### Breathe for better health

The average person breathes over 20,000 breaths per day (about 15 breaths/ minute, every 60 minutes, every 24 hours).

This process of breathing is fundamental to all our physical and mental functions. The respiratory system powerfully influences our heart and circulation while supporting our digestive and lymphatic systems.

On a moment-to-moment basis, your nervous system reacts to your breathing pattern whether you are awake or asleep. Yet, although it is so important, breathing can take place unconsciously or can be brought under our deliberate control.

For thousands of years, ancient traditions like Yoga have stressed the critical importance of proper breathing for good health. Modern medical science has now recognised breath-work as a complementary wellness tool in reducing stress, anxiety and depression and in lowering blood pressure. But there are important details involved in healthy breathing.

# Breathe from your belly

The two main patterns of breathing are thoracic or chest breathing, and abdominal or diaphragmatic breathing. The former uses the muscles of the chest, while the latter employs the diaphragm and this is far more effective. The dia-phragm is a large tent-like muscle that contracts to suck air into the lungs. In abdominal or belly breathing, the belly rises with the in breath and sinks down with the breath out. Breathing with the chest muscles uses up more energy while moving less air.

## Breathe deep and slow

Controlling the breath allows you to control various nervous responses from the body. Depending on the rate and the depth of the breath, a special part of the nervous system (the autonomic nervous system) sends signals to its two branches: the calming parasympathetic branch (rest and digest) or the alarming sympathetic branch (flight or fight). Rapid or shallow breathing strongly increases the sympathetic stress response while breathing slowly (less than 12 breaths per minute) increases the parasympathetic relaxation response.

Deep breathing raises levels of oxygen in our blood while lowering the level of carbon dioxide and presents a wide range of benefits for our health.

#### Breathe through the nose

Yoga students understand that the nose is for breathing and the mouth is primarily for eating. By design, nasal breathing and mouth breathing facilitate totally different physiological responses in the body. Breathing through the nose activates the parasympathetic nervous system, while mouth breathing encourages the sympathetic nervous system. Mouth breathing even elevates the heart rate and encourages the release of stress hormones into our bloodstream.

In addition, you get more oxygen into your blood by breathing through your nose. This because a gas called nitric oxide, is formed in the sinuses of human beings. In 1998, one of my teachers, Dr Louis Ignarro, shared the Nobel Prize for discovering the importance of nitric oxide. Nitric oxide dilates blood vessels. When nitric

oxide is produced in the sinuses, it follows the inhaled air through the nose, increasing blood flow and oxygen uptake in the lungs. This does not happen with breathing through the mouth. It only occurs when air is inhaled through the nasal passages.

#### Use humming

Doctors in Sweden have discovered that even greater amounts of nitric oxide can be produced in the nose and sinuses by a breathing technique called humming.

Humming is done by taking a slow deep breath in, and then while breathing out through your nostrils, with the mouth closed, creating a humming sound. One can start to practise humming with five to 10 repetitions, three times per day. Yogis have practised this breath work for thousands of years and call it Bramhari or the bumble bee breath.

Nitric oxide is also involved in hormonal and nervous system activity and helps maintain, repair and defend the trillions of cells in the body. Nitric oxide improves blood circulation and lowers high blood pressure while it reduces pain and inflammation. It increases energy and weight loss while improving digestive and immune system function.

### **Breathe consciously**

We can choose to become aware of our breath. Consciously follow the air from when it enters your nostrils all the way along your air passages to your lungs and then follow it all the way back out again. Notice things like the rising of your belly and chest as you breathe in and their sinking back as you breathe out. Tune into the gentle sound of the breath as it flows in and out. Turning your attention inwards can have a powerfully calming and relaxing effect as it increases your parasympathetic response.

## A simple breathing exercise

There are many types of breathing exercises with varying degrees of difficulty and effects. Try this simple breathing exercise:

Sit or lie in a comfortable position where you can be undisturbed for 10 minutes.

Close your eyes and focus your attention on your breath. Draw the breath in through your nose down towards your abdomen until you feel the breath fill your belly and chest.

Hold the breath for a moment, then exhale, through your nose, until all the breath is expelled from your lungs. Then begin to breathe in to a count of five, hold the breath for a count of 15 and exhale to a count of 10. Apply this three-part breathing exercise for 10 minutes in the morning and 10 minutes in the evening right before bed. Notice the relaxing effects as the body and mind responds to this breathing pattern. More detailed training on breathwork is found on my CD entitled **A Time to Relax.** 

I fully agree with acclaimed alternative health guru Dr Andrew Weil when he stated, "If I had to limit my advice on healthier living to just one tip, it would be simply to learn how to breathe correctly."