

## Chair Breathing

Chair breathing is an asana specifically recommended for patients with COPD and asthma where the patient sits on a mat in front of a folding chair, with legs stretched forward and resting their arms on the seat. They tighten all the muscles of the body, then progressively relax each part locally (progressive relaxation). Moving the head backward and forward slowly, the patient should repeat the exercise five times. Next patients move their head backward while inhaling slowly and deeply, then move their head forward and down while exhaling slowly and completely. This step is repeated five times.

This exercise includes performing the previous maneuver while chanting “Ah” in a low tone while moving the head forward and down. This is repeated five times. Next, patients perform the above maneuver but chant “MM” in a low tone while moving the head forward and down. This is repeated five times.

If therapists place their hands on the rib cage of a person performing this technique, they can actually feel the percussive vibrations created when these exhalation maneuvers are performed. Chair breathing is not a replacement for bronchodilators, but can be used as a helpful coping technique when managing an asthma episode.

## Yogasthma

The United States Yoga Association, in cooperation with Kaiser Permanente and St. Luke’s Hospital, San Francisco, has developed a program called Yogasthma, which promotes a holistic approach to asthma management. Program director Sandy Wong-Sanchez says that the Internet component of the program was inspired by the need to make asthma information available to children and families outside the classroom. “The last thing you want to do is take them out of class” to access asthma information, she notes. Yogasthma outlines “Seven Steps to Asthma Control,” including asthma education, pranayama, asanas, proper use of medications, dietary recommendations, clean personal space (including fresh air), and relaxation techniques. Its web site ([www.usyoga.org](http://www.usyoga.org)) provides clear directions for learning yoga techniques and addresses each of the topics in an effective format.

As the benefits of yoga practice become better documented, the oppor-

tunity to integrate yoga techniques into standards of practice becomes apparent. “All the major alternative medicine systems approach illness first by trying to support and induce the self-healing processes of the person. If recovery can occur from this, the likelihood of adverse effects and the need of high-impact, high-cost interventions are reduced. It is this orientation toward self-healing and health promotion (salutogenesis rather than pathogenesis) that makes alternative medicine approaches to chronic disease especially attractive.”<sup>1</sup>

As respiratory patients become interested in considering the benefits of a more healthy lifestyle and integrating natural techniques to manage their conditions, RCPs have an opportunity to help them learn about the potential benefits of yoga as an adjunctive therapy. They may find that “the simplest and most powerful technique for protecting your health is absolutely free—and literally right under your nose.”<sup>2</sup>

## References

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# Yoga as Adjunctive Therapy for Lung Disease

By John Wolfe, RRT

RCPs have the opportunity to introduce the benefits of yoga as respiratory patients consider the benefits of a more healthy lifestyle, including integrating natural techniques to manage their conditions.

As respiratory therapists, we know that breathing is an essential function and our daily activities persistently revolve around the breath and breathing.

However, our focus on administering aerosolized nebulizer treatments, ventilator management, emergency procedures, and other tasks often distracts from the ability to stop and consider the breath. The discipline of yoga, however, has focused on the essential nature of the breath, and refining breathing techniques.

We can better assist patients in their quest to assume a more active role in their plan of care by learning about the adjunctive therapies they may choose. “The increasing popularity of comple-

mentary and alternative medicine (now used by more than 40% of the public) reflects changing needs and values in modern society in general. As the public’s use of healing practices outside conventional medicine accelerates, ignorance about these practices by physicians and scientists risks broadening the communication gap between the public and the profession that serves them.”<sup>1</sup> For patients who want to consider taking more responsibility for their health and well-being, yoga stretches and breathing techniques offer a natural and healthy choice.

The term “yoga” initially conjures an image of a practitioner sitting on a pillow in a lotus pose or stretching into an impossible arch. In fact,

yoga is a generic term applied to several disciplines with distinct goals. We will consider yoga asanas (stretches) and pranayama (breathing techniques) that may be of therapeutic benefit, specifically for patients with asthma and chronic lung disease. According to the American Yoga Association, yoga breathing exercises can strengthen and relax the muscles of ventilation. Yoga breathing and stretching postures are used to increase respiratory stamina, relax the chest muscles, expand the lungs, raise energy levels, and calm the body.

# Yoga Techniques

The yoga techniques we will consider can be broken into two categories.

The first is **pranayama**, which includes breathing techniques that promote diaphragmatic breathing and can create a profound sense of relaxation.

The second is **asanas**, which involve stretches that provide a mild form of exercise to enhance flexibility, circulation, and muscle tone.

## Pranayama

Andrew Weil, MD, directs the program on integrative medicine at the University of Arizona, Tucson, and has become nationally known for his best-selling books, including *Spontaneous Healing* and *Natural Health, Natural Medicine*, which promote health and wellness. His central thesis is that, given the chance, the body will heal itself.

Weil has devoted his career to exploring and evaluating alternative therapies and presenting them as part of his vision for preventive health that promotes individual responsibility for health and fitness. He has recently released a recorded narrative on compact disc called *Breathing: The Master Key to Self Healing*. He describes a scenario that will be familiar to most respiratory therapists: “In the four years I spent at Harvard Medical School I learned about the anatomy of the respiratory system; I learned about disease of the respiratory tract, but I heard nothing about breath as the connection between the conscious and unconscious mind, or the doorway to control of the autonomic nervous system, or breathing techniques for controlling anxiety

and regulating mental states.”<sup>2</sup>

His excellent narrative on the first disc is devoted entirely to understanding the why of breathing exercises. He reminds us that breathing is the only autonomic function that can be consciously controlled and suggests it is the key to bringing the sympathetic and parasympathetic nervous system into harmony. “Breath is the only function through which you influence the involuntary nervous system. That is, you can establish rhythms of breathing with your voluntary nerves and muscles that will affect the involuntary nervous system.”<sup>2</sup>

The recording promotes “eight techniques to revitalize your health,” beginning with the most basic technique of “following your breath,” and exploring more advanced techniques of pranayama including maneuvers that he calls the “stimulating breath” and “relaxing breath.”

Weil concludes that “of all the techniques that I have investigated for reducing stress and increasing relaxation, it is breath work that I have found to be the most time efficient,

the most cost efficient, and the one that most promotes increased wellness and optimal health.” And that “the results are long lasting, they get better over time, and of course they are completely free of the toxicity that is usually associated with pharmaceutical drugs.”<sup>2</sup>

One of many effective pranayama techniques is alternate nostril breathing, which is using the thumb of the right hand to block the right nostril. Patients exhale completely through the left nostril, then inhale slowly. Then they remove the thumb from the right nostril and block the left nostril with the fourth and fifth fingers. Patients exhale completely through the right nostril, then inhale slowly. They should continue this pattern for about five minutes.

## Asanas

P.K. Vedanthan, MD, is an allergy and asthma specialist who has maintained a thriving practice in Fort Collins, Colorado, since 1976. Although Vedanthan had practiced yoga since childhood, he had never applied the techniques to patient care. Intrigued by the success of H.R. Nagendra, MD, in his clinical studies in India, Vedanthan began making yoga instruction available to asthma patients. “These were moderate to severe asthmatics who were on daily medications, inhalers, and oral medications. We found that they were able to reduce their medications; they felt a lot better, and their breathing attacks were comparatively less,” he explains.

He subsequently began a series of studies to attempt to document any clinical changes as a result of practicing the techniques, which included pranayama, asanas, and meditation.

## COPD

Vedanthan has also studied the benefits of yoga for chronic obstructive pulmonary disease (COPD) patients.<sup>4</sup> “We took 11 patients ages 61 to 79. They were taught yoga breathing techniques by a teacher and practiced at home with the help of an audiotape. They were all on oxygen, from 1 to 3 lpm. Baseline oxygen values on O<sub>2</sub> were obtained, then O<sub>2</sub> was discontinued. Within a few minutes, the range of desaturation was anywhere from 82% to 92%. Then we had them perform the yoga techniques and O<sub>2</sub> saturations started rising at 10 minutes and 20 minutes to figures of 92% to 94% without oxygen,” Vedanthan says.

“Ten of the subjects felt a lot better subjectively and felt relaxed overall.

One controlled study showed that people with lung disease who practiced yoga clearly felt better and had improved quality of life scores compared to patients who did not use the techniques.<sup>3</sup> There were no significant differences in pulmonary function test results or oxygenation in the asthma group, however.

“The most significant things were nonpulmonary aspects,” Vedanthan says. “What we now call quality of life, these [scores] improved significantly. So they felt better, were less anxious, were able to handle minor attacks much more positively and were sleeping better. All those compared to the non-yoga group improved a lot, which is significant. We concluded that yoga can be a good adjunct to therapy—it doesn’t replace medicines, but it’s a good thing for people with asthma to practice yoga on a daily basis.

One subject could not tolerate being off O<sub>2</sub> but was better subjectively after using yoga breathing techniques. After the study was completed, they kept on coming back saying they wanted to do it again. So we had them continue doing it. Lung functions showed no change. So basically, what we thought was true—these breathing techniques can improve oxygenation. It probably would benefit patients with COPD and may be useful in reducing the O<sub>2</sub> needs in these patients by improving their breathing technique. Most of them just panic and don’t know how to breathe.

“Even if I don’t find objective measurements, they subjectively feel better,” he continues. “That is a common thing we find in all these groups. We thought

“In yoga literature, there is a certain kind of breathing called chair breathing techniques,” Vedanthan explains.

“These are relaxation techniques, which they claim helps asthma attacks. So we took a group of asthmatics and provoked [their asthma with] an exercise challenge, attained a certain pulse rate, and measured their lung functions [to] see what happened. We found that six out of eight got to baseline levels much quicker with the chair breathing techniques and their asthma symptoms abated a lot faster without the use of medication.”

it may be a good part of pulmonary rehabilitation, and further studies are needed.”

Sapna Patel, a certified yoga instructor, works with some of Vedanthan’s patients and specializes in yoga for geriatric patients. She has observed that one of the most important aspects of yoga for asthma and COPD patients is that “they develop an increased capacity to relax and control their breathing. They learn that they don’t have to let their breathing control them and that they can take charge of their breathing.” As with any technique, she emphasizes that yoga requires regular practice in order to be effective.