers, then to your throat, head, scalp and each part of the face. Next, focus on relaxing your entire body, releasing any subtle tension that remains.

Stay in this state as long as you wish. When your consciousness begins to surface, come out of relaxation gently, gradually deepening your breath.

Wiggle your fingers and toes and move gently in ways that feel good.

Slowly roll to one side and come back to sitting.

## Tai chi is from wu chi

In the same manner that light is related to dark in yin and yang, tai chi, which is movement, comes from wu chi, which is stillness, the void of unformed energy and existence. Tai chi is a pathway for you to touch and experience the stillness.

There are many different styles of tai chi. Some are closer to martial arts applications and are more athletic and strenuous. Others have evolved more for health and restorative aspects of practice.

Before signing up for a class, investigate the training of the instructor and the style being taught for its suitability to your level of conditioning and health.

## Alignment

The alignment of your body posture is important in both yoga and tai chi. Elements of alignment include:

- Feeling the support of the ground
- Sustaining your posture
- Elongating your spine
- Stabilizing your core trunk muscles
- Opening your chest
- Positioning your head and neck properly to allow further extension of your spine
- Sensing how your entire body is involved and interconnected in the pose

If you're not in alignment, you may sacrifice the purpose of the pose, overworking muscles that are already strong, rather than developing deeper strength and flexibility in muscles that need to improve. Many different types of yoga involve postures that flex, bend and twist the spine on all planes. A solid base of support and an elongated spine allow room for freedom of movement without putting undue pressure on the spinal column and disks.

Proper alignment also increases body awareness. Areas of the body that have been neglected or cut off may come back into conscious awareness. This can increase both your body and emotional wholeness.

Yoga can improve alignment and therefore your body posture. It's common for many people to hold the top of their shoulders up and rolled



## Dan tiens — storage batteries for your energy

Traditional Chinese medicine teaches that in your body, vital life energy called qi is stored in three principal areas called the dan tiens (DON TEA-ens) — otherwise known as the elixir fields.

The dan tiens are like storage batteries for your energy. They include:

- *Upper dan tien* — This is behind your forehead above your eyebrows.
- *Middle dan tien* — This is in your lower chest.
- *Lower dan tien* — This in your lower abdomen, below your bellybutton.

The lower dan tien is the main storage area for your body. It's often referred to as "the" dan tien.

In the study of both acupuncture and qi gong (CHEE-gung), energy is said to circulate through pathways or meridians in your body. The two largest pathways are like rivers of energy flow.

One is known as the governance vessel. This runs from your lower dan

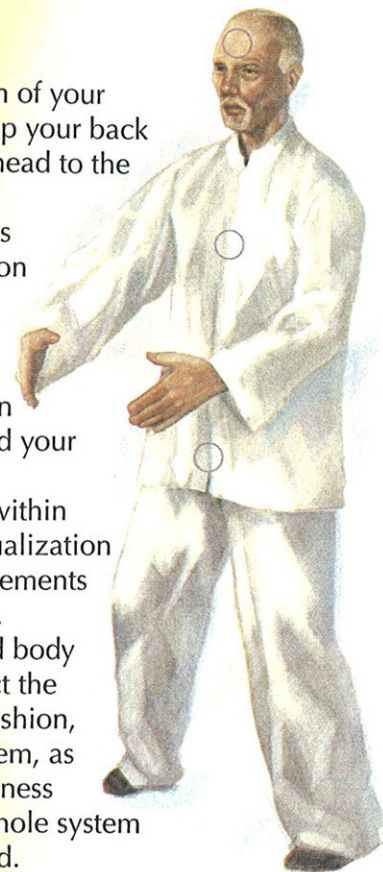
tien down around the bottom of your pelvis (perineum) and then up your back and over the crown of your head to the roof of your mouth.

The other main part of this circuit is called the conception vessel.

It runs from the roof of your mouth down the front of your body to the lower dan tien. Energy circulates around your body in these pathways.

Qi can move like waves within these circuits. Intent and visualization of flow are both important elements in facilitating this movement.

Exercises of the mind and body using qi gong appear to affect the whole body in a wave-like fashion, which shifts the nervous system, as changes in the state of awareness occur. This means that the whole system is balanced and synchronized.



## Other reading

■ *Kripalu Yoga: A Guide to Practice on and off the Mat*, by Richard Faulds

■ *The Way of Qigong: The Art and Science of Chinese Energy Healing*, by Kenneth Cohen

■ *Taijiquan: The Art of Nurturing, the Science of Power*, by Yang Yang, with Scott Grubisich

## Learning yoga, tai chi

The best way to learn yoga or tai chi is by taking a class or working with a qualified instructor. Classes are available in many communities.

forward. This closes the chest and holds tension in the shoulder girdles. To open the chest, allow the top of your shoulders to move downward and let the shoulders and shoulder blades sink farther toward the back, deeper into the support of the shoulder girdle. Allow your inhale to gently lift your chest, and your exhale to soften your shoulders.

At the same time, it's important to keep the neck aligned with the rest of the spine. To avoid a "head-forward" position, keep your chin slightly tucked and the top of your head extended. This brings your head and neck into alignment with the rest of your spinal column.

## Relaxing into the pose

When you do a yoga posture, give your body an invitation and permission to relax. Be aware of the areas of your body that support the yoga posture. As you focus on these areas, allow the muscles and tendons around them to relax. Allow yourself to feel the different parts of your body. Let your concentration move from your mind and head into your body itself, actually feeling the sensations in each area.

Once you have achieved a deeper state of relaxation, it's possible for a shift in consciousness to occur. The mind's usual defenses may relax, which may allow you to have significant success in modifying or changing behaviors. In your yoga practice, you will begin to notice your bodily habits of overwork, neglect and rigidity by feeling the muscles that are tired, weak or inflexible. As you continue your yoga practice, the



## Qi gong and qi

Qi (CHEE) is difficult to define. In Chinese medicine, qi is said to represent both the breath of life energy and the field of energy that surrounds, underlies and infuses you.

By facilitating the flow of this energy within your body and the interaction of your own life energy with the larger field that surrounds you, it's possible to feel restored and re-balanced.

Qi gong (CHEE-gung) exercises allow you to gather, circulate and store this vital energy. Some of the exercises are designed to increase your energy. Other exercises are used to heal the body.

Many people find that individual qi gong exercises and movements easier to learn than are tai chi routines. This is because they're individual exercises rather than a whole series of forms that are learned together. Yet, the benefits are similar to tai chi and may be easier to adapt to your individual needs.

## Timing

Tai chi exercises are traditionally done from 5 a.m. to 7 a.m., beginning with quiet meditation, yoga or stretching, followed by tai chi or other movement forms.

The movement forms can be energizing, so doing them in the morning can provide vitality for the day to come. Doing them late in the day may make sleep difficult for some.

body slowly shifts — strengthening, opening and releasing. The habits of your mind will begin to shift, as well.

Mental affirmations delivered during this deeper state of awareness can have important or even life-changing effects. Repeating a simple affirmation that fits with your own beliefs and needs can further enhance your yoga practice. An affirmation is usually a short phrase such as “I am happy, healthy and completely at peace,” “I am enough just as I am,” “I am free of fear” or “Energy flows completely through my entire being.” Affirmations may also help you to become more compassionate toward yourself and others.

You can use your breath to deepen your affirmation: “Breathing in, I receive peace; breathing out, I give love.” Let your affirmation inspire you to move through your practice with a deeper purpose.

## Deep breathing

There are many different breathing exercises in both yoga and tai chi. Most people breathe only into the chest, taking rapid and shallow breaths. This makes minimal use of the diaphragm and lower lungs. Others breathe into the belly, breathing more slowly and deeply, but making little use of the muscles that expand the chest.

With practice, you can learn to breathe deeply, expanding your lung capacity, strengthening the abdominal muscles, diaphragm and the muscles between the ribs (intercostal muscles) to make full use of your lungs. To do so:

- Sit near the edge of your chair, placing your feet the width of your hips apart. Don't lean against the chair back. Rest your palms on your thighs. Tuck your tailbone under, draw your bellybutton in and up, and elongate the spine, chin parallel to the floor. Draw your shoulders up, back and down.

- Close your eyes and concentrate on the flow of your breath.

- Slightly contract the back of your throat, allowing your breath to make a sound like the rise and fall of waves against the beach. Practice until you can make the sound inhaling and exhaling with the mouth closed.

- Try to create different volumes of sound.

- Shift between breathing in and out as smoothly as possible.

Continue this for several minutes, then release any conscious control of your breath, allowing it to naturally re-balance.

## Regular practice

The benefits of yoga may begin as soon as you start, but developing a personal practice on a regular basis is key. Yoga and tai chi begin with accepting yourself as you are — your limitations as well as your strengths. It's not a competition or a contest with others, but rather a way to become a more embodied, fulfilled and healthy you.

Letting your practice grow gradually over time on its own natural path is often better than setting specific goals. One of the key elements of yoga for most people is learning to slow down both the mind and the body.

As the body moves slowly into a yoga pose, holds the position and moves deliberately out of it, there's a clear and natural tendency to focus



## The six elements of qi gong breathing

A key aspect of qi gong breath awareness involves slowing down the breath. People often breathe predominantly with the chest muscles rather than the abdomen. They also breathe on average 17 times a minute.

By slowing your breathing rate down to around six or seven times a minute, and learning to breathe so that the lower abdomen expands with inhalation and relaxes with exhalation, a more natural state of breathing will occur.

After learning how to breathe into the lower abdomen and slowing your breathing rate, there are six aspects of the breath that warrant your attention. Your breath should be:

- *Natural* — Your breath should feel easy and unforced.
- *Slow* — Try to make your breaths unhurried and at a slow rate.
- *Long* — This is true in both your inhalation and exhalation phases.
- *Deep* — Draw your breath deep into your lower abdomen.
- *Smooth* — Try for a smooth and uninterrupted rhythm.
- *Even* — Inhalation and exhalation phases should be relatively even in timing.

on the here and now. Increasing awareness of your body and body rhythms helps to tie the mind and body together in a healing way.

It's common to have difficulty quieting your mind as you begin any slow or contemplative process, whether it's a yoga or tai chi posture or meditation. Eventually, the process develops its own flow, and meaning comes from learning to be deeply present in your body. Be gentle with yourself. Let go of expectations. Go with this flow.

## Breathing for energy

Yoga, tai chi and other meditative practices consider breath a vital energy. Thus, much emphasis is placed on breathing. In fact, Western science recognizes that oxygen is received through breath, and breath is one of the fundamental ways that most living things derive energy. Part of your practice will focus on breathing while in poses and at rest. You'll be asked to breathe deeply — typically through the nose — and to pay attention to your breath in your body.

You may have noticed that your breath becomes shallow and rapid when you're agitated. It's a natural short-term response to anger, fear or stress. During a yoga or tai chi session, your emotions can be brought into balance by regulating the flow and quality of your breath.

Poses and intensity levels vary from corpse, in which you lie flat on your back, to restorative poses such as twists and forward bends, to more complicated poses like headstand, which may take months or years to master. A good instructor can guide you through the poses, offering alternatives for varying fitness and flexibility levels. While there may be some discomfort when stretching dormant muscles, yoga doesn't subscribe to the "No pain, no gain" philosophy.

Strength is another byproduct of yoga. Poses are typically done in an enter-hold-release sequence that makes your muscles stronger. With strong muscles come increased energy and stamina, improved balance, overall physical wellness, increased metabolism, and possibly the prevention of osteoporosis.

Your body continually communicates to you, though its language is different from that of the head. Yoga, by getting you more in touch with your body, helps you to understand your body. When you practice regularly, yoga and tai chi can have a powerful effect on your whole life. The seemingly simple acts of yoga — and the awareness it can bring — have resulted in success at stopping harmful habits such as tobacco use, even when other avenues have failed.

## Health and tai chi

Tai chi is perhaps the best known of the energy practices that come under the broader category of qi gong (CHEE-gung). The aim for qi gong practice is improvement in qi balance. This is acquired through specific exercises based on three main principles — harmonizing the breath, harmonizing one's posture and movements, and harmonizing one's mind.

Tai chi and qi gong practices often combine rhythmic movements, breathing techniques and focused attention. Classes in tai chi — also called taiji — are available in many communities.

Each movement in tai chi — in addition to often having fanciful names such as "grasp bird's tail" — has a martial art purpose. Examples



## Yin and yang

The concepts of yin and yang are important in understanding acupuncture and qi gong (CHEE-gung), including tai chi.

Yin and yang represent both the existence of opposites and the interconnection of opposites: Yin is dark, yang is light; yin is lunar, yang is solar; yin is passive, yang is active; yin is inside, yang is outside; yin is female, yang is male; yin is insufficiency or depletion, yang is excess.

Yin and yang each contain the seed of the creation of the other. Each depends on the other for its existence and generation. They flow together in a unified manner or cycle.

Both are necessary. The balance between the two defines health or lack thereof. Ill health results from imbalances of yin and yang and from block-



ages of energy flow. An energy blockage is like a dam. Excess is a yang condition and is usually experienced as pain. Energy builds up behind a dam so that excess yang stagnates in that area. Beyond the dam there's energy flow resulting in a yin condition or depletion of life energy in that system.

Qi gong exercises that are designed to gather energy can thus address yin conditions of insufficiency, while qi gong exercises that facilitate flow of energy can address yang energy buildup and relieve pain.

Doing qi gong exercises can relieve obstructions to energy flow much in the same way acupuncture does. Thus, qi gong can be like giving yourself an acupuncture treatment.

## Ways to meditate

Meditation can be performed in three ways:

- Standing
- Seated (See page 1 of the October 2009 issue of *Mayo Clinic Health Letter*.)

- Lying down

Each contributes in a different and profound way to the balance and skill of the tai chi practitioner.

The third component of tai chi is called push-hands practice. In push-hands, two people work together making contact with their hands and arms in fluid motion to develop more feeling and understanding of the interplay of balance, center of gravity, intention of movement and force. The three elements together — meditation, forms and push-hands — provide a deeper practice than does any one of them alone.

include pulling an opponent forward and off balance, or deflecting a striking blow. The slow, graceful and fluid manner in which these movements are done in tai chi is a way of practicing and maintaining equilibrium if under attack.

Tai chi is performed slowly, which accentuates its intention, precision and accuracy, as well as the mechanics of the art. Surprisingly, if you practice the art slowly and softly, you can develop the ability to have agility, strength and quickness of movement. In addition to teaching motor skills and increasing physical improvement, tai chi is nurturing to the inner self. It also can decrease the incidence of falls and the fear of falling.

There are three main components to tai chi. These are:

- *Meditation* — To know yourself
- *Forms* — To know yourself in the world with respect to gravity
- *Push-hands practice* — To know yourself in relation to others

What most people associate with tai chi are the forms — the sequenced patterns of movements. The sequences are often called either short forms — consisting of eight to 10 movements — or long forms that may have more than 100 movements in the sequence. But this isn't all that tai chi involves.

Meditation also is a key component of tai chi. For many years, this meditative component of tai chi was taught only to the most trusted and accomplished students. And even when meditation was more broadly taught, new students often ignored that aspect and were attracted more to the form movements. That's unfortunate, since the meditation component of tai chi has been called "the million dollar secret." □