Recorder Technique Essentials

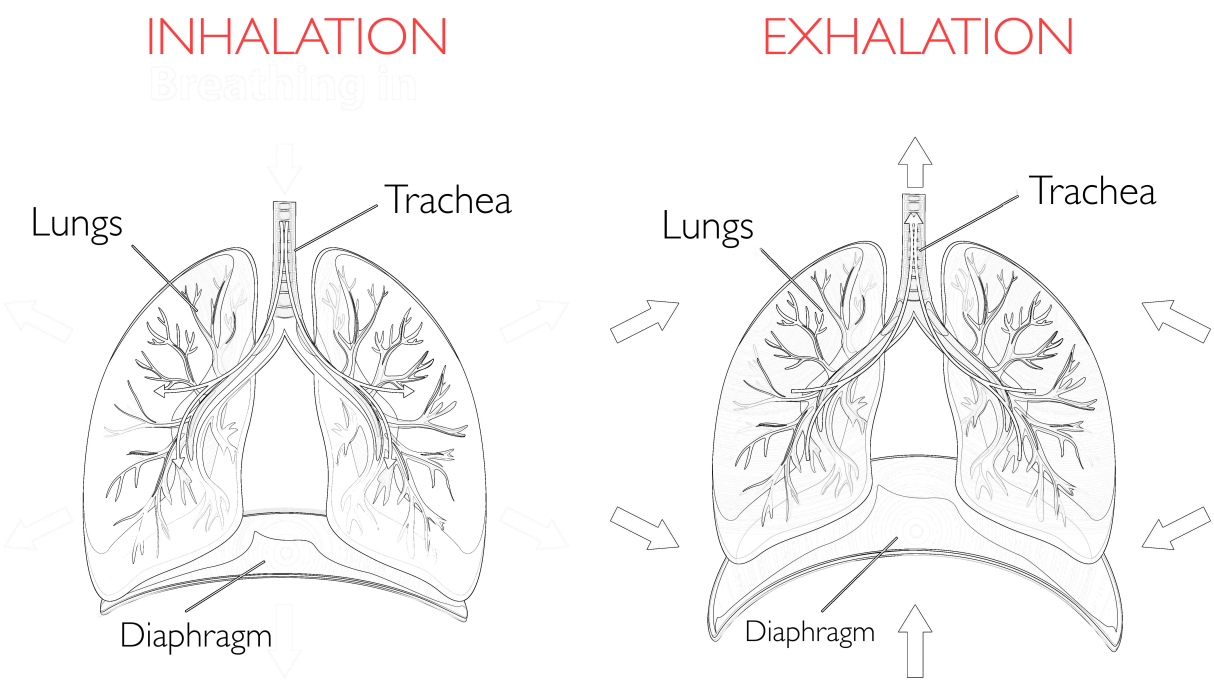
USE OF AIR & BREATH CONTROL

by Lobke Sprenkeling

THE RESPIRATORY SYSTEM

What are the mechanics of breathing? How does the respiratory system work?

The lungs expand when we inhale. The body does this automatically, but for playing wind instruments and singing we need a long controlled exhalation, which means that we need to inhale a greater amount of air in a shorter time than normal in normal life, and exhale much more slowly.



Normally, 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; while some other muscles between the ribs also help expand the lungs. Let's start with an exercise: observe your natural breathing without trying to actively breathe. You can place your hands in different places to feel it move: your stomach, waist, lower back, chest, ribcage on the sides, and ribcage on the back (these are a little more difficult to achieve - a good exercise for shoulder flexibility!).
The best is for this is an upright posture, head over heart, heart over pelvis. Feet under the hips, with your weight evenly distributed between both feet. Another option is to be seated upright, or even to lie down.

Now that 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 the inhalation and exhalation because we want to control the amount and quality of the air flowing out depending on the type of resistance we are dealing with. 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:

- The abdominal muscles (core muscles)
- The pectorals (chest muscles)
- The intercostal muscles (the muscles connecting the ribs)

Now we will try to isolate each type of breathing. How does each one feel? Does each type of breathing affect other parts of your body? Is there more relaxation or more tension? Which is the hardest? Which is the easiest?

The first way of breathing, the so-called “belly breathing” or abdominal breathing, is to pull the diaphragm - attached to the lungs - downward 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 so that they push outward. This is why our abdomen expands when doing abdominal breathing. The entire abdomen expands, so we can feel it in our waist and even in our lower back.

The second type, “chest breathing”, involves pulling up the lungs with the chest muscles and even cervical muscles.
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 very controlled while blowing.
If we only inhale in the upper part of the lungs for a long period of time, in a long musical piece without many moments to calmly breathe in, hypoventilation can occur (the opposite of hyperventilation): even though there is 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.

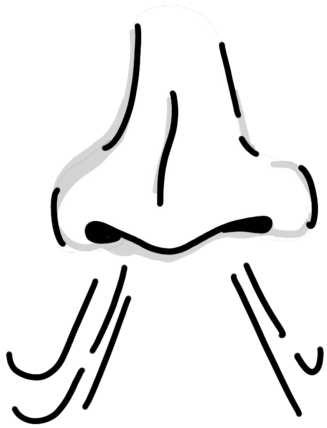
The intercostal muscles also play a role. They are used for chest breathing, but also slightly expand the chest when breathing abdominally. They serve to give the lungs a certain flexible space. We can also use them consciously if, in a long musical phrase, abdominal breathing alone is not enough: they 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 cornetto from the Renaissance. To play these instruments, breath support is used to push against this resistance. The abdominal muscles therefore push upwards. Try blowing on the back of your hand and you will feel the tension in your abs.
With the recorder, however, it works differently: there is almost no resistance. With these instruments, breath support is used to maintain 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 which is a major reason not to do it.
However, breathing out through the nose often goes unnoticed. Many people who inhale through their mouth leak through their nose when they blow out. This will take away from the sound, resulting in a more airy, hoarse sound, and spilling air unnecessarily. Therefore, make sure you close off your nose completely when blowing.

EXERCISES

Now the real work begins! Exercises 1 to 4 make us aware of our diaphragm and where in the body our muscles have to work actively. Exercise 5 is the basis for the correct use of abdominal breathing once we have a good feeling of the diaphragm and the abdominal muscles.
It may seem unproductive 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 our brain knows what our 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 that our body isn't aware of yet, but which we can observe from the outside.
When you look in the mirror and do the exercise, notice where your body expands when you inhale and how it feels. In time, the feeling will be enough and we no longer have to observe.

1. Breath of Fire / Panting Dog

Breath of Fire, used in Yoga, 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 well.

3. Condensation

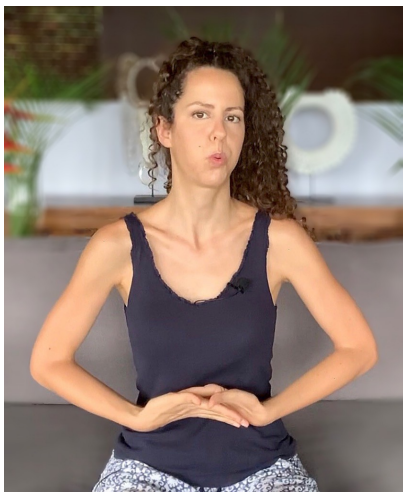
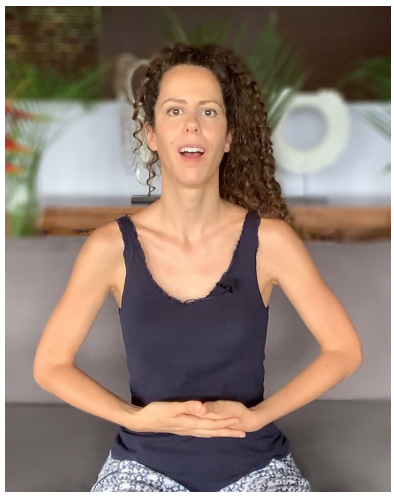
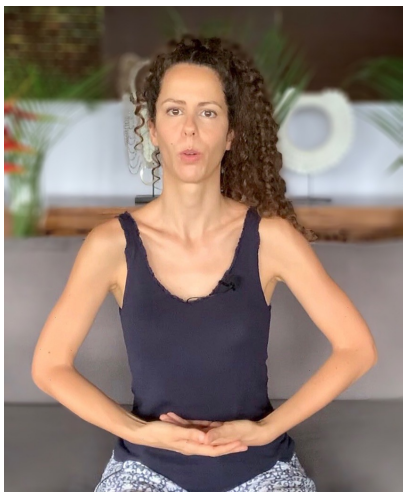
Breathe against a mirror, on which you try to leave a constant layer of condensation for as long as you exhale. This exercise helps you practice slow, controlled blowing. If you want to practice without a mirror, you can do the same exercise against your hand, continuously breathing out warm air against 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.
Then come up slowly vertebra by vertebra. Up to which point do you still feel it 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.

5. Opening up

- Level 1: Exhale through the mouth with "fffffff" until you have reached the end of your breath (at this point there is still at least 1 liter of air in your lungs), and immediately open your mouth in the form of an "Oh" or an "Ah", whichever is better for you to help your windpipe fully open. The diaphragm will immediately come back from its position of tension to a more relaxed position, pulling the lungs along so that the lungs automatically open and air flows in naturally, without you having to do anything. This is the neutral position of the diaphragm where there is no tension.
- Level 2: Now we will add a stage to Level 1 that will help us develop correct and useful breath support for the recorder. After all, we have to inhale a lot in a short amount of time in order to be able to play an entire musical phrase.
  Exhale with "fffffff", open your mouth as before with "Oh" or "Ah" to let the diaphragm return to its neutral position. This time, however, go further: help this natural breathing process along by breathing in a little more, thus lowering the diaphragm even further ("abdominal breathing"). In other words, we continue the downward direction of the expanding lungs using the abdominal muscles.

In these pictures I show the approximate position of the diaphragm with my hands in the different phases of this exercise.
The first picture shows the phase of total exhalation with the diaphragm under full tension. The second picture shows the neutral phase after simply opening the airways and the third picture shows the further inhalation.

From here on we practice with the recorder.
We hold the recorder with the right hand (and also with the lower lip, the right thumb and optionally the little finger under the edge between holes 6 and 7). The left hand is on the stomach or waist so that we can still feel our breathing.
When the recorder is lying on the lower lip, we first blow out all the air: not yet in the recorder, but above it, and then immediately open our mouth in the form of an “Oh” or “Ah”. Instead of blowing out normally as before, we now blow into the recorder.
In this way we can still do the breathing exercises from before, but already combine them with playing the recorder.

The next step is to play a long tone with both hands on the recorder while continuing to focus on diaphragmatic breathing and the feeling of it. The goal is that when playing a musical piece on the recorder we maintain this awareness of our breath support, so that our tone is stable and centered without any breathing problems.

The basic tone on the recorder should be smooth, like a lake without any waves.
Vibrato is an ornament in Early Music, and having a continuous vibrato would be like playing with a continuous trill. In addition, the continuous vibrato is usually uncontrolled, with no abdominal support and some tension in the throat.
When we use vibrato, we do so in a very controlled way in two possible forms: the air vibrato and the finger vibrato.

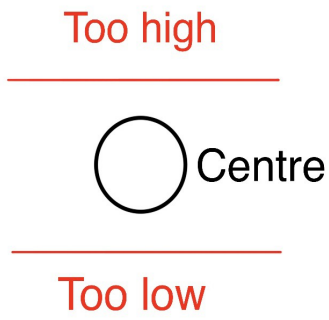
- The air vibrato consists of a wave movement when blowing into the recorder: less, more, less, more. This can go from slow to fast and back again, but it must be very regular. I would try it first on ffffff without the recorder, and feel and hear how it works: ffff**FFFF**ffff**FFFF**ffff. Then try it on the recorder, starting with a slow wave motion, until

the muscles understand how it works and can make a faster wave motion without it causing any tension in the throat.

- Finger vibrato consists of moving a finger along the edge of the finger hole or creating a shadow over the hole with the finger. The additional covering of a finger hole makes the tone lower. Now the average pitch is between the uncovered and partially covered hole, so as a compromise we have to blow a little more. It results in a small crescendo, and decrescendo as you come back. This type of vibrato is mainly used in French baroque music; it is well described in the 1707 treatise “Principes de la Flute Traversiere, de la Flute a Bec and du Haut-bois” by the French composer and instrument maker Jacques Hotteterre.

FINDING THE CENTRE OF EACH TONE

Now that we know we need a controlled tone, I recommend finding the center of each tone. Each tone on the recorder has its own centre where it resonates most. To me it's as if the sound is singing around my head. So this centre has to be found for every note, which is why I strongly recommend playing long notes every day at the beginning of your practice. The best is a very slow scale of long notes. However, if you don't have the time, consider choosing at least a few low, medium, and high tones.



The recorder, like many Early Music instruments, doesn't have much room for dynamics; soon it becomes either too high or too low. Imagine two horizontal lines one above the other. In the middle there is a small circle: this is the centre of the tone. Within the two lines the tone is perfectly in tune, but against the top line it sounds a bit aggressive, forced; whereas against the bottom line it sounds apathetic and weak.

Some tones on the recorder have more space than others. As you blow long notes, you will discover the subtle differences between each one of them.

SLOW/FAST - BROAD/THIN

For the low notes on the recorder, the air has to move more slowly, whereas for the high notes it has to be faster. However, that doesn't mean we're blowing “harder” or “softer”, rather it's the speed at which the air moves. Sometimes I like to compare the air for high notes to an arrow being fired: there is no force behind it, it is not a heavy object, but it flies through the air quickly, lightly and easily.

In addition to slow and fast, there is another parameter and that is how broad the air is. It doesn't depend directly on whether it's high or low: for each tone we can use wider or thinner air to give it expression. Thin air can be used to suggest *piano*, slightly softer dynamics, while broad air gives the sound more warmth and space.

Now we have four options:

- Slow, broad air
- Slow, thin air
- Fast, broad air
- Fast, thin air

Try it out. How does that feel in your mouth? Where in your mouth do you feel each combination? Is this the same for all tones or is there a difference per tone?
This is something very useful to work with in order to develop a beginning of dynamics on the recorder and adapt the character of each note to what we want to express.

Playing the recorder has a lot in common with singing: the little resistance, that is, the way the air flows through the airways, as well as how the oral cavity plays a role in resonance and sound (although when playing the recorder we have to to keep the jaw in a neutral position). There is a lot of subtlety and at the same time an organic fluidity in both instruments, which takes time and effort to perfect, but working properly on our sound transforms our instrument from a school instrument into sublime beauty. It is not without reason that the recorder in Italian, from the Baroque era to the present day, has been called *flauto dolce*, “sweet flute”.

Link to the YouTube video about this subject (with subtitles in German, French and Dutch):
https://youtu.be/1Jf0ax8Y6EQ

Link to the Spanish version (with subtitles in Italian and Portuguese):
https://youtu.be/Wy_npY5MrNE