# The Flutist's Face as a Faucet

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**On the understanding that Air is a fluid**, this session is aimed at:

- Encouraging consideration of the body as a sort of "waterworks;"
- assisting the discovery of a comfortable configuration for the "internal pipes and tubing" of the body; and
- Discovering the optimal structures through which to move unobstructed air from lungs to flute.

## Thinking from the Ground up:

- Feet, legs, hips = Essential balance of the system
- Abdominal muscles = the "pumping station"
- Thoracic area, lungs = cistern
- Bronchi, Trachea, Larynx, Pharynx, Mouth, Lips = conduit
- Sinuses, and skull = Essential counterbalance of the system

**Poor Body Carriage – posture which causes tension, compression, or unbalance – will compromise the function of any one or all of these systems!**

## Air will flow smoothly from lungs to flute assuming:

- There are no kinks in the system – twists, bends, crooks; and
- None of the various valves within the full system is engaged to constrict the air passage.

## Valves – each presents a "danger-point:"

- Vocal Folds (vocal chords), and the opening between them known as the glottis
- Tongue
- Soft Palate
- Teeth, Jaw
- Lips

# Activities and Exercises

**Step 1** is to mentally and/or physically locate each element of the system within the body; and
**Step 2** is to exercise our mind and that element into a right-relationship with each other to perform as desired – for our purposes: eliminating the "kinks in the system" and clearing the obstructions. The following is merely a short list of activities and exercises which may be employed to satisfy these two steps for the less common elements.

## Start with a best-practice attitude to posture

No shortage of good ideas and materials here! However, just to touch on the most troublesome areas for flutists:

- Sitting or standing is really no matter – most of us need to be able to perform in both postures. Just ruthlessly confirm sturdiness of "carriage" and sureness of balance from sole of the foot to top of the head either way!
- Place music stand – if using – left of your body's centre-line, on an angle about 45° to the line of your shoulders, and in a position where it can be seen without tipping the body, i.e. high-enough, or, if your vision is okay, low and away! This works standing or sitting! You may need to gently coerce ensemble directors to accept this as better for the sound of the section and the physical health of the flutists, even while sacrificing the lovely line of silver flutes "all in a row." Encourage your students to lead by example!
- Ensure that the hands – not the arms! – lift the flute. Elbows should "hang" lightly between the lifted hands (and flute) and relaxed shoulders.
- Pivot the head a-top the spine – minimal or no tip, tilt, or tuck, please! - 45° to the left if possible, but in no circumstances should the pivot be any further than is comfortable. "A-top" the spine is the operative command! The skull will remain stoically, but not stiffly, up-right and balanced over the tip of the spine! The hands will confidently bring the flute up to meet the lower lip where it is when the head is fully balanced – i.e. no forward jut of the chin to find the flute … flute to the face, not face to the flute!.

**Unkink, unblock, and unobstruct the system!**

### Feet, legs, hips = Essential balance of the system

Ensure that the arches of both feet if standing, or the points of the sitting bones if sitting each carry an equal load. Any inequality of load here will threaten to cramp "the pumping station," diminish the capacity of "the cistern," or kink "the conduits." Ensure all joints are in unlocked position.

- Conjure the image of picture frame springs, and hair clips to demonstrate tension and compression (feet, knees, hips), versus spring and extension.
- Use "Gollum Dots" as a mental reference of orientation in space and rough-rectangular alignment

- Pay homage to the Roman engineers – arches, arches, arches!

### Abdominal muscles = the "pumping station"

Ensure there is no shrink, twist, tilt, or lean through lower spine. Each is to some extent an issue of balance, and some extent an issue of habit: sometimes borne out of trying too hard, sometimes a result of the body being pushed around by the assumed needs of the flute, the stand, the chair. Often issues of physiology do factor in, too. It is up to the savvy teacher to help the student trouble-shoot the exact cause(s) and develop a strategy for remedy.

- Try not to give in to physiology – just factor it into the full equation.
- Start with balance – if it's good, most shrinking, twisting, tilting, and leaning will disappear assuming the habits are retrained effectively.
  - Tackle habit-retraining with a 2-minute timer or sticky-note "hair."
- Remedy "shrink" – including slouch or sway-back – with lengthening the spine from tailbone to shoulder blades. Ask muscles to lift weight without bracing or arching.
  - When remedying a slouch, the pelvis should not tucked but rather "sitting bones," even when standing, should feel rather dangly.
  - When remedying a sway-back: the ribcage may feel oddly droopy as if hanging from the upper vertebrae.
- Remedy "twist, tilt, and lean" with "Gollum Dots," striving for a lovely Euclidean rectangle shoulder-shoulder-hip-hip.

### Thoracic area, lungs = cistern

In addition to taking seriously the "no shrink, twist, tilt, or lean" injunction above, give special attention to the flexibility of the ribcage, the hang of the arms, the movement of the diaphragm, and the reactions of the lower viscera. Ensure maximum opportunity for capacity by relieving tension or stress on any area of the thoracic area.

- Think of the collarbone and shoulder blades as forming a "ring" from which the arms hang. This "ring should gently sit and balance on the upper part of the ribcage – neither pressed down nor lifted up. Be aware that the tops of your lungs expand up into this part of your thoracic cavity and so therefore, ensure that the collarbone is doing nothing more than gently hanging on the rib cage, otherwise associated muscles will put tension on this area.
- Create the habit of pivoting head 45° left. With this, the flute can strike a 45° angle to the shoulders. Immediately upon opening up the angle between shoulders and flute, the left hand will float to a position in front of the sternum and the right hand will ease forward directly in front of the right shoulders – or there-abouts, depending on the physical size of the flutist. Take note of how the left arm no longer crunches the upper left ribs (a particular concern for the buxomly flutist), and how the right shoulder blade no longer jabs into the upper right back.
- Make use of coordinated onsets (sharp tongueless "WH") - quickly expel an strong, energetic, short, barely-controlled burst of air into the flute and allow the ribs and diaphragm to simply bounce back into position, letting the lungs return to full "under their own power."
- Without twisting, crunching, straining, or letting your arms do anything other than HANG, experiment in using your breath to discover increased flexibility and hence capacity through the thoracic area. A 16-couont "square-breath" is great for this exercise!
  - Breathe in through your belly button
  - Breathe in through your side ribs
  - Breathe in through the tips of your lungs
  - Breathe in through your shoulder blades
  - Breathe in through the "third button" of your blouse or shirt (just below your sternum)
  - Breathe in down the full length of your spine letting the air wrap all the way down the curl of your tailbone.

### Bronchi, Trachea, Larynx, Pharynx, Mouth, Lips = conduit

Like all of our body-systems, these parts have much better things to do – or at least were designed to do other things than play the flute … like help us breathe, eat, speak, and keep our brain attached to the rest of the body. Like many body systems, some of these can be manipulated voluntarily and some cannot. In many cases these passages are tiny and narrow, and have to travel through equally narrow spaces of the body. It is our responsibility to understand the capabilities, limitations, and interactions of these systems and ask only of them what they can give.

- The trachea is held in its open position by cartilage rings. The rings will naturally collapse slightly to allow food to pass the area on its way through the esophagus. Tension in the upper collarbone area can likewise cause compression in this area. There is nothing you can do to open the trachea more widely – so do even try! The added effort will only contribute to compression and blockage in the system! Left alone, the trachea will take care of itself nicely.

#### Larynx

- The larynx is a complicated gizmo! This houses your vocal folds (or your voice box) – the passage through which (known as the glottis) is very narrow indeed. There is only one set of muscles that can move the vocal folds out of the way to let the air pass. All the other muscles in this area will close off the area, principally for speaking! Most attempts to *open* this area will result in *closure* – so think "neutrality" here, rather than "openness."
- Throat noise – the grunting and voicing heard in some flute players - originates in this area. Think Swiss: neutrality is the key! It is true that with enough air passing the vocal folds, they will not come in contact. It is further true, however, some interventions – well-meaning they may be – can cause us to think we are moving air, when we are really restricting it.

#### Grunts and Catches

- Lightly cough and you will feel the laryngeal area constrict; likewise, with a friendly British "'ello": this is the phenomenon of the glottal stop.
- The common command to "think HHHH" closes down the glottis; so, too, will a strong "stage whisper:" this is to be avoided.
- The sensation of an extraordinarily light whisper – as if not doing much more than mouthing the words as you read to yourself – gives the sense of neutrality you seek. Accelerate the air with a "Wwhhh" – as all we English-speakers should do when saying "whale" (not "wail) or "whole" (not "hole").

### Singing and discernibly-pitched noises

- These tones are most common in the low register and seem to be a result of the flutist trying to "help" these lowest notes speak. The flutist may actually be doing this to a certain extent throughout the flute range, but the most obvious signs of the resulting tension may only be voiced under the lower air-speeds required for the lower pitched notes (high air-speed will prevent the vocal folds from coming together – but don't succumb to "H" … use "WH")
- Differentiate between helping the note sound – controlling the air and coaxing the tone with the larynx (BAD!) – and allowing the *ph*arynx (a different apparatus all together) to form a resonating chamber at the same pitch as the note being played (extraordinarily helpful!). Robert Dick coaches the practice required to do the latter successfully in his book, *Tone Development Through Extended Techniques.*
- For a round-about "cure" purposely practice singing-and-playing as a technique of its own. Once the sensation of doing this technique is gained, it is far easier to NOT do it.

## Pharynx, Mouth

- To access the mouth and pharyngeal areas effectively, the jaw and tongue must be encouraged to work in tandem.

### Jaw

- The jaw is a rigid bone, hinged but NOT connected to the skull just in front of the opening to the ears (not lower beneath your ear lobes), and operated by several systems of very powerful muscles. The disconnectedness of the jaw allows for motion up-down, front-back, side-to-side – this so that we can bite and chew. The powerful muscles – one of which is the tongue – operate all the possible motions of the jaw.
- Determinedly opening the mouth (jaw) – as in opening wide for the dentist – will do nothing good for the flute tone and will produce favourable conditions for the development of TMJ. With this maneuver the muscles at the back of the jaw lock the hinge-joint into place and the tongue compresses the laryngeal area, entirely counteracting any true achievement of openness.
- In order to achieve true openness and relaxation of the jaw, the operating muscles must be "released." An infallible trick to achieve this result? Assuming your posture is sound (*caveat*: your neck will sometimes shrink up doing this for the first time), simply imagine your earlobes dripping and melting down like long globs of oozy pizza cheese.

### Tongue

- The composite space formed by the mouth, pharynx, and sinuses is the *size* that it is – although the positioning of the jaw has a great deal to do with exactly how big or small that space is! HOWEVER, once the size is established, the *shape* of the space is highly variable and changeable! It is the tongue which largely takes on this role.
- The vowel which the tongue shapes determines much about where the open and closed areas of the mouth and pharynx are. Some vowels produce large open spaces in the pharynx and small narrow spaces along the ridge of the hard palate, while others produce a large space in the dental cavity and only a tiny space in the pharynx. Much more on this a few steps below!
- The ubiquitous command to "yawn" upon breathing in or blowing out will, if done too energetically, likely cause the tongue to glom to the area of the lower pharynx thus compressing the larynx and will, virtually every time, cause the soft palate to descend and become rigid. The intended effect of opening the air passage and adding resonance to the tone will not be achieved – in fact, the opposite will have occurred!
- Rather than sleepily yawning, wake up and "smell the roses!" Take in the most beautiful fragrance imaginable through both nose and mouth simultaneously: enjoy it; savour it. This act both relaxes the tongue and lifts the soft palate!

## Lips: The Flutist's Face as a Faucet!

- All your lips really need to do it act as the final flexible conduit delivering air from the body to the flute – nothing more, nothing less.
- Remembering that muscles can only pull, never push: ensure that no facial muscle is pulling your lips away from the flute (smiling, or tension across the dental structure). To assist in this, many flutists opt for a "loose embouchure" style, although a very loose embouchure is not required, and floppy embouchure is never indicated.
- The powerful muscles just inside the upper and lower lips (under the squishy skin inside the mouth, not under the smooth external lip part) can flex the lips outward to elongate the faucet and provide almost infinite control to the final shape of this last and crucial moment of the airstream before it leaves the body.
  - The lips should always shape some variation of unvoiced "WH"

## Action of the tongue, and interaction with the lips

- Flutists, because of the nature of their instrument, ask their mouth (with tongue, pharynx, and lips) to shape umlauted-vowels – a configuration which does not exist in the English language – with the lips forming "WH" as given above and the tongue forming an additional vowel as given below.
  - The English "back" vowels Long-O (toe), Short-O (Todd), Short-U (tuck),and AW (tawdry) open large spaces in the dental cavity but narrow the pharynx almost to the point of closing it off; and thus act to place pressure on the pharyngeal and laryngeal areas, thickening the tone with a "British-hoot."
  - The English "front" vowels Long-E (tea), Long-OO (too), Short-OO (took) each produce a very open pharynx but have a point of extreme constriction near the roof of the mouth; and thus place great pressure on the air causing it to become very turbulent and high pressured as it hits the back of the lips, resulting in a forced tone. These vowels also tend to cause the lips to pull and press upon the air as it makes its exit from the body.
  - The English vowels Long-A (take), Long-I (Type), and OW are diphthongs and therefore are composites of several vowels in combination – we don't usually try to use these.
  - The English "middle" vowels Short-I (tick), Short-E (technology), Short-A (tack) each produce a relatively uniform tube for the passage of air through the pharynx and mouth free from turbulence, construction, or eddying. In addition to encouraging lifting of the soft palate, these vowels encourage an excellent placement of the tongue for articulation (T and K, etc.). These are a flutist's best options and best friends!
- The consonants which form the basis of our articulation patterns are usually affected by the vowel our tongue forms behind the consonant.
  - "T" will always strike in roughly the same point of the mouth regardless of vowel, although the Spanish, Portuguese, and French "T's" are more forward in the mouth than the English, and German "T's"
  - "D" is merely a voiced-T and as such tends to encourage the tongue to fall backward toward the pharynx – not a best option for softness! Use a gentle "T" instead!
  - "K" is extremely affected by vowel, striking far back in the mouth when accompanied by a back vowel where it will choke off the passage of air on multiple-tonguing, and striking very high and forward when accompanied by Short-I where it will fly through the air with the greatest of ease for a fearsome and formidable multiple-tongue.
  - "G" is merely a voiced-K and even more than "D" will fall to the back of the mouth. Any attempt to use this for a smoother multiple-tongue will likely be an exercise in futility, doing little more than thickening the tongue and choking the air.
  - "P," "CH," "L," "N," "TH," "Thp," rolled/flipped "R," or coordinated on-set can all be used to great effect to colour the air stream as it prepared to exit the mouth.
- Be mindful that each articulation stroke acts as a valve, momentarily (or longer) stopping the air. As long at the consonant is clean, the accompanying vowel is crisp, and the airspeed is adequate (optimal) to the task the stoppage will not be obtrusive.

## Sinuses, and skull = Essential counterbalance of the system

- Many things contrive to drag our skull off-balance: trying to see the music, reaching with the chin to find the flute rather than letting our hands bring the instrument back to the face, a hand position which struggles to hold the instrument and gives us a sense that the instrument is sliding away from us. Identify these tendencies in your playing – if present – and do what is needed to counteract and remake the habits. Remember: if the "top is off," then the rest of the system cannot balance because there is much more urgency to hold the head on the body than there is to produce excellent flute playing.
- In looking to access the sinuses for resonance, remember that we want the sinuses to be a cavern for resonance, not a passageway for air.
- The aim is to raise the soft palate on exhalation – "smelling the roses" in reverse. The test for this is simple, if counterintuitive: playing a left-hand note, pinch your nose shut with your right hand.
  - If there is little or no change to the timbre of the note, the soft palate is raised and you've achieved maximum resonance of the sinuses.
  - If your tone cuts out, the soft palate is descended and you are note achieving any boost in resonance from the sinuses.

**One step at a time, setting new habits as you go: with no patience for the "bad," and infinite patience in allowing the "good" become a part of you. Happy Fluting!**

### Resources


For carriage of the body (better known as posture):
- Lea Pearson, *Body Mapping for Flutists: What every Flute Teacher Needs to Know about the Body* (Andover Press)

For areas that singers deal with far better than flutists:
- Richard Miller, *The structure of Singing: System and Art in Vocal Technique* (Schirmer)
- Barbara Conable, *The Structures and Movement of Breathing: A Primer for Choirs and Choruses* (GIA Publications)

For flute-specific exercises any warm-up or tone materials can be applied, but the following have more in the way of accompanying instruction to help guide and focus your work:
- Peter-Lukas Graf, *20 Basic Studies for Flutists* (Schott)
- Angeleita Floyd, *The Gilbert Legacy: Methods, Exercises and Techniques for the Flutist* (Winzer Press)
- Fiona Wilkinson, *The Physical Flute: Creative Techniques for the Development of Tone, Vibrato and Pitch Control* (Waterloo Music)



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**As of the time of posting (Feb. 2010) the following sites are available to provide excellent visual references to the concepts presented above.**

http://www.thatsfit.com/bloggers/tanya-ryno/

http://www.salsastories.com/stories_o-p/posture.htm

http://andoverpressonline.com/wp-content/uploads/2008/12/whateveryex.jpg

http://www.nytimes.com/imagepages/2007/08/01/health/adam/9026Breathing.html

http://www.britannica.com/EBchecked/topic-art/499555/107185/The-diaphragm-forces-air-in-and-out-of-the-lungs

http://upload.wikimedia.org/wikipedia/commons/c/c3/Illu_conducting_passages.jpg

http://upload.wikimedia.org/wikipedia/commons/thumb/d/d4/Illu01_head_neck.jpg/250px-Illu01_head_neck.jpg

http://eatsleepdraw.com/post/57119999/human-jaw-2

http://chestofbooks.com/health/anatomy/Human-Body-Construction/The-Lower-Jaw-Part-4-Fractures-Of-The-Lower-Jaw-Mandible.html

http://upload.wikimedia.org/wikipedia/commons/3/3a/Illu_larynx.jpg

http://upload.wikimedia.org/wikipedia/commons/5/50/Gray956.png

http://commons.wikimedia.org/wiki/File:Cardinal_vowels-Jones_x-ray.jpg

http://www.utexas.edu/features/archive/2005/babble.html

http://www.fact-archive.com/encyclopedia/English_language

http://www3.hi.is/~peturk/KENNSLA/02/TOP/VowelSpace.html