

Breathing Training

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Accompanying brochure for the CD-ROM with breathing exercises

Preface

The training program outlined in this brochure was compiled for a study conceived and directed by Andreas Eherer (Associate Professor of Medicine, Medical University of Graz) and aimed at improving gastroesophageal reflux-related symptoms.

The exercises are based on a training program developed by Karl Ernst Hoffmann (Professor Emeritus of Voice at the University of Music and Dramatic Arts, Graz) for his students.

The exercises were adapted by Gernot Puschnig (student at the Academy of Physiotherapy, Graz) to make them more suitable for alleviating gastroesophageal reflux.

General remarks on the training program

- Read this brochure carefully before you start training with the CD-ROM.
- You will need about 20 to 30 minutes for whole set of exercises. Make sure you have enough time for your training session. The training will be effective only if you feel calm and relaxed while you are doing the exercises!
- Every exercise should be continued until the accompanying music stops.
- If you start to feel dizzy or faint during your training session, stop the exercise, relax and breathe normally. Continue with the exercises once your discomfort has passed.
- If possible, always do the exercises at the same time of the day, preferably **before** the evening meal or at least one hour thereafter.
- If you are suffering from acute reflux symptoms, you may prefer to do only one exercise (e.g. Exercise 3 in a sitting position). Note whether your symptoms improve in the course of the training and record any changes in your training protocol.
- During the first week of training you should do the exercises at least 5 times, thereafter daily or at least 6 times a week.
- It is important that you record in your training protocol your training load and all medications taken during the training period.

Description of the starting positions

Starting position: lying on back (supine position)

You should best lie on the floor on a gymnastics mat, a soft blanket or a carpet. Bend your legs as shown in the picture to avoid excessive curving of your lumbar spine (swayback). Put a pillow under your head. Hold your arms at your sides, straight but relaxed (Picture 1)

[Insert picture]

Picture 1: Starting position – supine

Starting position: seated

Sit up straight, at best on a low stool. Your knees should be hip-width apart, and the soles of your feet flat on the floor. The angles of your hip and knee joints should be about 90 degrees.

Sit with your upper body erect; the pelvis should be kept in a neutral position, neither be tilted too far back (humpback!) nor too far forwards (swayback!). Check your position: if most of your upper-body weight is on the pelvic bones you sit upon (your left and right ischial tuberosities), the pelvis is positioned correctly.

Lift your breast bone slightly upwards and stretch your cervical spine straight upwards (imagine that someone is pulling you straight up from the back of your head), pull your chin slightly inwards, towards your larynx. Relax your shoulders and place your hands palms down on your thighs. (Picture 2)

[Insert picture]

Picture 2: Starting position – seated

Starting position: standing upright

Standing on both feet: With your feet about hip-width apart, put one foot 5 to 10 cm in front of the other, bend your knees slightly, and distribute your weight equally on both feet. Straighten your upper body, avoiding a swaybacked posture.

Straighten your cervical spine (stretch the back of your head upwards) and relax your shoulder muscles; extend your spinal column upwards and at the same time relax your rib cage and your shoulder muscles. (Picture 3)

Standing on one foot: alternately stand on your right and your left foot (not illustrated).

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Picture 3: Starting position – standing upright

Exercise 1

Starting position: supine

Put your left hand on your breastbone, your right hand on your navel. (Picture 4)

Breathe in through your nose as if trying to draw in a pleasant aroma. Image you want to inhale a beautiful fragrance as deeply as possible in one breath.

Make sure that only your stomach rises when you breathe in. With your left hand, make sure that your thorax remains entirely relaxed, while your right hand rises and falls with the rhythm of your breathing. Breathe out through your nose. With your right hand you should be able to feel how the abdominal wall moves in and out.

Repeat this exercise 5 to 10 times; then change the position of your hands.

Make sure that your breathing rhythm is calm and steady, and the inflow and outflow of air feels natural.

You may want to increase the degree of difficulty of this exercise after one week by putting a heavy weight (e.g. a book) on your stomach. Increase the weight by one kilo per week, i.e. in the fourth week you would be bearing a weight of 3 kg. Make sure you always indicate in your training protocol how much additional weight you used!

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Picture 4: Starting position for Exercise 1

Exercise 2

Starting position: supine

Now put both hands on your sides, at the level of your lower thorax. (Picture 5)

Breathe in through your nose as if trying to inhale a pleasant fragrance. Make sure that when you breathe in, first your stomach lifts and then your lower ribs expand sideways. With your hands on your sides check that your lower rib cage expands properly. Your upper rib cage must lift only minimally. Breathe out through your nose.

Start with 5 breaths in a series. Take a short break before you repeat the exercise.

In the course of the training, gradually increase to 10 breaths per series.

When you have mastered this exercise as described above, press your hands slightly against your sides when you breathe in to prevent your lower rib cage from expanding. Only exert so much pressure that there still is a constant flow of movement from your stomach to your lower ribs.

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Picture 5: Starting position for Exercise 2 (left), different hand positions (right)

Exercise 3

Starting position: seated

Place both your hands on your navel, with one hand above the other. (Picture 6)

Breathe in through your nose in short snuffles (start with about 5 such snuffles) while exerting slight pressure with your hands against your abdominal wall, until you experience a pleasant feeling of tension, extending from the inside of your body to the outside and all around your midsection, from your navel, to your hips and to your lumbar spine.

Hold this tension for about 3 seconds, and then breathe out slowly for about 10 seconds with slightly pursed lips (image you want to make the flame of a candle in front of your mouth start flickering, without blowing out) At the beginning, repeat this exercise 5 times at most.

Relax and take 2-3 normal breaths between exercises so that you do not become dizzy or faint.

Increase the snuffling inhalations slowly from 5 to 10 between the 2nd and the 4th weeks. Also gradually increase the tension on inhalation from 3 to 10 seconds and the exhalation phase from 10 to 20 seconds.

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Picture 6: Starting position for Exercise 3

Exercise 4

Starting position: seated.

Breathe in through your nose as if trying to inhale a pleasant fragrance, while lifting your right arm. (Picture 7) Breathe out slowly and calmly through your nose while lowering your arm again. Repeat this exercise 5 times; then repeat it while lifting your left arm. After that, start again with your right arm.

When you start this exercise, check with your free hand that your stomach and lateral ribs expand evenly.

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Picture 7: Exercise 4 (1st week)

Intensify this exercise from week to week as described below:

2nd week: starting position: seated, as described above: hold one nostril closed with your free hand; otherwise continue as described above, alternating nostrils when you alternate your arms. (Picture 8)

3rd week: starting position: standing upright. Again, hold one nostril closed, lift and lower your free arm with every breath.

4. week: starting position: standing on one leg. (Picture 9) If you lift your right arm, stand on your right leg, if you lift your left arm, stand on your left leg.

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Picture 8: Exercise 4 (2nd week)

[Insert picture]

Picture 9: Exercise 4 (4th week)

Exercise 5

Starting position: standing upright

Again, inhale in short snuffles, consciously keeping up the tension of your breathing.

Use the vowels o, a, and e and laugh in short bursts to try to break the tension.

Laugh audibly to loudly at a comfortable pitch.

Try not to exhale air (not Ho-Ho-Ho, but O-O-O). Start with 8 to 10 laughs and increase to 25 during the training period.

After a few breaths, repeat the same exercise by exhaling air before each tone (i.e. Ho-Ho-Ho).

Also do the exercise alternately with and without exhaling air (one breath each).

Important: While you voice the vowels, constantly intensify the feeling of tension in your midsection.