

Chapter 2

POSTURE IN VOICE TRAINING “FREEING BODY AND VOICE”

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INTRODUCTION

The Ideal Voice Training Method can be achieved through a sincere collaboration where mutual trust is built, allowing the student to use their talent in the most natural way, valuing the personality of the student, delivering the voice of the student to the instructor’s profession. The singer’s self-realization is only possible with body awareness, conscious awareness and a natural voice technique. The student should know the anatomical structure of the human body, how the functions work, and should have knowledge over time about how to avoid all physical and psychological factors that may prevent this. A singer’s instrument is his/her body, and as İlter Denizoğlu (Ear Nose Throat, Audiology and Speech Disorders specialist, Vocology specialist) states, “Only singers build their own instruments”. Although the diaphragm muscle, throat and larynx come to mind first when it comes to voice training, voice training is directly related to the anatomical structure, physiology and psychology of our entire body. In this sense, the voice education process requires the student to use his/her voice in a healthy and sustainable way; It should also provide gains such as natural resting breathing and phonation respiration, principles of voice hygiene, discovery of the zero point of the body and mind, natural posture. In the light of all this information, having the right and natural posture is extremely important to freeing the singer’s body and voice.

Respiration and Phonation

Breathing is important for voice production and the use of the body for breathing. He/she who breathes “right” sings “right” – “Chi sa respirare sa cantare”, let’s deal with breathing first. Respiration begins with the transmission of oxygen

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demand in the blood to the respiratory center in the brain. The intercostal muscles, which are the respiratory muscles, the abdomen (abdominal muscles) and the diaphragm, whose task is to expand the rib cage, come into play. The domes of the diaphragm flatten while the diaphragm expands vertically and the abdominal muscles and intercostal muscles horizontally. Compared to the air outside, low pressure is created inside and oxygen is absorbed into the lungs. In natural respiration, the duration of inspiration (inhale) and expiration (exhale) is equal. There is a break in between. Air passes through the oropharynx (oral cavity) and/or nasopharynx (nasal cavity), respectively, through the pharynx, larynx, trachea, bronchi and bronchioles and reaches the alveoli. There is gas exchange and oxygen enters the blood. In expiration, carbon dioxide is expelled together with the air in the same way as during inspiration. During natural breathing, the breath is usually taken in and out through the nose. The vocal cords are in the lateral position. It is seen that the chest and abdominal wall move almost in coordination.

The origin of the word phonation is derived from the word “phone”, that is, sound. Phonation means producing sound. With the expansion movement during respiration, the diaphragm is activated, the domes of the diaphragm flatten and oxygen is absorbed into the lungs. In song and speech breathing, when the lungs are sufficiently breathed in, the air is returned along the path it follows in inspiration by the contraction of the respiratory muscles. During expansion, an internal acoustic is formed and the sound resonates. In this way, the voice becomes stronger and bigger. It is important to convert the inhaled air into sound without losing it. The duration of the breath given in phonation breathing varies according to the structure, length and shortness of the sentence. There is still a time between inspiration and expiration. In phonation respiration, it is seen that the abdominal wall begins to exhale before the inhalation movement of the chest ends.

There is a need for vibrating vocal cords for voice production, breathing organs that provide the air flow necessary for the realization of this vibration, and cavities that allow the sound to grow before it comes out of the mouth, that is, resonator areas (Özsan, 2010). In humans, the respiratory tract begins with the nostrils, followed by the nasal cavities, pharynx, larynx, trachea and bronchi. As the bronchi go into the lungs, they divide into thin branches called bronchioles (Töreyn, 2008).

SPINE, SUPPORT (APPOGIO) AND POSTURE RELATIONSHIP

Columna vertebralis (spine, spinal column) is the central bone column of the trunk. It carries the skull, pectoral junction, upper extremities (end or end part of an organ) and thorax, and transmits body weight to the lower extremities via the pelvic junction (Ecerkale, 2006, p. 8).

Spine; It stands upright with a support arrangement of soft tissues such as ligaments (fibrous connective tissue that connects bones to other bones), capsules, and muscles. Muscles play little role in maintaining proper posture and the energy required for muscular activity is minimal. Ligament support also takes place without energy. When the ligaments are forced beyond their physiological limits, the muscles step in and prevent the ligaments from being further strained. Ligaments and muscles must be in balance for correct posture. Balance disorder in bad posture causes fatigue, skeletal asymmetry and pain with nociceptive stimuli. The muscles are overstretched to maintain the abnormal posture. Spasm and pain occur over time. With the right posture, weight is distributed to each body part, shock is absorbed (suction, absorption), the range of motion is maintained, and the movements necessary for stability (balance) and mobility are independently controlled (Griegel Morris et al., 1992, p. 425-431).

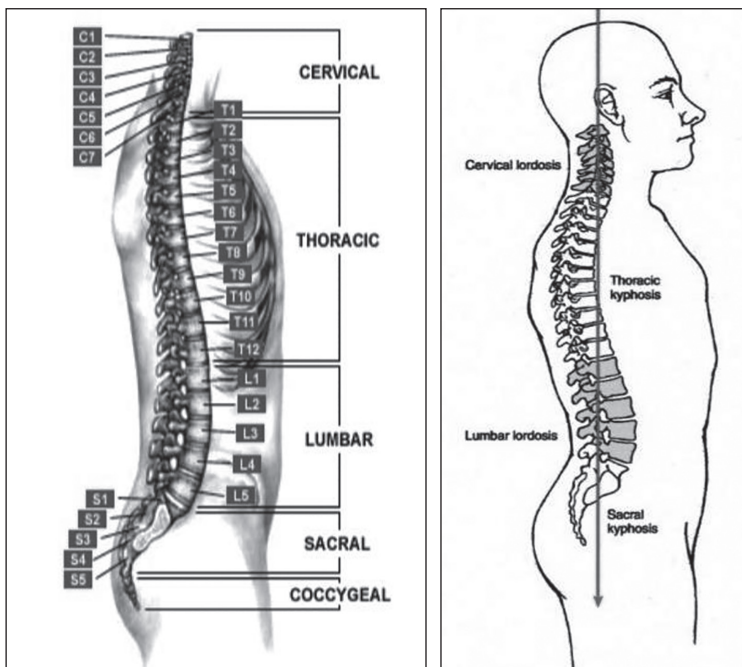


Figure 1. Columna Vertablis (Spine) (Ecerkale, 2006: 8.9)

The spine has four major interrelated functions: support, mobility, protection, and control. The elements that provide effortless normal posture are as follows;

1. Intra-disc pressure separating adjacent vertebral bodies
2. Tension in deep and superficial annular fibers
3. Tension of anterior and posterior long ligaments
4. Pelvis iliopectineal of hips and popliteal of knees It is supported by the continuous contraction of the gastrocnemius and soleus muscles as well as the ligaments (<http://www.pilatesfederasyon.com>).

Common posture disorders are, Humpback (Kyphosis), Hollow waist (Lordosis increase), Humpback and hollow waist (Kyfolordosis), Neck straightening (Decrease of the curve in the cervical region).

The muscles in our body work in harmony. It is local in certain movements, and in some movements it is compound (compound). If situations that will disrupt this harmony are avoided and a certain exercise routine is established, in general, optimal by obtaining the posture, we protect our spine health (<https://www.agirsaglam.com/ideal-omurga-posturu>).

The right posture prevents the vocal cords from functioning optimally while singing. In order for voice training to be successful, there should be no unnecessary contractions in our body and our muscles should move with full flexibility. The mood of the singer should also be free from tension. Solid information about posture for the singer may cause the singer to become more stressed. Thus, the flexibility expected from the singer cannot be realized. However, the singer will enter from position to position while performing his role on the stage (Kar, 2012, p. 24).

According to Denizoğlu (2020), head-neck balance, which can be examined under the heading of posture, is stable and balanced laryngeal posture, dynamic spine, etc. factors can also be included in the big picture that makes up voice. It is possible to evaluate the support mechanism (defined as appoggio in the voice training), which is especially important for professional voice, in phonatory functioning, just like an enzyme function. The basis of proper support is to consciously avoid muscle contractions (convergence of the organ walls due to contraction) that hinder natural functioning. For example, with the unnecessary contraction of the extrinsic (external) laryngeal muscles, the intrinsic (internal) laryngeal muscle mechanism will be adversely affected. The tense relationship of

the jaw, tongue and hyoid bone , which we can describe as a kind of “Bermuda Triangle”, will also negatively affect the relationship of the system (p. 217).

Ida Rolf describing proper standing posture, the angle of the imaginary plane passing through the shoulders with the line of gravity should be a right angle so that the head stays in vertical balance; likewise, he argues that the angle made by the imaginary plane passing through the hip bones with the gravity line is a right angle. Ida Rolf used the definition of “Equipoise” (balance) while defining the proper posture and divided the body into blocks. Vernard, on the other hand, likened the proper posture to a puppet with a string attached to its head and chest. This will provide an active balanced stance that will keep the head upright and the rib cage high and keep the pelvis suspended (Denizoğlu, 2020, p. 217).

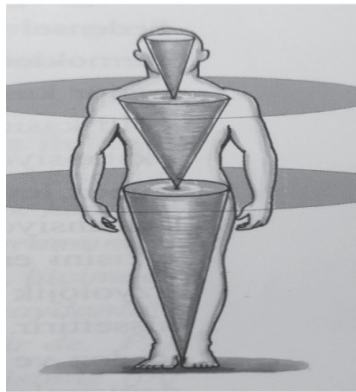


Figure 2. Apparent balance platforms in the body

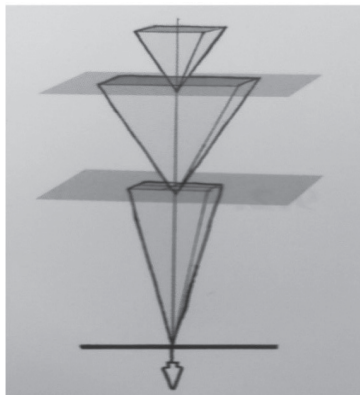


Figure 3. Pyramidal human and balance masses (Denizoğlu, 2020, p. 217).

Posture is the placement of each part of the body in the most appropriate position relative to the adjacent segment (section) and the whole body. In other words, the combination of positions taken by the joints in every movement of the body is also defined as posture. The body acquires a proper posture as a result of the harmonious operation of many muscles in order to provide stability with the support of the ligaments during muscle activity or to form a basis for a movement (Ozman, Demirel, Sade, 1995). Posture during sitting, standing, lying down is static posture. Body positions during movements are dynamic postures (Beyazova, Gökçe, p. 2000).



Figure 4. Static Posture (<https://udiscovermusic.com>)



Figure 5. Dynamic Posture

Photo: Decca/Christian Steiner - (<https://classicaexplorer.com>)

Posture is examined in two ways as active and inactive in itself inactive Posture is a form of posture taken for rest or sleep. Active posture, on the other hand, includes postures formed during upright postures and movements. In order to maintain these postures, many muscles must work integrated. The work of these muscles takes place in the form of static and dynamic. The static posture is a motionless posture that is formed as a result of isometric contraction of the muscles to stabilize the joints and opposing gravity. Basically, it refers to the body posture provided by the stretch reflex and protected against gravity. Dynamic posture is essential to form the basis of any movement. It is an active posture that tries to adapt to the constantly changing environmental conditions as a result of the movement. Factors affecting posture, heredity, race, gender, seasons, nutrition, socioeconomic status, fashion of the time, occupation and occupation, psychological state, hygiene , sleep, exercising in the open and fresh air as much as possible, emotional joy, grief, distress, etc. conditions, fatigue, fractures, soft tissue disorders, disorders in the normal placement angles of the joints affect the posture. In addition, the posture habits obtained as a result of the studies including the movement content and postures of the sports branch from a young age affect the posture (Karakuş and Kılınç, 2006, p. 311-312).

RELATION OF VOICE AND POSTURE

Voice is an instrument for people to express themselves and communicate in a healthy way. Any change in the voice directly affects the person's life. Postural reflexes and postural use also affect voice health. A good posture is achieved by using the body in the most suitable position. It is essential to use the body with minimum energy requirement from the neuromuscular system without any strain. Otherwise, the effect of any changes in the skeleton or joint may lead to unexpected consequences along the kinetic chain. First, it negatively affects the balance of the body, weakness of muscle coordination and endurance occurs, loads on the joints, affects the respiratory function and finally negatively affects the voice. Postural imbalances in the neck and head structure can also cause changes in the soft tissue and muscles of the pharynx.

Posture is also affected by our psychological state, the requirements of our profession and our cultural characteristics. Our posture is the language of our body. What we feel is reflected in our body language and we act accordingly. Our posture and movements almost paint the picture of our soul. On the other hand, a teacher, a worker, a doctor, a cameraman, a singer, a porter, an announcer, an

instrumentalist, a banker etc ... they have different postures as required by their profession. Again, features of our culture such as sitting at the table and sitting on the floor are reflected in our posture by directly affecting the functions of our spine and muscles.

In Egypt and Mesopotamia 5000 years ago, chairs, stools, etc. was used. The Chinese started sitting on the chair 2000 years ago. Middle Eastern, North African and Islamic cultures prefer to sit on the ground. The squatting posture of doing work or resting has been adopted by millions of people in Asia, Africa and South America. Cross-legged sitting, called the “Turkish or tailor sitting”, is common in the Middle East, India, and Asia. Sitting with legs crossed or sitting with legs bent back has become widespread today (Herring & Tachdjian, 2002).



Figure 6. Puppet Imagination in Posture

(Photo belongs to the researcher's student. Used with her permission)

During singing, it is very important that our respiratory organs and vocal organs do not contract, and that they are not exposed to any tension. The singer must discover her/his primitive voice and her/his body must be in full flexibility so that she/he can reflect what she/he has learned during the vocal training process. The mood of the singer should also not be tense and negative. Generally, for correct posture, voice trainers say, “Imagine a rope pulling you up from the top of

your head.” they use the phrase. In this way, the distance between the vertebrae is stretched and the body is ready to explore its own center. When we sleep, that is, when our consciousness is disabled, all the muscles in our body are expressed as zero point. Again, while sleeping, our respiratory muscles such as the diaphragm, abdomen and intercostal muscles can work much more flexibly. Since it is resting breathing, we perform equal and wider inspirations and expirations. Sometimes, when you give verbal advice to the singer about her/his breathing or posture during the lesson, the person may feel more compressed because the control mechanism comes into play. The words of the educator can be perceived as a directive and create the opposite result. This situation causes the breath to be shorter and tenser, and the posture to be unnatural and upright and impulsive.

At such times, resorting to motion will be a savior. The focus of the student should be removed from breathing and posture, and the selectivity in the perception formed at that moment should be destroyed. It would be best to follow a kinesthetic (movement-based) approach by imagining a moment when the body is comfortable (thinking using imagination). This approach can even be an easy exercise, such as putting any two objects in the hands of the student and waving his arms. In this way, the student will relax with the movement he made at that moment, her/his shoulders will be released, her/his body will stretch, her/his larynx will not be compressed and physical learning will also be activated. In the next action, she/he will recall this comfortable moment and her/his body awareness will increase. With the correct call of the movement every time, motor learning will take place, that is, knowledge and awareness will begin to become permanent. The aim should be the stance that makes the singer feel comfortable, that he can use the voice possibilities in a wide range and that is aesthetic at the same time.

Singers generally tend to stretch their heads upwards in high-pitched voices, raise their toes, and pull their chin down in low-pitched voices. When the head and neck are extended upwards, the larynx is stretched, and when the chin is pulled down, the larynx is compressed. However, in order for the thyroid cartilage and the cricothyroideus muscle, which is effective in the head voice, to fulfill their functions, on the contrary, a balanced position should be focused. Facial muscles should be quite relaxed and in a position to freely make tongue movements. Eyebrows should not be stretched. The lower jaw should be released and not pushed forward in order to maintain its natural range of motion (Kar, 2012, p:24).

Generally speaking, good posture starts with establishing one's own center and maintaining this awareness. The connection with the ground should be felt and a stance should be adopted that will ensure the flexibility of movements. If the feet are open about one step wide, it will be easier to ensure the formation of the center and balance. The back should be straight and the body should be flexible. Shoulders should remain free. Otherwise, the larynx may be compressed. In addition, it should not be forgotten that there are aesthetic concerns in posture (Kar, 2012, p. 24).

The most important point in the postures of the singers is the coordination of the movements of the head and neck region. Contrasting movements can be comforting in situations of tension. For example, lowering their hands or flexing on their knees when making high-pitched notes, raising their hands up when descending to low-pitched notes, or drawing eight boots with their hands will prevent unwanted neck movement as imagination .

BALANCE POINTS AND IDEAL POSTURE IN VOICE TRAINING

Melissa Malde, Mary Jean Six balance points were proposed by Allen and Kurt-Alexander Zeller. These six points are as follows.

1. AO joint
2. Thorax relative to the lumbar spine
3. Hip joint
4. Knee joint
5. Ankle joint (including foot arches and foot tripods)
6. Arm structure (Malde, Allen and Zeller, 2013, p. 53).

AO Joint

The head makes up about 8% of the body and weighs an average of 8-10 kilograms. Anatomically, the uppermost vertebra located under the head and in the middle of the neck is the spinal cord known as the Atlas. In Greek Mythology and in many of its reflections in art, Atlas is depicted as a man carrying the world around his neck. For this reason, the most important carrier vertebra of the head was named after him. The function of the cervical spine is to support the head. It consists of 7 vertebrae. The AO Joint is the first and most important of the 6 balance points required for a proper posture (İşsever, 2020).



Figure 7. Equilibrium Points (<https://paramountsinging.weebly.com>)

Thoracic Balance Associated with the Lumbar Spine

The thorax covers the area between just below the neck and the lowest (12th) rib. This part of the body includes organs related to vocal training. Rib cage,

sternum, dorsal vertebrae, lungs and diaphragm. Harmony and pressure in this area are very important. The cervical spine above the thoracic spine and the lumbar spine below the thoracic spine should be in harmony (İşsever, 2020).

Hip Joint and Pelvic Arch Balance

The pelvis is located in the lower right part of the torso of the human body and is responsible for the distribution of balance between the upper torso and legs. While sitting, the weight of our body is lifted by the sitting bone.

But while we are standing, weight is transferred from the pelvis to the legs via the hip joints. The location of the pelvis becomes important here. The pelvis line determines which leg will be loaded with more weight. A positioned pelvis allows the person to move freely and sing better (İşsever, 2020).

Knee Joint Balance

The knee joint is one of the six balance points that are very important in singing training. Loosening the knee joints creates a very favorable bodily position during phonation. Knee lock position is a common problem when singing. We basically do it to look strong and confident. We see this posture especially when the singer sings difficult passages. This stance is a lordotic stance that puts a load on the lower back. This tension spreads throughout the body from the knees to the throat (İşsever, 2020).

Balance of the Ankle Joint

Learning how to use the ankle joint to stride properly is key to maintaining balance and aligning the foot. The tibia bone, which runs along the legs, is connected to the talus bone via the ankle. The talus bone plays a role in the distribution of gravity. This bone activates several muscle groups as the center of gravity changes. In a movement such as bending, the talus bone loads the body weight on the navicular bone and other bones in the front of the foot (İşsever, 2020).

Arm Balance

Conscious use of the arms while singing helps to breathe efficiently by expanding the ribs easily, but it is also about finding the ideal posture and maintaining balance. The arm consists of three parts. “arm” from shoulder joint to elbow joint, “forearm” from elbow joint to wrist joint, “hand” from knuckle

to fingertips. Especially on stage, the greatest load is on the shoulder joint. The arms magnify the artist's expression, expression and emotions on stage. For this reason, shoulder joints are used in many acts on stage (İşsever, 2020).

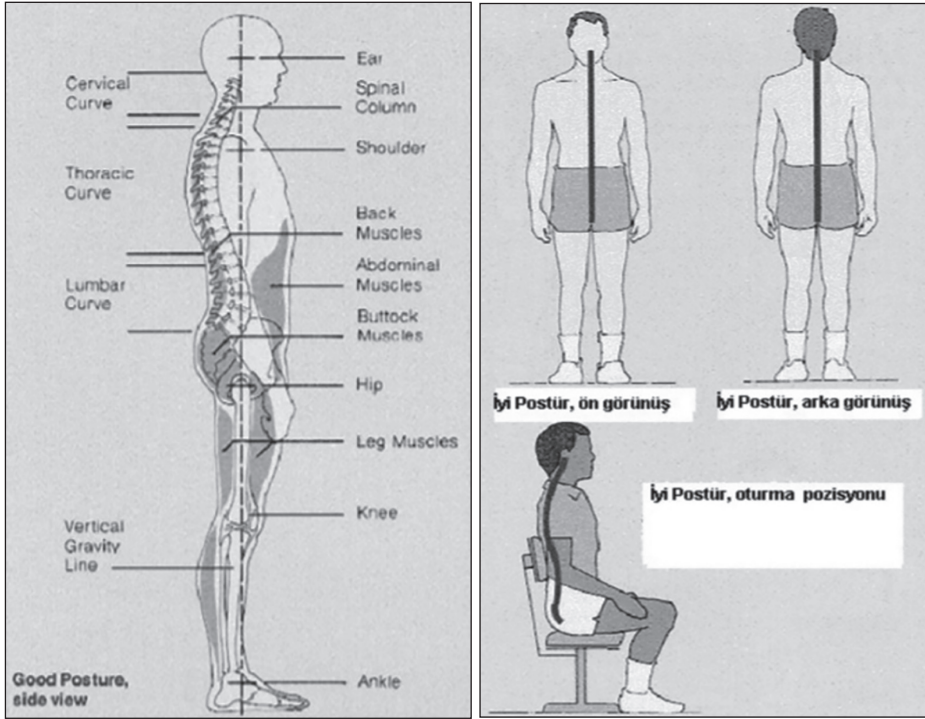


Figure 8. Ideal Posture Side View, Ideal Standing Posture, Ideal Sitting Posture (Ecerkale, 2006)

The ideal standard posture is understood to use the body at maximum efficiency and to keep stress and injuries as minimal as possible. In standard posture, vertebrae and ribs should be in their normal curvature and angles, and lower extremity bones should be in an ideal posture and straightness for weight bearing. Pelvis neutral position; Helps good posture and straightness of extremities, trunk, abdomen. In addition, the position of the thorax and the upper back plays an important role in the optimal functioning of the respiratory organs. The upright position of the head also ensures that the stress on the neck muscles is kept at a minimum level (Otman et al. 1995).

In a relaxed (comfortable) standing position, the hip and knee joints are in full extension as they support other parts of the body. In addition, in the knee joint, the extension (increasing the angle between the two parts of a joint, namely stretching) is added to the rotation in the last few degrees of the movement, and the joint is locked tightly. The main muscle that provides stability in the ankle is the Gastrocnemius (the strong muscle that controls the back of the leg). Because this muscle spans two joints, the stabilization effect is reduced when wearing high-heeled shoes, as it relaxes a bit. (Otman et al. 1995).

In ideal sitting posture;

- Ischial tuberositas (bone protrusion that comes into contact with the ground, especially when we sit on hard ground and is located in the lower and posterior parts of the pelvis) should form the largest support surface,
- The upper part of the thighs should be placed on the sitting surface so that it does not create excessive pressure behind the knee joint,
- The lumbar spine should be in mid-flexion (bending movement of the joint), physiological curvatures should be maintained,
- The entire spine should be supported by a slightly curved backrest,
- The weight of the legs should be transferred to the support surface with the feet,
- While sitting on the floor, the body should be supported by leaning on the hands and arms or against the wall (Grimmer et al. 2002).

POSTURE ANALYSIS AND SYMMETRIGRAPH

Posture analysis is one of the methods widely used by many researchers to evaluate the performance of professional athletes, examine their body profiles, determine the risk of injury and improve their performance. Today, posture analysis is also carried out to prevent discomfort caused by the instrument and to detect vocal diseases caused by singers' misuse of their bodies.

Posture assessment is made to people standing behind a transparent posture chart (Symmetrigraf) divided into squares. The feet are fixed at a certain point and the evaluation is made. In addition, posture analysis can be performed by transferring two photographs taken from the front and the side to the "Posture Analysis v.20" computer software program. Then, taking into account the body mass index values, the angular relationship between balance and general upright posture and extremities (arms, legs, extension) can be analyzed.

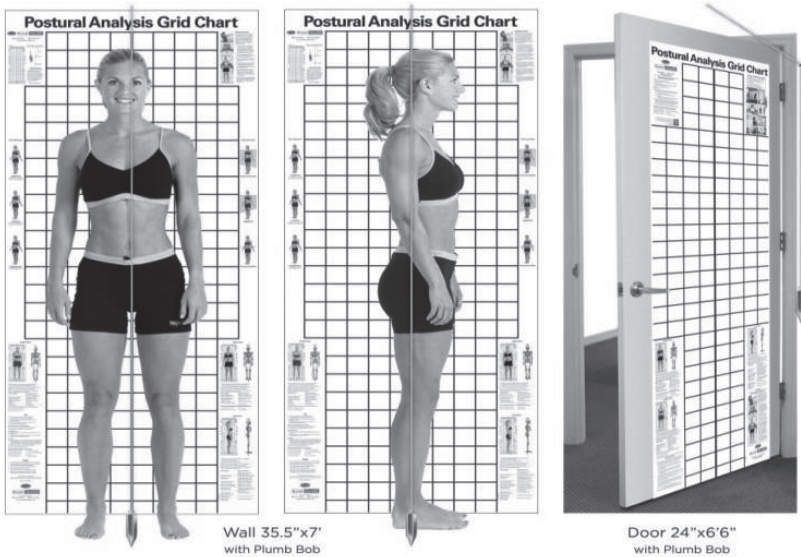


Figure 9. Symmetrigrath (<https://harunmetekoc.com>)

BODY AWARENESS - CONSCIOUS AWARENESS AND POSTURE RELATIONSHIP

According to Bauer (2016), neurological interactions between mind and body are the source of kinesthetic experience. This experience includes not only sensory awareness of the body, but also the ability to consciously facilitate movement. To sing a song; it requires conscious body movements including posture, breath management, resonance and articulation. The singer must acquire kinesthetic sensitivity to facilitate the physiology and certain physical movements required by singing. From this perspective, singing is essentially a motor skill before art. Like all fine motor skills, singing requires kinesthetic sensitivity for motivation and work (p.129).

Kinesthesia is a term related to body movement and perception. It is defined as the presence of body position or a sense of movement resulting from stimulation of sensory nerve endings in muscles, tendons, and joints. In daily movements, both important kinesthetic sensations are experienced, consciously or unconsciously, and movements that require great skill are experienced. From picking up a shopping bag, jumping from a high place to singing an aria, physical activity between mind and body is consciously facilitated by the neurological communication system (Bauer, 2016, p.129).

Emile jacques Dalcroze (1865-1950) was a Swedish musician and music educator who developed the “Eurhythmics” method, a method of learning and living music through movement. Eurhythmics ; It is a music education approach based on the idea that the basic element in music is rhythm and the source of all musical rhythm can be found in the natural rhythms of the human body. The aim is to establish the connection between the hearing ear, the performing, feeling, perceiving body, and the reasoning, imagining and correcting brain. In Dalcroz’s words, the development of his method began when a student with severe rhythm problems left the classroom with smooth and uninterrupted strides. The Dalcroze method is a method of teaching musical concepts through movement. According to Dalcroze , the best way to build a solid and vibrant musical foundation is to transform the human body into a well- tuned musical instrument. The method has three key elements of equal importance. Eurhythmics is ear training-solfeggio and improvisation. Dalcroze observed that students who could not play in the tempo of the musical world during the experiments were able to walk in the tempo in the real world, tap their feet and shake their heads while responding to the music, change their movements in crescendos, and relax their muscles when the musical sentence was finished. If students can use their sense of motion by activating, they can also release their natural sense of rhythm that they need to use in music creation. Dalcroze’s long-term experiments have proven this, and Dalcroze has now begun to give lessons while students are swinging and dancing barefoot on the dance stage. Again, in his own words, “I dream of a form of music education where the body becomes a bridge between sound and thought and becomes an instrument that allows us to express our emotions without deceiving them.” defines its method by saying ([www. Dalcrozeusa.org](http://www.Dalcrozeusa.org)).

Frederick, Australian actor working on “Body Awareness in Acting and Singing” Metthias Alexander (1869-1955) developed the Alexander technique in 1904. This technique is a psycho -physical way of re-education. During a theater play on the stage, his voice was turned down, then he was treated, but when he spoke loudly again, the problem recurred. He wondered if this discomfort, which was not present during normal speech, was recurring on stage and tried to analyze the way he practiced the movements by placing mirrors around him.

“Alexander observed the behaviors that caused his voice to be hoarse and created a solution in 5 steps, which he called kinesthetic, visual, structural, intellectual and emotional. In the kinesthetic step, he became aware of the tension

in his body. In the visual step, he started to see his habits clearly. In the structural step, he gained knowledge about anatomy and movement. In the intellectual step, he began to see the thinking mechanism more clearly. In the emotional step, he observed how he behaved towards other people. Alexander observed himself physically and mentally for nine years (Leibowitz, Connington, 1999).

Alexander; naming neck, head and back control as primary control, he concentrates on building a comfortable and balanced stance. He worked on this issue with otolaryngologists. Doctors realized that the fact that the way the body is used affects the correct and efficient functioning of the body was overlooked in the diagnosis and encouraged their patients who were theater players who applied to them with the same problem to learn the Alexander technique. While “relaxation and willpower” constitutes the first stage of the technique, “Orientation”, which regulates the neck-head-back relationship, constitutes the second stage of the technique. Emphasizing that the relationship between the head, neck and trunk will affect the whole body, the Alexander Technique is a set of exercises that free the neck, allow the back to lengthen and expand, and keep the head forward and upright. With this technique, which is used by stage artists to reduce muscle tension, provide internal balance, and perform the movements that they do while playing their instrument more easily and without difficulty, the person tries to diagnose and prevent harmful and unnecessary movement habits and to provide conscious muscle control.

The Alexander technique helps musicians improve the quality of their performance in passages that require physical movement while playing or singing (Jay, 1998).

The principle on which the Alexander technique is based is to use our bodies as nature intended. It is necessary to reduce muscle tension in order to move, not to increase the tension of our muscles as most of us do. Instead of making our life much harder than necessary, both physically and mentally, we can experience that most things can be easier and effortless by allowing movement. Once this starts to work in our subconscious, our every action will become calmer” (Brennan, 2000: 32-64).

Mosche Feldenkrais (1904 – 1984) worked as an assistant teacher and played football. He studied mechanical engineering and electrotechnical. He founded the Judo club in Paris and taught, and started to write books on this subject. While playing football in Scotland, where he went in 1940, a wound on his knee

started to get worse, doctors suggested surgery and promised him a maximum of 50% success. “If the surgery goes badly, he will no longer be able to walk, if it goes well he will walk, but he will never be able to do judo or any sport again. In this case, Feldenkrais, who took responsibility for his own recovery, created his own technique by combining the western physiognomy, anatomy, neurology, system theory, the movement series used by babies in the development process, as well as the eastern philosophy of life and his experience in combat sports based on movement (Ergin, 2006 cited in Kar, 2020, p:13).

By examining the relationships between his own body and mind, he succeeded in teaching himself to walk again. He did not develop a new theory in his works, but put the knowledge of his age into practice by examining it from different angles. He assimilated the knowledge he learned from many fields such as anatomy, biomechanics and behavioral psychology and transferred them to his technique. He continued to practice Judo until the age of 83, one year before his death (Feldenkrais, 2000).

Situations where the Feldenkrais method is useful are as follows: 1. Music, dance, yoga, Thai It improves performance in different areas such as chi and makes an important supportive contribution. 2. It teaches harmony and comfort in daily movements. 3. Chronic pain. 4. It teaches you to live in the moment you are in. 5. Movement difficulties brought on by a sedentary life or age. 6. Against stress, tension and fatigue” (Bradbrook, 2005).

Kristin Linklater (1936 -) is an important educator working in the field of voice production for acting education, who connects body awareness and voice freedom with her work, which includes the approach of releasing the natural voice. Her book “Freeing the Natural Voice” was published in 1976. She is also highly demanded as 14 speakers and seminar leader in Germany, France, Belgium, Italy, Denmark, Australia, New Zealand, England and Russia, as well as regularly in America-New York. Her work is at the center of voice studies at the South Korean National Theater Academy. Born in Scotland in 1936, he studied acting at LAMDA (London Academy of Music and Music), one of the most important acting schools in England. Kristin, who has completed Dramatic Art. The method designed by Linklater is built on scientific and cultural knowledge. Before discussing the method’s approach to the concept of “natural voice,” Kristin It would be useful to briefly touch upon Linklater’s scientific explanations for the formation of voice. In order to understand the terminology used in the Linklater

method and to determine the scientific basis of the applications, it is necessary to draw a rough framework of the neuroanatomical process² that produces the voice (Linklater, 2006). In the Linklater technique, the channels in the voice emerge with emotions. Since each individual is different from each other, emotionally related vocal problems exist at different levels (Wygant, 2003: 10).

The voice/speech formation process begins with the impulse³ produced in the motor cortex of the brain. The impulse string produced in the motor cortex is sent via neural pathways to structures associated with speech. First, the way to the lungs is opened from the lips and nose, then the air flows into the lungs with the contraction of the respiratory muscles. When the amount of air required for the intended voice and/or speech is supplied, the respiratory system reverses its processes and this time pushes air upwards, into the vocal tract, and then into the mouth and nose. During the initial phase of this exhalation, the vocal cords in the larynx are somewhat closed. Thus, as the upward air flow passes between these two flexible tissues, ripples occur. With these fluctuations, the air is left in the upper vocal tract by dividing into particles. These air particles activate the air in the resonant spaces of the pharynx, mouth and nose, completing the qualities of the voice to be released. (Linklater, 2006: 13-14). At this point, it would be appropriate to mention the preferred terminology and style in the Linklater method. In the method, the principle of explaining the voice to the actor by keeping scientific explanations at a minimal level has been adopted. Voice and related organs or structures are explained through analogies⁴ and metaphors rather than scientific terms⁵. The first of the reasons for this preference is to direct the actor to an approach that prioritizes the psychological elements that make up the voice, rather than focusing on following the physical laws of voice production. In this way, the actor is also reminded that his voice is the product of her inner and outer world and that it is “single/unique”. Thus, in the Linklater method, instead of saying “an impulse occurs in the motor cortex of the brain”, it is said that “a need arises in the body to communicate”. The intensity (stimulus) determines the voltage (voltage) of the impulse.” Instead of saying, “An ordinary greeting will produce a low reaction in the breathing and vocal muscles, while an enthusiastic encounter will create a high reaction.” “Air particles are released after activating the air in the resonance spaces.” Rather than saying, “The

² It is the branch of medicine that tries to find the location of functions in the human brain.

³ Impulse, impulse to do something, to take action and which is so strong that the individual cannot prevent it .

⁴ Drawing conclusions by analogy.

⁵ To describe something by analogy with something else, metaphor

vibrations will dance to the resonators and your need to convey your feelings will be satisfied” (Linklater, 2006: 15).

Hilde Langer – Rühl (1911 – 1990) is a pianist and composer. In 1974, she founded the branch of “Examination and Education of Breath-Voice-Movement Training in terms of Singers and Instrument Players” in Vienna. She gave respiratory and vocal training at the “Vienna Academy of Music and Performing Arts “. Hilde Langer – Rühl musicians are recognized as pioneers in the field of breath, voice and body studies. Their work in collaboration with the pulmonary specialist Viennese Doctor Franz Muhar is based on the assumption that every instrumentalist must use the diaphragm muscle. It also emphasizes the hypothesis that musicians can breathe naturally through correct physical movements and thus better realize the spiritual and emotional content of music.

Her works include the following theses: While making music, all impulses must be generated through the diaphragm. This also applies to instrumentalists. However, after a correct and good exhalation, breathing can be done when it occurs as a healthy and natural movement. After a conscious exhalation, the breathing process should be activated reflexively. A musician can only enter the emotional and spiritual realm of music as much as he can physically use his breath naturally. 16 If the body is tired, tense or overly relaxed, it will tire quickly and the timbre quality will be adversely affected. Romeo Alavi Kia in his work on this subject called “My Voice, Mirror of Myself” Prof. Talking about Langer-Rühl, she says, “Inspired by yoga and with exercises he developed, he discovered ways to regulate movement and breathing” (Skopal , 2011).

“Lessac has studied how coordinating the body and brain can proceed with attention and awareness. One must experience physical feeling at the same time as behavioral feeling. The training focuses on kinesthetic awareness, where the performer is expected to feel physically and cognitively produce voice by changing habitual behaviors. According to Lessac, there are four understandings necessary for the interpreter. These are body aesthetics, internal harmonic sense, structural training and similar event principles. 1. Body aesthetics focuses on the senses and expanded awareness. For example, body sensations or the opening of the voice, its flow, rhythm, the wave or hardness of the rhythm. 2. The inner body process creates the inner harmonic emotion, provided that the five senses of hearing, feeling, tasting, seeing and smelling are combined. These five senses develop the inner sensitivity of the interpreter while making body movements through the inner harmonic sense. 3. Structured training is the awareness of body

and mind control without restricting freedom of movement. 4. The final step is to find a few similar events that are pleasing and imaginable, interpret them naturally without spending much energy, and awaken body movements. Lessac 's method of voice production requires an awareness of anatomy and the ability to naturally reproduce voice up front without strain on the face, mouth, and neck. Tonal production is based on awareness of ringing and buzzing vibrations felt in the forehead, nasal region, and alveolar region" (Stemple et al., 2000, p. 433).

Laban movement analysis (LMA) is a method and language for describing, visualizing, interpreting and documenting human movement – sometimes referred to as Laban / Bartenieff movement analysis. Lisa Ullmann, Irmgard Bartenieff, Warren Developed and expanded by Lamb et al. Based on the original work of Laban. LMA draws from many fields, including anatomy, kinesiology, and psychology. Used by dancers, actors (Newlove, 1993), musicians and athletes; Labanotation (or Kinetography), a notation system for recording and analyzing movement in the LMA , by health professionals such as physical and occupational therapists and psychotherapists (Bartenieff et al. 1980) and by experts in anthropology, business consulting, and leadership development (Lamb et al. 1969). Laban) is used. Laban motion analysis is classified in a variety of ways contemporary. Initially, these categories were very simple, and Laban himself was mostly devoted to the effort studies Eukinetics and Spatial. Laban referred to Choreutics, the theory of Harmony. Student of Irmgard Bartenieff later further detailed these categories in four stages (body, effort, shape, and space), and this system, known as BESS, is widely taught today. However, BESS is not the only organization of Laban's theory in use. For example, in the UK More influenced by another student of Laban, Lisa Ullmann, the categories were body, effort, space and body, space and relationship (CDL, 2018).

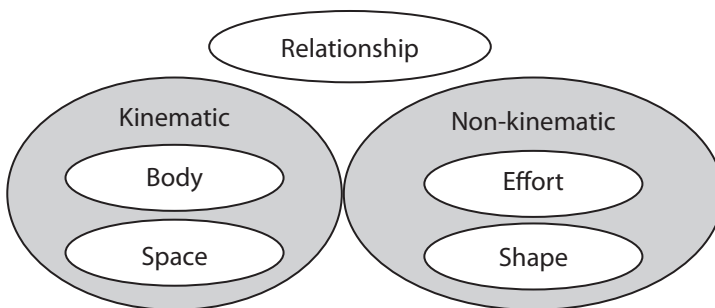


Figure 10. Laban Motion Analysis

“Yoga is a spiritual philosophy with a holistic foundation. There is an inner connection between the soul, mind and body. A tired body cannot concentrate on anything, and a mind with problems leads to unhealthy and negative thoughts, leading to dependence on unhealthy behaviors. An unconscious and unaware of itself disturbs our balance. Yoga has methods that are beneficial at all levels to increase the flow of positive energy. The most important tool we can use to keep our minds healthy is relaxation. We can relax our body by starting from the feet and going up until our whole body is completely calm. Then the mind will relax and a balanced point can be reached” (Münzinger, 2009, p. 7-8, cited. Evren, 2012, p. 569).

In addition to the techniques that increase our body awareness, which we have explained above, conscious awareness also has important effects on posture. Kabat-Zinn defined mindfulness in its most comprehensive and well-known definition as “a state of awareness that emerges through giving attention to the present moment by moment, without judgment, knowingly and willingly”. This kind of awareness is more about improving the way of paying attention than paying more than usual attention to something; it means that the individual uses all the resources and senses in his body and directs his attention in a different and wise way with his whole heart and mind (Williams, Teasdale , Segal & Kabat-Zinn , 2015).

One of the most powerful methods that enables the individual to connect with his body is the body scanning technique. In the body scanning technique, the individual focuses on the body comprehensively and instantly, which allows the individual to develop both concentration and mental flexibility about his body at the same time (Davidson et al. 2003). In this technique, the individual lies on his back and directs his mind to different parts of the body. The exercise begins by focusing primarily on the left toes. The focus is gradually shifted to the foot, leg, abdomen, then from the right foot to the abdomen. Then the attention is given to the waist, back, chest, shoulders, and finally the hands, arms, neck, face, back and front of the head are given to the exercise to end. It is felt that breathing affects every part of the body (Duncan and Bardacke 2010, Kabat-Zinn 2009).

MENTAL AND KINESTHETIC ANALOGY, IMAGINATION AND METAPHORS IN CREATING NATURAL POSTURE

At the beginning of the episode, we stated that singers whose instrument is their body should know the anatomical structure of the human body and how the functions in our body work and should be equipped with how to avoid all

physical and psychological factors that can prevent them. We have underlined the advantages of knowing the physical laws of vocal production and knowing vocal physiology for a singer. We have also explained anatomically the 6 balance points required for the ideal posture that the singer should have.

Undoubtedly, when it comes to vocal training, educators begin the process by explaining the lungs, trachea, respiratory muscles such as the diaphragm, intercostal muscles and abdomen, which are effective in respiratory function. Then, they explain the vocal muscles (posticus, lateralis, transversus, intervus, cricothyroideus) and larynx structure (hyoid bone, epiglottis, thyroid cartilage, cricoid cartilage, and arytenoid cartilages) that are effective in phonation. And then the resonator and articulatory organs (oral cavity, lips, tongue, teeth, palate, pharynx, nose, sinuses) that shape and amplify the voice are explained. The organs that produce the voice are in a part of the body. However, singing activities are done with the whole body. For this reason, body awareness and posture awareness should also be kept at the center within the voice training programs.

When we look at the other side of the coin, we are confronted with the fact that keeping scientific explanations to a minimum in vocal education, as we see that it is preferred in the Linklater method terminology, allows the singer or actor to focus on the psychological elements that make up the voice, instead of the organs and structures related to the voice during voice production. At this very moment, we come across the method of explaining concepts and drawing conclusions by using analogies, by using analogies, by imagining using imaginations, by using metaphors. While some students think that these methods are too abstract and want to rely on scientific knowledge; we see that some students need to think that their voice is a unique product of their world and to convey their feelings in this way. Whether the way of scientific knowledge is preferred or metaphors and imaginations are used while the student gains target behaviors in voice education, it may still take a long time to grasp these gains. There will be times when both methods will be used in the training process. Sometimes the singer will have problems applying a subject that he has mentally grasped in his/her body. The neurological communication system between mind and body will develop over time with the help of motor learning. In this sense, it is vitally important for the singer to have a kinesthetic sensitivity and awareness. Every student should be treated as a phenomenon in terms of anatomy, mind and spirit. Student relativity is the key to success in education.

CONCLUSION AND RECOMMENDATIONS

As a singer we can do some simple physical exercises to have a natural posture. Spread our feet at shoulder level, think with our legs straight and knees slightly bent, keep our hips facing straight ahead, align our spine, keep our stomachs straight, keep our chest relaxed and forward, think shoulders down and backward, and think straight ahead with our head.

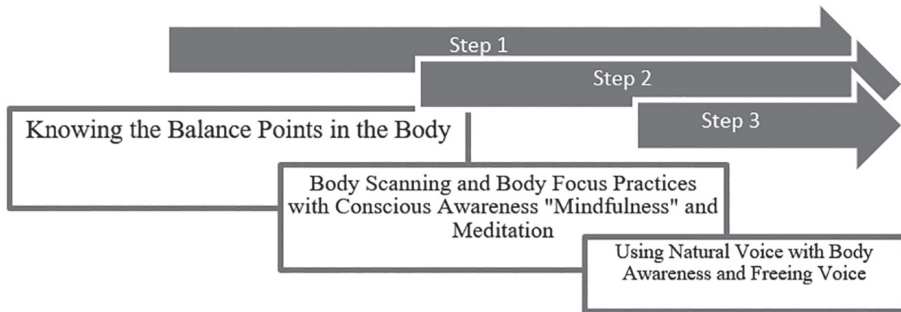


Figure 11. Steps to Improve Posture

Step I: Knowing the Balance Points in the Body

OA Point; this is where the topmost vertebra (atlas) articulates with the base of the skull (occiput). Balance your head on this joint so you're not looking up or down while singing. A properly balanced OA joint reduces neck and jaw strain.

Neck; It's only part of your spine. Streamline with the rest of your spine rather than pushing forward. If you balance your head on your OA joint, your neck should also come to this position.

Your torso above your hips for optimal breathing. Do not try to straighten your spine. The spine is naturally curved and, when straightened, prevents you from breathing.

Soften your knees so they don't lock or bend. Place your legs directly under your body and feel their support.

Your shoulders are not connected to your rib cage, do not move your shoulders while singing. Try to pay attention to this and instead of resisting, bring your shoulders to a neutral position.

Leave your arms relaxed at your sides when not gesturing. Do not make fists, do not squeeze your hands. Don't play with your clothes, this will make you look and feel nervous.

The pelvis directly under the torso so it provides maximum support. Do not push forward or backward.

Spread your feet shoulder-width apart, distribute and balance your weight evenly between your feet to avoid leaning forward or backward (<https://paramountsinging.weebly.com>).

Step II: Body Scanning and Body Focus Practices with Conscious Awareness “Mindfulness” and Meditation

Kabat - Zinn (2003) defines mindfulness with its most comprehensive and well-known definition as “a state of awareness that emerges by giving attention to the present moment by moment, without judgment, knowingly and willingly”. This kind of awareness is more about improving the way of paying attention than paying more than usual attention to something; it means that the individual uses all the resources and senses in his body and directs his attention in a different and wise way with his whole heart and mind (Williams, Teasdale, Segal and Kabat-Zinn, 2015).

It would be a healthy method to use conscious awareness in order to have a natural posture suitable for singing. Ability to pay attention to the moment and experience one is in; It is important both mentally, spiritually and physically not to get stuck on past experiences, feelings and thoughts or focus on a future goal and miss what is here and now. Considering that our posture is affected by our emotions, thoughts and feelings, this would be the right choice. For example, meditative activities such as body scanning will increase body and mental awareness.

Step III: Using Natural Voice with Body Awareness and Freedom of Voice

Voice of the singer, who uses her/his body with body awareness methods, her/his mind with conscious awareness, that is mindfulness and meditative methods, and her/his voice with voice physiology information and voice hygiene rules, is healthy, natural and sustainable. After this freedom is achieved, the singer will take firm and strong steps towards becoming an artist with the support of vocal therapy and singing education, with the systematic studies and studies that she/he will continue for a lifetime in the style she/he wants to realize herself/himself.

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