Technique Tip: Use of Air and Breath Control

The Respiratory System

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What are the mechanics of breathing? The lungs expand when we inhale. The body does this automatically, but for playing wind instruments and singing, we need a long controlled exhalation—we have to inhale a greater amount of air in a shorter time than we do in normal life, and exhale much more slowly.

Automatic breathing happens by activating the diaphragm, a thin membrane attached to the lungs on one side and abdominal muscles on the other side, pulling the lungs downwards. Some other muscles between the ribs also help expand the lungs.

Start with an exercise: observe your natural breathing without trying to actively breathe. Place your hands in different places to feel movement: stomach, waist, lower back, chest, ribcage on the sides and on the back (a little more difficult—a good exercise for shoulder flexibility!).

This is best to try in an upright posture, head over heart, heart over pelvis. Your feet should be under the hips, with your weight evenly distributed. Another option is to be seated upright, or even to lie down.

Breathing to play the recorder

After you've felt how your natural breathing results in expansion and compression of various parts of your torso, let's look at how breathing works for the recorder. When we play a wind instrument, we have to actively work on both inhalation and exhalation: we want to control the amount and quality of the air flowing out, depending on the type of resistance involved. The recorder is an instrument with very little air resistance, in contrast to reed or brass instruments.

There are three main muscle groups that we can actively move:

- abdominal (core) muscles
- pectorals (chest)
- intercostals (connecting the ribs)

Now we will try to isolate each type of breathing governed by these muscle groups (demonstrated in my video). How does each one feel, or affect other parts of your body? Is there more relaxation or more tension? Which is the hardest, or the easiest?

The first way of breathing, so-called "belly breathing" or abdominal breathing, is to pull the diaphragm—attached to the lungs—downwards with the core muscles. The diaphragm is a muscle that we cannot manipulate directly, only indirectly with different groups of abdominal muscles. When we do so, there is not enough room for the intestines as the lungs expand downward. This is why the entire abdomen expands in abdominal breathing—we can feel it in the waist and even in the lower back.

The second type, "chest breathing," involves pulling up the lungs with the chest muscles and even cervical muscles in the neck.

It has three disadvantages. Since it involves a cervical muscle, it closes up the throat and tenses up muscles in the neck/shoulder area. These muscles are not as strong as the abdominal muscles, so the tone won't be very controlled while blowing.

If we only inhale in the upper part of the lungs for a long period of time, while playing a long musical piece without many moments to calmly breathe in, hypoventilation can occur (the opposite of hyperventilation): even with air in the lungs, the oxygen has run out. It is then old, low-oxygen

air that gets into the lungs via the trachea. This makes us short of breath, which can be very uncomfortable.

The intercostal muscles also play a role. They are used for chest breathing, but also slightly expand the chest when breathing abdominally. They serve to give the lungs a certain flexible space. We can also use them consciously if, in a long musical phrase, abdominal breathing alone is not enough: they give just a little more. It feels like a sideways breath under your arms. However, I would only use it consciously when abdominal breathing is perfectly controlled.

Resistance

There are wind instruments that offer a lot of resistance: reed instruments like oboe or clarinet and brass instruments like trumpet or the Renaissance cornetto. To play these instruments, breath support is used to push against this resistance. The abdominal muscles *push* upwards. Try blowing on the back of your hand; you will feel the tension in your abs.

With the recorder, however, it works differently: there is almost no resistance. Breath support is used to keep the lungs open as long as possible—so that the air does not simply fall out, but rather flows out in a controlled and even manner. In short, the abdominal muscles continuously *pull* the diaphragm downward.

Leaking through the nose

An important detail in playing the recorder that is sometimes overlooked is preventing air from leaking through your nose. We have to breathe in and out through the mouth and "turn off" the nose. Inhaling through your nose is easy to notice, since it's quite noisy—a major reason not to do it.

However, breathing *out* through the nose often goes unnoticed. Many people who inhale through the

mouth leak through the nose when they blow out. This will take away from the sound, resulting in an airy, hoarse tone, and spills air unnecessarily. It's best to make sure you close off your nose completely when blowing.

Exercises

Now the real work begins! Exercises 1 to 4 make us aware of the diaphragm and where in the body our muscles have to work actively. (These are demonstrated in my video, along with exercise 5, the basis for the correct use of abdominal breathing once we have a good sense of the diaphragm and the abdominal muscles.)

It may not seem productive to practice without the recorder, but if you do these exercises daily until they become second nature, you will develop a solid breathing support that will make playing comfortable and improve your tone significantly. When the brain knows what the muscles are doing, we develop muscle memory and proper breathing becomes automatic.

That's why I recommend doing at least one or two of these exercises for a few minutes each day before playing. It is best to practice in front of the mirror, as there are some things of which our body isn't yet aware, but which we can observe from the outside. When you look in the mirror and do each exercise, notice where your body expands when you inhale, as well as how it feels. In time, the feeling will be enough; we no longer have to observe.

1. BREATH OF FIRE / PANTING DOG

Used in yoga, Breath of Fire involves breathing through the nose, while the Panting Dog is done through the mouth, but otherwise they are the same exercise. Breathe actively in and out very rapidly, with equal emphasis on the inhale and the exhale. This is a great exercise for feeling the diaphragm moving and for activating the abdominal muscles.

2. P-T-K

Say consonants like P, T, K energetically. For example "Tic toc tic toc"... or "Peter! Thomas! Karen!" They activate the abdominal muscles (that much force cannot only be done by the pectorals alone) and make you feel the diaphragm.

3. CONDENSATION

Breathe against a mirror, on which you try to leave a constant layer of condensation for as long as you exhale. This exercise helps you practice slow, controlled blowing. If you want to practice without a mirror, you can do the same exercise against your hand, continuously breathing out warm air against your hand with your mouth open as you exhale.

4. BENDING FORWARD

While seated, place your hands on your lower back, then bend all the way forward, so you end up having a rounded spine. Let your head hang loose. When you inhale, there won't be sufficient space for the organs to go forward (towards the belly), so that they have to expand more towards your back. In this position, you will feel your lower back expand.

Come up slowly, vertebra by vertebra. Up to which point do you still feel your back move under your hands? The idea is that, when you sit up straight, you'll eventually be able to still feel it. In this way, we focus not only on breathing in towards the abdomen, but also to the sides and the back: a more conscious use of the full capacity of diaphragmatic breath support. ❁

Want to learn more?

More Recorder Technique Essentials from Lobke Sprenkeling, including more breath control exercises with and without the recorder (and a quick look at vibrato vs. flattement): **www.youtube.com/americanrecordermag.**


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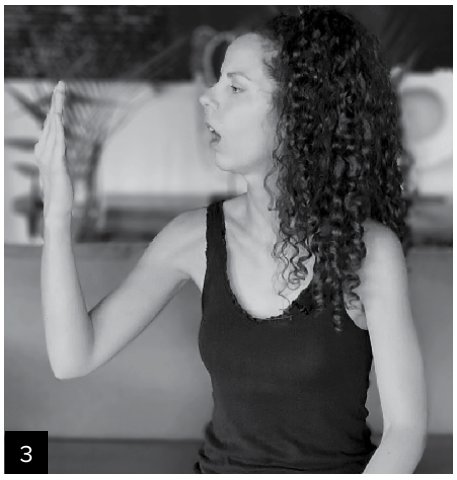
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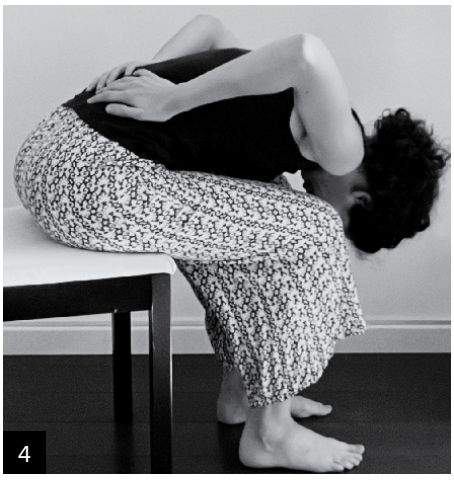
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