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The role of breath, body, hearing and psyche in voice emission

In singing instruction, three basic components are always the most important: breathing, phonation and articulation, which are not only interdependent but are always conditioned by the singer's physical and mental state and the level of development of their musicality and musical hearing. It is also worth mentioning so-called vocal hearing, which relates not only to pitch but also to the ability to perceive and enjoy both one's own and others' performances on a deeper level. It is part of the singer's mental image of sound, realised through their voice. The more refined the singer's imagination, the more precise and differentiated their ability to analyse subtle differences in pitch, strength and colour. The singer should perceive what bodily sensations these auditory nuances evoke and how they correspond to the musical message. The singer gradually develops their imagination, both by listening and through their own singing, under the teacher's supervision. Gradually, in cooperation with the teacher, they refine their sensitivity to bodily sensations, which are processed by their brain into a holistic auditory-psychosomatic "touch". Teachers speak of "understanding through hearing and body". From experience, we know that we become fully aware of the correct sensation only when we manage to achieve it ourselves. For example, we understand singing "on the breath" or "with head resonance" only when we experience it personally. The quality of the singer's imagination improves with musical and vocal experience and is connected to the development of musical, emotional and kinaesthetic memory. The degree to which these forms of memory have developed is measured by the speed, durability and accuracy of recall, as well as the readiness to evoke sensations and acquired habits and use them creatively in vocal interpretation.

Vocal imagination, which triggers the necessary psychosomatic tuning, is closely linked to the singer's ability to experience music and perceive the flow of a musical phrase. Practice confirms that a clear, rapidly formed mental image of a complete melody automatically triggers the required setting of the vocal apparatus during singing. This imagination (activated even before inhalation) anticipates the

balance between functional tension and relaxation that correspond to the requirements of the musical message. The vocal delivery then becomes vivid, retaining its strength and spontaneity. Musicality, musical and vocal imagination and emotional memory must be systematically developed. Therefore, even the simplest vocal exercise must be presented to the singer as a communicative musical phrase with its own musical and emotional content.

In vocal pedagogy, a holistic approach is applied, taking into account the interdependence of breathing, body, hearing and psyche. Given the scope of the discussion, we will focus on part of this issue: the relationship between body and breath. The idea behind the described practical exercises is to teach the student to observe breathing and bodily activity simultaneously. The exercises aim to help the student consciously avoid external interference with breathing. The student should rediscover natural breathing, strengthen it through bodily activity and apply it to more demanding parts of compositions.

Relationships between body posture or movement and breathing (and therefore phonation).

The breathing function is closely connected to body posture and movement. Once we become aware of and experience this close interrelationship, we stop forcefully manipulating the breath. We become its observers – calm, clear-minded – who use breathing as a fluid, internal source of our voice.

The situations listed and described below, in which a breathing response occurs as a result of movement, a change of position or an intention to act, have been verified by the author through her extensive teaching practice. It is up to the teacher to apply this information creatively in practice, taking into account the individuality of the student.

Probably everyone agrees on one thing: when training the breath, it is better to observe its flow and “perceive” it through bodily sensation rather than control it through force of will and considerable effort.

Let us try to observe some relationships between breathing and posture:

- Lying on the back allows natural, calm breathing – it becomes even deeper when the knees are bent (although slight lumbar lordosis should be maintained).
- Lying on the stomach eliminates a problem that often arises when breathing while lying on the back – the ends of the ribs lift forward, making it difficult to fully expand the sides and back of the chest. Resting the floating ribs on the mat opens access to these areas.
- When lying on the back, we place a hand on the lower ribs and check that they do not move forward. We feel the ribs at the back moving sideways away

from the spine and resting on the ground, allowing breathing into the sides and back of the ribcage.

- The singer can become aware of diaphragmatic activity in many ways – through laughter, giggling, whining, barking...
- Singing while standing on one leg, which is bent and straightened during phonation, activates the pelvic floor – an essential partner of the diaphragm. Through their coordinated action, we build a voice that is strong, confident and capable of expression.
- Lowering the pelvis with bent knees relaxes the lumbar region. However, one should remember that during this movement, the upper back remains rounded (the thoracic spine curves), and the head moves slightly forwards. This is a relaxation exercise, not a target singing posture.
- Lowering the pelvis during exhalation activates the diaphragm's attachment in the lumbar region. The exercise is performed in a sitting position.

In an upright position, we energetically pronounce the consonants M-W-R-S, extending the “ssss”, while simultaneously pulling back the lumbar section of the spine (the pelvis lowers). The upper body automatically bends; this exercise relaxes tension in the lumbar region and activates the posterior diaphragm attachment.

- The exhalation ends with a slight tilt of the upper body – as the head drops freely, we pronounce “tha”. With this sound, the abdomen relaxes, and the body initiates a spontaneous, calm inhalation through the mouth – with the wide tip of the tongue touching the lower lip. The inhalation continues as the pelvis returns to an upright position and the lumbar, thoracic and cervical spine straighten. The impulse to straighten comes from the feet pushing against the ground.
- The exercise proceeds calmly and evenly. The result is “forgetting about the breath” – the body itself finds its natural rhythm by repeating the movement. As the spine straightens, the singer's mind focuses on the idea of the pitch at which they then produce the consonants M-W-R-S.
- If the practitioner combines inhalation with a sense of childlike wonder and the expectation of the sound “heard” in the mind that descends from above, they will find it easier to achieve vocal placement – which is then “supported” on the breath.

Extended version: the relationship between the diaphragm and the lumbar section of the spine

The strongest attachment of the diaphragm is located in the lumbar section of the spine, making it exceptionally sensitive to any tension or change in this area. To relax the stiff lumbar section, an exercise metaphorically referred to as “horse riding” proves helpful. Controlled movements of the lower spine can be used not only to deepen breathing but also to somatically “feel” *legato* – the smooth connection of two tones within the body.

Performing the exercise

In a sitting position, relax the hips: the lumbar spine moves back, the shoulders move forward, the back rounds and the head tilts. In this configuration, full exhalation occurs, ending with the relaxation of the abdominal wall. This process is supported by pronouncing the syllable *tha*, accompanied by allowing the jaw to drop freely.

We remain in this position until the body itself signals the need to replenish oxygen. Inhalation is combined with a gradual return to an upright position, initiated by pressing the feet against the ground. A gentle hip movement follows – the pelvis reacts, followed by the lumbar and then the thoracic spine. At the end of the movement, the transition between the thoracic and cervical sections is straightened, gradually lifting the head.

As the body straightens, air flows freely into the lungs through the open mouth, relaxed larynx and expanded trachea. The tongue lies freely, its tip dropping forward, creating a feeling of weight. The jaw also drops under this “weight”, without tension.

Then exhale in the same way, repeating the entire cycle of movements. Always wait for the body to call for inhalation or exhalation. After several repetitions, we find our own rhythm.

Inhalation can be accompanied by the sensation of yawning – using only its initial phase, without allowing a full yawn. During inhalation, the resonating space is optimally adjusted and remains open during exhalation as well.

In the next stage, we add a simple melody to the exercise, always connecting two adjacent tones and singing them *legato*. Each tone is accompanied by a backward movement of the hips, which strengthens the bodily sensation of tones flowing through the body.

Example exercise sequence

- 1–2 *ja-a* – hip movement back → straightening with inhalation
- 3–4 *ja-a* – hip movement back → straightening with inhalation
- 5–4 *ja-a* – hip movement back → straightening with inhalation
- 1 – *ja* hip movement back

Because of its relaxing and airway-opening properties, this exercise can serve as a supportive element in respiratory rehabilitation, especially in the initial stage of asthma. However, it should be remembered that movements in the lumbar section of the spine can strongly activate emotions, so the exercise should be performed mindfully and not prolonged beyond the individual's physical tolerance.

- Relaxing the knees creates a movement opposite to the airflow of exhalation, thus limiting inappropriate, excessive pressure of inhaled air that is directed upwards towards the vocal cords. For safer execution, it is recommended to take a step forward with one leg. The body's weight will be evenly distributed over both legs, and the aligned pelvis will rest in a central position. The point is to lower the centre of gravity, not to lower the pelvis. The purpose of lowering the centre of gravity with an aligned pelvis is to engage the pelvic floor muscles and the diaphragm in movement, which is helpful when singing a rising melody, a melodic leap or a full tone. A movement performed just before reaching the tone can also contribute to a soft onset of the vowel on a high, narrow sound. Swaying and straightening the knees combined with lowering the body's centre of gravity strengthens the leg muscles and the awareness of pushing the feet away from the mat. The centre of the body is activated.
- The spine responds to the feet pushing off the ground by straightening. Straightening the spine and "lifting" the chest is a prerequisite for full breathing (without a straightened spine, the chest is often flattened and lowered). Firm grounding of the feet, active pelvic floor muscles and alignment anchor the sound in the body while the muscles remain elastic.
- Activity transferred to the fingertips (engaging the fingers that "grip something") relaxes the hand muscles, straightens the body and frees the chest muscles, which can then lift and expand. Elastic muscles work without unnecessary effort and tension.
- Straight arms extended to the fingertips facilitate better mobility of the intercostal muscles during breathing.
- It is beneficial to breathe and sing while lying on the back in an infant-like position with arms and legs raised. The effect is enhanced when the fingers and toes are actively holding an object. The spine and head are resting on the mat.

- Points of support on the periphery of the body (i.e. in the feet, hands, fingertips, crown of the head and on the “edge” of the tongue tip, i.e. in diction) activate the centre of the body, straighten the spine and thus make it possible to use the entire respiratory system during breathing. Engaging peripheral supports eliminates undesirable muscle tension that isolates individual body segments. On the contrary, thanks to support on the body’s periphery, the body achieves internal coordination, remaining internally connected and flexible in movement. We can set the chest, hips and waist dancing... and our body will not “fall apart”. Activity on the periphery of the body coordinates the muscles so that they work economically and efficiently, without unnecessary (substitutive) movements and increased effort. If the singer adds their voice to the movement of a dancing body with which they spontaneously express their current feelings, they pave the way for the free resonance of tones. For the singer, it is an opportunity to reveal the true sound of their voice. The more freely they surrender to this process, the more vocal possibilities they discover. They connect with their inner feeling of singing. In such moments they experience authenticity, certainty and security, because they realise that “this voice is me”, and they feel comfortable with themselves.
- Sitting with the palms turned upwards induces deep, calm breathing, which soothes the psyche. This effect is intensified when the thumb and index finger of each hand are joined and the remaining fingers are extended at the tips.
- When the arm is placed to the side (fist closed, thumb pointing upwards) and the head is simultaneously turned in the opposite direction, the ribs at the front and sides of the ribcage are relaxed. We do this on both sides. The breath then freely “enters” the elastic ribcage.
- When “picking apples from a tree”, we stretch the intercostal muscles (we breathe smoothly, without holding the breath). When reaching “for a high branch”, the body’s weight rests on the leg on the same side as the extended arm. First we follow the hand with our gaze, but the higher we reach, the less we tilt the head back, looking straight ahead instead (the body straightens, the cervical spine becomes a continuation of the thoracic spine, the back of the head “extends” upwards, the crown of the head is the highest point of the body). Only in this way can we reach even higher to grasp the apple with our fingertips and pick it. Then we do the same on the other side. After stretching the body, we will be able to breathe better. While picking apples we raise the chest, which tends to sink with a relaxed posture. This is a consequence of atmospheric pressure, which we must constantly “resist” by straightening the spine. Working on sustained alignment improves not only posture but also the functioning of the entire respiratory system.

- For example, if we lift the left arm sideways above the head (stretching the arm to the fingertips) and at the same time bend the ribcage to the right, we breathe into the stretched left side of the body. However, if we stand even more consciously on the sole of the right foot and push off from the ground, the entire ribcage will lift higher and the first, i.e. oblique, side of the ribcage will also be partially engaged in breathing (it will also be stretched upwards). Then we perform the exercise in the opposite direction. After returning to an upright position, we will feel how the ribs move during breathing; we do not control the movement of the ribs, we only observe it.
- Place the hands as if offering (or receiving) something, with the palms turned upwards. Such positioning of the hands strengthens the “anchoring” of tension in the body. The movement of the hands that “offer something” comes from the forearms; the shoulders do not take an active part. We feel muscle activity especially in the back – between the shoulder blades and lower down, towards the hips. Thanks to the feet anchored in the ground, the entire body becomes connected. The idea “I am offering something” activates the desired muscular synergy to fulfil the intention. Muscular synergy strengthens the body from within, yet the body does not become stiff; it remains flexible.
- Strengthening and softening the voice is supported by hand movements that offer something in front of the body, with palms facing upwards. Initially, we practise a melody that initially rises in pitch, e.g. 12321 (scale degrees). Later, we move on to a more difficult task – strengthening and softening a single tone (*messia di voce*). If we want to strengthen the tone, we “offer” it with hand movements and continue the movement even as we soften it – we gradually reduce the sound intensity while always moving the hands forward. This ensures continuous breath support. When softening the tone, we must maintain support from the body and breath – on the contrary, we feel it more intensely, only narrowing and brightening the tone in our imagination.
- Greeting a guest warmly (opening the arms to express joy at the meeting) helps maintain the width of the chest, as in the example above, in which we offer something in our hands – here, we offer the guest our sincere openness. If, during the greeting, we take a step towards the guest and briefly leave the toe of the back foot on the ground, pushing off the mat with that foot will cause the upper part of the chest to rise diagonally upwards and slightly forwards. Further opening the bent arms at the elbows in a welcoming gesture will allow the entire respiratory system to engage in the breathing function.
- Breath support in the pelvis is strengthened when we open the hands and lift the thumbs, moving them outwards. The hands open even more; as the thumbs move, “the back opens”, and the breath is directed more clearly into

its lower part. We observe that the lower rib arch slightly “lifts”, and the breath “settles” in this place. If we sing a note in this position, we feel support in the hips (not in the lumbar spine!). The front of the chest is brought forward and “lifted”. In the full sound of the note, “the whole body resonates”.

- When we imagine embracing someone, the body reacts in a similar way to when we greet a guest. “If we hug mum and tickle her back with our little finger” (we consciously lift the thumbs and move them outwards), a pathway opens for the breath into the back. Active elbow joints help maintain the inhalation position of the expanded ribs. The diaphragm then does not rise with the first sound, as happens in normal breathing, when the ribs relax during exhalation. On the contrary – thanks to the activity of the elbow joints, the expanded ribs “force” the diaphragm to remain in a lower position, thereby slowing down the exhalation.

Note: If the muscles in the shoulder area tense when “hugging mum”, we can perform a relaxation exercise: we raise our arms in the hugging position together with the shoulders. We stay in this position for a moment, deliberately drawing the shoulders up towards the ears. After a moment, we relax the shoulders, but the bent arms remain forward and “hug”. The shoulders will relax and spread sideways, together with the entire upper part of the chest (the area of the sternum widens, the shoulder blades move apart). Natural supports are created in the elbow joints of the bent arms, from which the forearms and hands (with active fingers) extend forward into space. The position of the hands keeps the chest in a “lifted” position – we breathe into the chest with full participation of the diaphragm.

- Hanging down from the waist: we place the legs slightly apart, knees bent, arms lowered, shoulder joints relaxed, hips stretched. The head does not jut out; the back of the head is a continuation of the thoracic spine. The exercise is assisted by the thought: “water is dripping from my hair, it is good that the dripping shampoo no longer stings my eyes”. In this position, breathing deepens (the lumbar section is engaged, where the diaphragm has its strongest attachments), the lower abdomen is relaxed, so the diaphragm can descend freely and work elastically. For those who cannot place the tone in the mask resonance, this position is a good starting point for discovering this resonance – bending forward, we produce the sound m (mim, mam, mem). We feel its vibration in the hand we place on the forehead. Then we slowly stand up “with the sound of the tone in the hand”, which remains in the mask even after the body and head are upright. We rise by pressing the soles of the feet against the ground.
- Is it possible to feel which part of the diaphragm works most intensively: its centre, its lumbar section (an example is given in the next point) or its entire

surface up to the rib attachments? With a short, energetic inhalation, the breath is “concentrated” in the centre of the diaphragm, which supports its elasticity, and the voice gains agility and lightness. We feel this activity when we “sniff like a little dog” during breathing training or when we sing in dotted rhythms or *staccato*. During “heavier groaning” one can observe increased diaphragmatic activity across its entire surface, especially in the area of its attachment to the xiphoid process of the sternum and the lower ribs.

- If we sit down on a chair with a feeling of relief that everything is now behind us and breathe out freely while saying “thaaaak”, we will feel the lowest ribs in the lower back drop in complete relaxation. The muscles, including the abdominal muscles, are relaxed at this moment, but they do not collapse. The natural resonance of the voice, which is held in the muscles, is activated when the need to take in air arises, starting the inhalation phase in the lumbar section. If we simply follow the breath, we will notice how the lower ribs on the back gently expand sideways during inhalation and how the entire back rises from the arch of the lower ribs, then falls again during exhalation. It is worth “extending” this exhalation from the lower ribs to a full exhalation and pausing for a moment at its end. We will feel the tension around the neck muscles, tongue and jaw joints gradually disappear. This sensation should be very soothing. The next breath flows out of this calm and corresponds to the current needs of the body.
- When we lie on our side, deep diaphragmatic breathing induces drowsiness: the head is relaxed and slightly tilted forward, the jaw joint and tongue are completely relaxed, facial expression is softened and the mind passively follows the alternating cycle of exhalation, calm and inhalation. The body and emotions experience beneficial tranquillity. We practise in a safe space so that we can also consciously activate the breath in moments of tension, such as a stage performance, when emotional tension turns into unwanted physical tension. Breathing that relaxes the back muscles and the solar plexus brings release.
- Gentle activity between the shoulder blades supports natural breathing and the opening of the voice. We will feel the activity when, standing, we lean the body backwards and, with full trust, “lay” our back on the hands of the person standing behind us (supporting us in the lower shoulder blade area). We place our feet firmly on the ground and rest our back on the prepared hands – there should be no leaning or lifting in the hips! If the person behind us engages their core muscles and anchors their weight on their feet (or takes one step forward with one leg), we can trust them. Their hands will support our weight. Calm, with a relaxed mind, we observe how our body copes with the situation,

that is, the change of position. The body is supported at the feet and in the shoulder blade area, but is otherwise completely free. We will feel relaxation in the shoulder joint (the arms hang beside the body under their own weight), we will notice expansion around the sternum and lower ribs, and the solar plexus will relax pleasantly forwards and sideways. Let us draw on this sensation of the chest opening in all directions with each breath and the gentle movements of the abdomen responding to the soft, calm movements of the diaphragm. We breathe freely because the entire respiratory system is working. After a while, we will feel a surge of energy and a desire to sing boldly and with a full sound. Support in the feet and the feeling of support in the interscapular area anchor our voice in the body. The voice sounds surprisingly resonant and free. In this situation, we improvise melodies that arise from bodily sensations or sing a favourite song.

If at first we are unable to relax the body with full trust, the person behind us can “shake” us slightly. Our still restless mind will focus on maintaining balance, the body will automatically activate the necessary balance reflexes and the head will “understand” that there is no point in resisting and it is better to surrender completely to the situation.

- Standing, we rest the interscapular part of the back against a door frame (preferably one with a rounded edge so that the support against the spine does not cause pain). We place the feet apart, moving them forwards to ensure stability and to be able to “slide” the back up and down along the door frame while singing. We test this movement – the arms hang freely, support is provided by the feet, springy knees, leg muscles and deep abdominal muscles. During the upward and downward movement we can sing or speak clearly. After mastering this movement, we can place the arms in a “welcoming” position (support in the elbows, not in the shoulders!) to help open the body to the sound of the voice.

A more difficult option: in a half-sitting position (legs apart) we rest the back and bring the back of the upright head closer to the wall (the cervical lordosis is preserved). At first, in this position we simply breathe to become accustomed to its demands; then we sing. We can also add the movement of the hands that receive something into upturned palms and grasp it with the fingertips. This position, with the shoulders relaxed, helps anchor the voice in the body. It sounds free, broad and resonant.

- The muscles of the upper chest, including the shoulder girdle, should be able to remain flexible in every situation. The prevalence of limited flexibility in this part of the body among today’s children, young people and many adults is concerning. The upper chest can be trained and mobilised using the

sternum, which we draw back towards the spine (the shoulders are brought forwards, the head drops down). Then, in the opposite direction, we move the sternum forwards and diagonally upwards, as if the movement originated from a prominence on the sternum. This movement is also supported by the thought that we are directing the thoracic spine forwards through the body towards the sternum. In this position, the head, extended upwards, may pass “above level” into a slight tilt (the range of the tilt can be increased by widening the shoulder blades). When returning to an upright position, the singer must maintain the muscular freedom and flexibility achieved through the movement. Therefore, during the exercise we teach the student to be aware of what happens to their body during the movement and to store these sensations in body memory. They will then understand the teacher’s instruction: “open the body”.

- Many singers have a tendency to “close”. This occurs not only under the influence of ordinary atmospheric pressure but also, very often, as a result of traumatic experiences and associated negative emotions. Exercising the sternum and shoulders helps to get rid of this “closure”. Let us emphasise once again that a fully developed breath as a source of the voice can only be achieved in a relaxed body ready to perform.

The ability to “lift the chest towards the armpits” is an extremely valuable skill for singers and their breathing. It is connected with their posture and internal activity in counteracting the effect of gravity, which pulls down not only the body but also its organs. Many postural exercises initiate the internal activity necessary for this. Let us stress once more how important it is that the singer consciously experiences, accepts and stores positive muscular sensations in body memory.

- How can we achieve “lifting and expanding the chest” with the help of another person? Standing in front of the singer (with their permission), we grasp their chest at the sides (about 3–5 cm below the armpit) in the same way as a mother lifts an infant that is still limp. The singer standing on the ground will feel that the ribs of the chest are slightly lifted, and their shoulders and arms (relaxed at the shoulder joint) drop limply. They do not actively assist the movement. The chest remains “suspended” in our hands – we wait a moment. After a while we feel the movement of the ribs (inhalation) under our hands. The singer’s brain has registered the pressure of the hands and sent a signal to the intercostal muscles, which will push the pressing hands away when an inhalation is needed. Subsequent breaths are directed in the same way towards the hands in this position. With each inhalation, the chest becomes more relaxed. It breathes, but without the involvement of the shoulders. Gradually the breath deepens, and the singer begins to breathe with the

entire respiratory system. The chest reacts similarly in a lying position when we place our hands on its sides (about 3–5 cm below the armpit) and wait a moment. Sometimes it can take up to a minute for the intercostal muscles to start working. The brain constantly analyses the situation (compares it with the habit of breathing only in the upper chest or the learned practice of directing the breath solely to the abdomen). It spontaneously sends an impulse to the ribs only when it decides it is necessary to respond to the pressure and finally take a proper breath. Both the need to replenish oxygen and the pressure prompt it to choose a specific way of inhaling. After several repetitions, the brain accepts the rib movement and incorporates it into the repertoire of acquired inhalation (motor) skills. A new experience is also gained: the chest does not have to remain habitually “dropped”, but can lift, open freely and participate in the work of the entire respiratory system. The singer’s muscles have acquired this experience spontaneously as a result of the adopted position. If the singer had not achieved this physical experience through their own muscular “searching” and had learned it only through the teacher’s instructions on “how to move the chest muscles by force, how to breathe with them”, they would be unlikely to return to the experience of the “crying” child, for whom breathing when singing high notes was essentially the synchronised work of the entire respiratory system. Practice convinces us that, even with the best intentions, the changing requirements of interpretation prevent us from consciously establishing balanced muscular synergy correctly and economically. And yet, theoretically, a “trained” mind should know “how to do it”! The mind then consciously directs the body’s movements, but this often happens at the cost of increased effort, which impedes breathing and its interaction with the vocal cords, something many singers struggle with for years, and some for their entire lives. A psychosomatic approach to working with the breath is based on an appropriate image of the musical phrase within the whole piece and on the appropriate positioning of the body prepared for performance. Breathing then occurs within the desired range, without abrupt conscious intervention.

- As the melody ascends, the stronger stream of exhaled air tends to “attack” the vocal cords from below. This forces excessive adduction, leading to tension and loss of elasticity. The false vocal folds, which tend to close, will then also be engaged. This direct attack of the breath on the vocal cords can be regulated by “changing the path” of the breath. If we place a hand on the sternum (or press the index finger against the upper part of the sternum – the protrusion where the second rib joins the sternum), the position of the chest changes and the work of the diaphragm is also altered. The larynx, through the movements

of the muscles suspended in the fascia (the retractor muscles), is connected to the sternum and tilted backwards, towards the occiput. All this contributes to distributing and shaping the energy and power of the breath reaching the vocal cords. On its way from the diaphragm, the breath energy is distributed – it “bounces” off the sternum, is directed internally towards the ribs and back to the diaphragm.

For completeness, let us add: a fully developed tone can be supported by the body only if the supraglottic area actively participates in voice formation – we then speak of support in resonance and diction and their interaction with breath support.

- The position of the head influences how the breath spreads through the body. When it is slightly tilted forwards, the breath is directed more towards the back. When tilted backwards, the head favours the flow of breath towards the lower areas, especially the abdomen. Let us observe how the direction of the breath changes when we tilt the head to the side.
- When the head is upright and the neck extended, the yawning reflex can be triggered spontaneously. If we do not interrupt the whole yawning process, but only prolong its initial phase, we feel that the larynx is slightly lowered and the spaces above the palate open. If we raise the bent hands above the head and “open a gate” with the hands and consciously extend the joints of the middle fingers, the ribs will expand to the sides and the diaphragm will naturally drop. Adding the thought that the soft palate rises high (up to the hands above the head), or that the hair on the crown of the head lifts and “levitates” above the head (which activates the soft palate), we create a whole-body setting favourable to raising the voice or using it in a high vocal position without difficulty. The body is ready to work “from above”.
- The movement of the hands helps guide the breath and visualise the course of the phrase, and changes in gestures can support musical articulation (*legato*, *staccato*, *tenuto*, etc.). Many movements and gestures associated with specific situations remain imprinted in the singer’s muscle memory. Sometimes, as teachers, we can use them to quickly teach the student skills that would otherwise require lengthy verbal explanations or laborious exercises. We draw on experiences from everyday life, or we motivate the student by giving them a task to complete “in their own way”. For example, we place them in a situation in which, with a gallant gesture, they are to take off a hat as a sign of respectful greeting. The entire act is accompanied by singing a descending musical phrase. The hand removing the hat makes a wide arc upwards and forwards, and the head gently bows in a courteous nod.

What is beneficial for singing in this situation? The movement of the hand reaching for the hat initiates an upper setting of the voice, and removing the hat

while singing the descending melody helps maintain the resonant position of the starting tone (reaching for the hat “lifts” the soft palate, which remains active throughout the phrase). The initial gesture of the gallant greeting (the hat slightly raised and moved above the forehead) is linked to a slight inclination of the head with the neck extended, which remains in line with the spine. The elongated nape opens the path of sound to the resonators, and their activation is further supported by the smile of the eyes and lifted cheeks (which affect the activity of the soft palate). Support in the nape (a movement opposite to the hand gesture) widens the posterior arch of the nasopharynx, and the entire space of the oral cavity is slightly “stretched” backwards and upwards – the sound is directed towards the dome. The soft, fleshy tongue moves forwards and, with a slight tilt of the head, automatically approaches the hard palate, which helps keep the sound in the head resonators. The descending melody flows in one line, without breaks in the voice. If we perform the greeting gesture using *brumendo*, its easy execution is supported precisely by the slight tilt of the head and the natural contact of the tongue with the hard palate.

A carefully chosen hand movement can help the singer overcome technically difficult tasks during vocal training. For example: a stepwise progression to high notes sung *legato*, 3-4-5-4-3-2 (mi-í-i-jó-bén). It is worth combining the exercise with a hand gesture in which we place the hands on both sides of the head, and the index and middle fingers, following the rising melody, move upwards on both sides of the ears, then along the hair, and from the crown spread apart – at the moment of the transition from the fifth down to the fourth scale degree. The hand movement traces the shape of the letter Y in the air.

What happens during this exercise? The spreading of the hands around the ears prevents the head from being pushed forwards, the body straightens and the soft palate subconsciously lifts, adjusting the acoustic spaces to the tones 1-2-3 sung with a “slender” sound. We feel as if the upper jaw and the spaces above it gradually rise and open. The movement of the spreading hands (3-2: i-jo) simulates the full opening of the head spaces into which the sound moves above the soft palate. We notice how the sound spreads into the dome of the head and radiates into space like a halo. Throughout, attention is focused on the movement of the hands, not on the conscious shaping of the tone – the mind only registers the sensations accompanying the whole process. Only the ears “supervise” the slender sound of the rising tones (1-2-3). The sound of the phrase is carried by free exhalation and resonates, filling the open sound spaces. When we feel complete freedom of voice and resonance (usually at the 3-2 transition, when the hands separate), we can allow ourselves dynamic play with the tone: expand it, soften it, or lead it with full breadth to the final note on the syllable *ben*. The syllable

ben strengthens the frontal resonance and closes the musical phrase, accompanied by the hand gesture: from the open *Y* shape, during the melodic motion 2–1 (*jo-ben*), the hands meet at chest level. If we continue the exercise or its sequential repetitions, the hands do not stop – they move smoothly into the next repetition of the described movement.

The following variant is an exercise for equalising registers. The pattern, which descends sequentially through the notes of the major scale, is always combined with the *Y*-shaped hand movement. In each subsequent sequence, the gesture starts from the “forks” around the ears and moves upwards. We perform the exercise at a slow tempo so that the singer has time to feel and consciously experience the process with their whole body.

Exercise: 8-9-10-9-8-7, 7-8-9-8-7-6, 6-7-8-7-6-5, 5-6-7-6-5-4, 4-5-6-5-4-3, 3-4-5-4-3-2, 2-3-4-3-4-2-1 (*mi-i-i-i-jo-ben*, *ti-ti-ti-ti-ta-ta*).

- With the help of hand movements, we can also solve intonation problems resulting from technical imperfections in the phrase. Maintaining accurate intonation on repeated notes is always a challenge related to breathing and resonance. This challenge can be readily overcome through movement. Usually the singer’s mind focuses on the first note, and the subsequent repetitions are left, as it were, “to themselves”. As a result, the tension in the breath and in the supraglottic resonance space decreases. The activity of the soft palate weakens, the sound loses its placement in the resonators and a tone deprived of higher harmonics seems darker to the ear – which the brain interprets as lower. The vocal cords automatically adjust to the perceived timbre, lowering the pitch. With each repetition of the notes, the intonation of the entire phrase, and often of the whole piece, gradually “drops”.

How does the movement of the hands help correct this problem? By engaging the hands, we activate the breath and the placement of the tone in the resonators. Although the repeated tones have the same pitch, the hands in front of the body illustrate the movement of climbing stairs – with each successive “step”, the hands move alternately. The hand moving from above (like a foot stepping onto a higher step) rises higher and further forwards with each movement, activating the back muscles and diaphragm support. The thought directs the movement of the hands, and the gaze follows how the hands – and with them the soft palate – rise higher with each successive tone. The muscular arch between the hard and soft palate (resembling a horseshoe) lifts and, with each successively higher tone, inclines towards the nose. The body straightens, the legs press more firmly into the ground, the neck lengthens and the crown “lifts” upwards. As a result, in this setting, the repeated tones retain their timbre and intonational quality. We must ensure that no final tone is burdened with uncontrolled breath – the sound could then intensify.

On the contrary, the ending of the tone should be brightened towards the dome so that the next repeated tone can start from above.

We work in a similar way with repeated tones followed by an upward leap. Proper use of the breath and resonators during repetitions and a clear mental image of the pitches of the entire musical phrase help to master this technically demanding task. The very first tone must be placed high in the resonators, and the subsequent repetitions “build” a bridge leading to the high note. The aim is to minimise the resonant difference between notes that are far apart in pitch. A good command of the technique of repeated tones is essential – this “shortens” the distance to the high note. If they are not executed correctly, we move away from the high note – the resonance of the preceding tones drops. We use the same hand gestures as described earlier. The last tone in the series of repetitions must already be supported by breath and resonance on a prepared foundation – at the threshold of the high tone. On this common basis, both tones – though distant in notation – meet in resonance, and the high tone takes over and smoothly continues the melody. It is important that both hands indicate the same height during the leap – the hand representing the high tone moves only forwards, remaining on the same plane. The leap occurs in one line because the placement of the high note has been prepared by the preceding tones.

These examples illustrate only part of the relationship between breathing, phonation, resonance and body posture. A fuller picture of this subject can be found in the forthcoming publication by Alena Tichá: *Učíme děti zpívat*, to be published by Portál in an expanded edition. It is an original methodology for working with the voice based on the use of play, motivation and movement.

Much of the text is based on knowledge gained during the following seminars and courses:

- Boele, C. (2016, September 23–24). Škola odhalení hlasu podle Valborg Werbeck-Svårdström [personal communication]. Course, Obec křesťanů, Praha 7 – Holešovice.
- Boele, C. (2023, November 17–19). Škola odhalení hlasu podle Valborg Werbeck-Svårdström [personal communication]. Course, Obec křesťanů, Praha 7 – Holešovice.
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- Čumpelík, J. (2019, July 5–14). Letní jógové soustředění Jiřího Čumpelíka [personal communication]. Course, areál Sklenářka, Kostelec nad Orlicí.

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Abstract

The role of breath, body, hearing and psyche in voice emission

When singing, three fundamental components are always involved: breathing, phonation and articulation. These are not only interdependent but are also influenced by the singer's mental state and physical condition. An important element is the level of musicality and auditory perception. Taking a holistic approach to vocal training (with an awareness of the interconnections between these aspects), this text presents examples of situations in which body posture or movement can influence breathing function and, consequently, the quality of vocal performance, including improved intonation. The text is based on personal experience from fifty years of teaching practice.

Keywords: Singing, breath, vocal education

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