

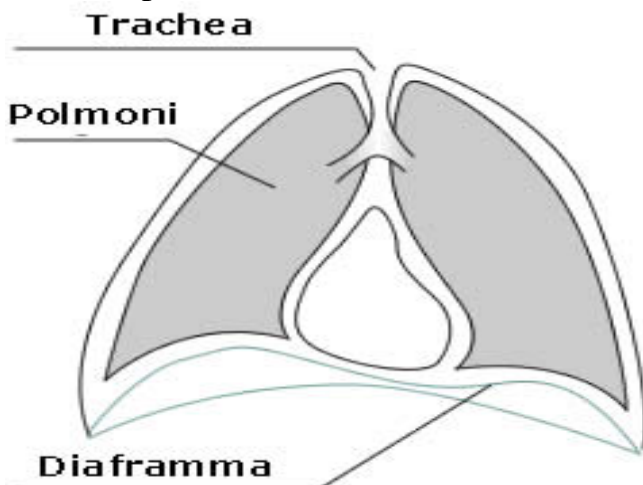
## MARCELLO CHIARLE

### LESSON N 1

#### THE RESPIRATORY SYSTEM

##### The diaphragm and his/her movements

This lesson is devoted to an important part of the respiratory system: the diaphragm and his/her movements. It is necessary to know that this muscle develops him in embryonic phase and that the dome diaframmatica is formed by the migration of structures that you/they depart from the cervical line. Does this narrow relationship between cervical line and diaphragm make to realize as a cervical pain can be caused by the jammed diaphragm (and vice versa). As the diaphragm he introduces? And' a dome muscle-tendinea that it separates the chest from the abdomen. it Possesses an irregular form because it is more breadth in side sense that in antero-back sense and it is taller on the right side that on the left side, for the presence of the liver. Divisible in two portions: a plant tendinea (center frenico) and a muscular peripheral. The muscular portions have various insertions: vertebral, costal and sternali.



The diaphragm assumes particular importance for the relationships that it contracts with important structures of the system neurovegetativo. Together with the esophagus, in fact, they pass of here also the vague nerves: the left vague nerve is anterior to the esophagus and the right one it is back. These two nervous components belong to the system of regulation of the whole vegetative life and therefore the two irritation of one can create some reflected troubles. The relationships pressories between chest and abdomen are therefore fundamental for a correct physiology. If such pressures come to also have altered the respiratory mechanism it changes: in subjects with an abdominal flabbiness the respiratory mechanism comes to be "low", different from subjects with an abdominal ipertonia in which tall respiraton is had, apicale. Even if a good respiraton doesn't exhaust the art of the to play however! To every way this is the center of the system of sonorous issue and therefore we will depart from here. The heart of the respiratory system is the diaphragm, whose meant etymological it is ` what is in mean' (diafragma). This respiratory muscle, of wide and

convex form, in effects it separates the thoracic hollow from that abdominal. When we inhale the curve of the diaphragm does it get up and the muscle makes him fitter to sustain the nota. A what it serves the diaphragm?

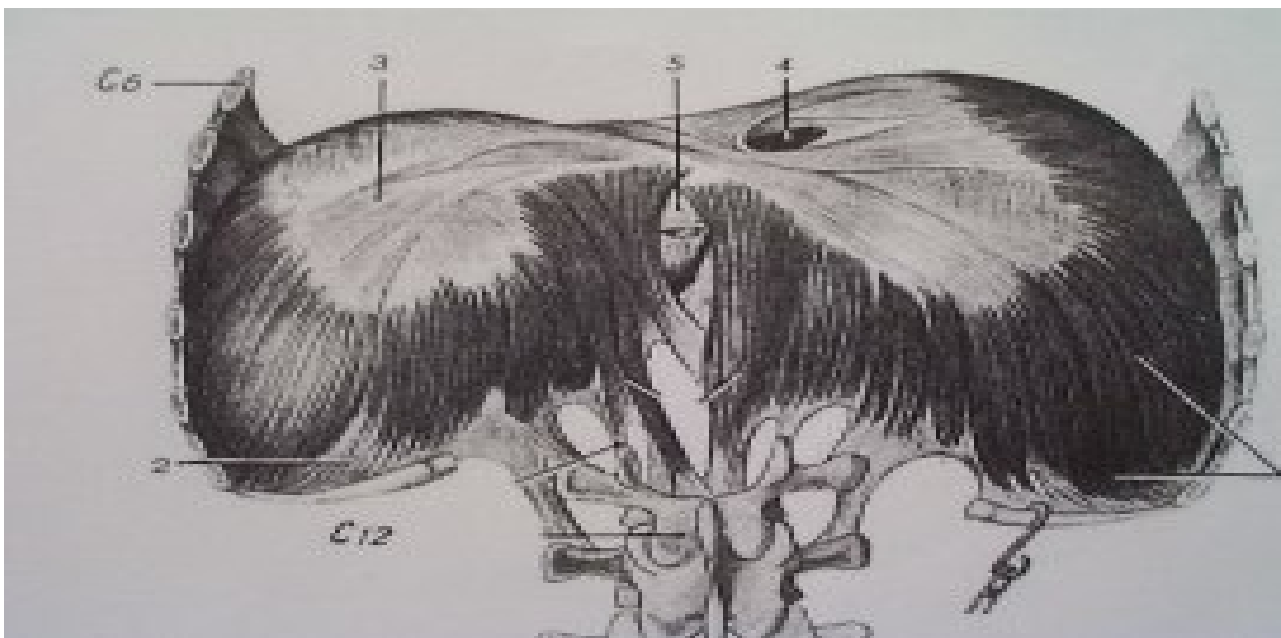
Over whether to separate two hollow with different functionality, the diaphragm it is our fundamental support of the sound: it is here that the so-called one happens 'support'. With a fanciful image we can say that the diaphragm is the 'tray' that it sustains the suono. Sentire the functionality of the diaphragm or also only his 'presence', it is among the things most difficult to play, also being absolutely essential. We try to help us with some very simple exercises:

1. we start to laugh, close-up and then strong, trying to feel the movements sussultori of the muscle.

2. Ora try to yawn instead: with this exercise the diaphragm prepares him in maximum bending, the position that is of support of the voice. The gape also serves to 'to take conscience' of the oral hollow and faringee open estates go for always not closing the passage to the sound.

3. when it happens us to sob - in the weeping or in the simple hiccup - we can observe the involvement of the diaphragm (naturally this cannot tell him an exercise 'voluntary' and I hope rather that to all of us the happens less possible to feel the presence of the diaphragm for this street...).

Here an image of the diaphragm seen by the back:



## LESSON 2

### Inspiration and Expiration

#### The inspiration.

First of all when it is inhaled it would need to try to fill with air the whole lung and not only the tall part (respiration clavicle). This is a rule that should accompany us, over that in to play, in every moment of our life. In fact the tall respiration or clavicolare it is harmful for the organism because it allows only a limited ventilation and an insufficient blood exchange. And' the stress and the hurry that it makes us breathe only with the tall part of the lung. In fact the animals and his/her children, in to breathe, they naturally dilate' the whole lung.

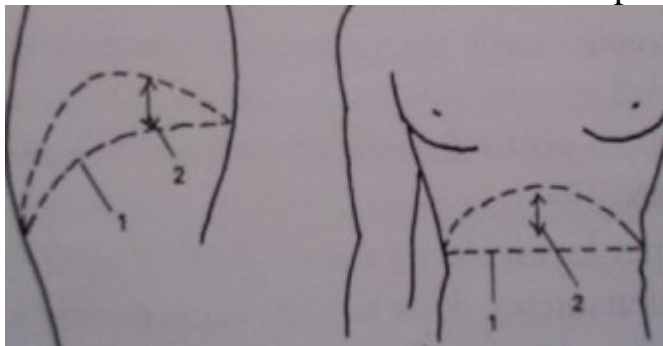
The respiration departs from the nose. The air reaches the bellows that must be filled until after all; it reaches then the abdomen that inflates him slightly bringing himself/herself/itself in before. The time of the diaphragm gets up of different centimeters. The inferior ribs sideways open and therefore the diaphragm lowers some. Your thoracic cage is ampler is sideways - costal opening - that vertically because of the lowering of the diaphragm (and not because they have gotten up the shoulders that have to be immovable instead!)

#### The expiration.

The abdominal strap he maintains keynote to furnish pressure and to regulate her/it; the diaphragm returns in the native position; the ribs are closed. When he plays this movement you/he/she must be regulated looking for of ` to delay' the costal closing with the abdominal support, without exceeding for not stopping the diaphragm. Gives the importance of the abdominal support for the estate of the sound, it recommends him to make abdominal exercises to help the tonicity of the muscles.

The issue of the sound goes ` estate', and you/he/she must not be pushed, to avoid the closing of the larynx: in this way, besides provoking damages to the vocal chords, the thoracic box it doesn't enter vibration anymore as it would owe.

Here here under the movements of the diaphragm of a good performer:



Movements of the diaphragm you sideways approve and frontally.

1 = diaphragm

2 = opening of the time of the diaphragm (with the costal opening it slightly lowers)

### LESSON 3

exercises for the respiraton.

N.1. to practice the abdominal respiraton.

This exercise teaches us to use the belly in the respiraton. And' at the base of the technique cost-diaframmatica (what you/he/she will be explained in the es. N.2), that so necessary to play well.

Let's lay down us in supine position on a rigid surface. We support well the earth shoulders. We place a hand on the navel. we Inhale with the nose and we inflate the belly. We have to see our hand that gets up because of the air that there riempie. We hold back the air for 2-3 seconds. We expire with the mouth deflating the belly. Our hand also follows the end of this movement. Before taking back we stay a pair of seconds with the emptied body.

N.2. to practice the respiraton cost-diaframmatica.

With this important exercise it is learned to use the costal system and diaframmatico together. That is really that that it is essential to know how to use for playing sustaining the sound. This exercise is difficult indeed, above all if you decide to do alone it. You look for therefore to make to drive you from your teacher to avoid errors.

As in the preceding exercise let's lay down us in supine position on a rigid surface. We sideways place a hand on the navel and one on the costs one (thumb in before). we Inhale with the nose inflating the belly and... we move the air dilating the sideways costs. We expire maintaining the costal expansion. We attend a pair of seconds before taking back the exercise.

N.3. to develop the costal and abdominal musculature.

Once impratichiti with the exercise N.2, can pass to the consolidation of the musculature of support in the following way:

We inhale with the nose, moves the air sideways dilating the costs one (you see es. precedent) and we hold back the breath for 2 or 3 seconds. We start therefore to slowly expire maintaining the costal expansion. Toward the end of the issue of the breath, we try to prolong the expiration sending forth the consonant SSSSSS in regular way up to the emptying.

We remember that the emptying of air never has to be complete. We always hold back some air inside of us. This is worth for all the exercises and especially in phase of real sound.

Initially the issue of the consonant SSSSSS won't last more than some second. We try to gradually extend this thin time to a maximum of 30 seconds for the women and 40 for the men.

If we regularly make this exercise we will get a good support of the sound.