

# PROFESSIONAL USE OF THE VOICE

## DID YOU KNOW THAT?

Repeated use of the voice can cause pathologies of the phonatory apparatus in people who use their voice as an element of work. These people are considered professional voice users.

## SUMMARY

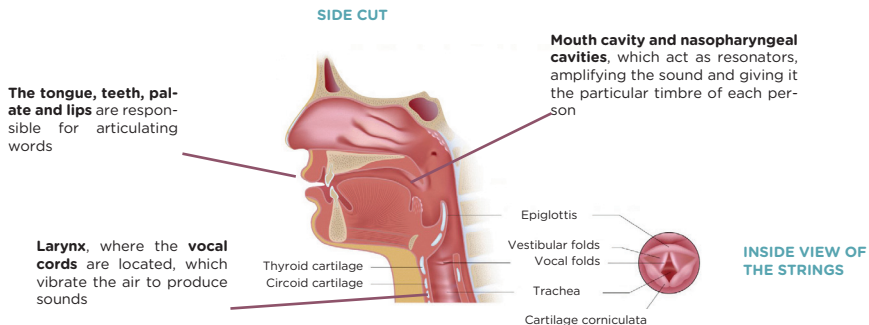
The aim of this manual is to inform University of Barcelona staff who use the voice as a working tool about the risks and preventive measures to be adopted.

It complements this information:

- General risks at the UB.
- Manual Risks associated with teaching and research.
- Manual Risks associated with working with data visualisation screens.
- Configuration of the workplace.

## PHONATORY APPARATUS

The phonatory apparatus consists of the respiratory apparatus (which produces the air mission that we modulate when we speak), the larynx and vocal cords (which make the air vibrate producing sounds), the mouth area with the tongue, teeth, palate, (through which we articulate words) and the nasopharyngeal cavities (which act as resonators, amplifying the sound and giving it the particular timbre of each person).



# THEREFORE YOU SHOULD

## BASIC CARE OF THE VOCAL APPARATUS

Taking care of your voice is simple. All you need to do is apply a few guidelines:

■ **Hydration:** the vocal cords need to be permanently lubricated so that they do not become irritated or damaged when vibrating. It is very important to drink water frequently when speaking. The water should be at room temperature or cool, not cold. And water is better than other drinks. Avoid very hot drinks.

■ **Resting speech.** The speaking apparatus needs to be given a rest, alternating tasks that require speaking with other tasks.

In some professions this is easier than in others; a teacher can alternate speaking training time with pupil work time. A tele-operator needs to have his work organised in such a way that he can periodically rest his voice.

■ **Optimal use of the voice and speech training.** Learn breathing and voice projection techniques and do exercises to improve vocalisation and articulation of words.

■ **Smoking.** The friction caused by smoke irritates the throat and strings.

■ **Foods that dry out the cords:** avoid menthol and eucalyptol. Marshmallow, citrus or hedge mustard candies are better.

■ **Foods that increase acidity:** all foods that can cause acidity in the gastro-oesophageal tract should be avoided, because acidity attacks the cords. Examples: spices, alcoholic beverages, coffee.

■ **Foods that increase mucus:** avoid heavy consumption of bananas or dairy products.

■ **Vigilance and health care.** Professional voice users need to be able to recognise when their voice may be affected, and seek medical advice for diagnosis and preventive measures.

Consume foods rich in vitamin C and avoid exposure to extreme temperatures to prevent colds.



## OBSERVING YOUR VOCAL APPARATUS

When the phonatory apparatus is working beyond its capacity, it gives early symptoms, which we must learn to recognise: coughing, throat clearing, voice alterations (such as aphonia, hoarse voice, broken voice...), irritation in the throat area (where the larynx and vocal cords are located), feeling of having something in the throat. If the symptoms persist, it is necessary to find out the cause by going to the doctor's office and informing him/her of the professional activity.

## ACTING ON THE ACOUSTIC ENVIRONMENT

To overcome ambient noise, we have to multiply the power of our voice by more than 8. Some measures to reduce ambient noise are:

- Reduce noise from conversations: keep quiet in classrooms, reduce the volume of telephone conversations and use microphones.
- Improve the acoustics of the premises. Separate all sources of noise (printers, meeting areas, machinery, etc.) from the work area.

## ACTING ON THE ATMOSPHERIC ENVIRONMENT

The environment in which we work affects the vocal apparatus. In order for it to be optimal, certain aspects must be taken care of:

- Temperature and humidity. Maintain a temperature of around 25 °C (regulations indicate between 17 °C and 27 °C), and a humidity level of around 50% (between 30% and 70%).
- Ambient air pollution: common air pollutants (particulate matter, gases such as ozone, CO, CO<sub>2</sub> and nitrous gases, pollen, etc.) should be within healthy limits; for this purpose, ventilate with clean air.
- Indoor pollution: pollutants generated indoors, such as chalk dust, vapours given off after painting or from new furniture should be avoided.



# PREVENTION OF VOICE DISORDERS

## THE VOICE, A WORKING TOOL

The voice is one of the main tools in professions where communication is the basis of work. However, few people take care of it and take the necessary measures to ensure that it does not suffer alterations that can be serious.

Taking care of your voice means taking care of your health and your work, you need to be aware of the importance of taking care of it and preventing it.

## VOICE DISORDERS

- Hoarseness, pain, burning, dryness, throat clearing.
- Dysphonia due to misuse and abuse, bad habits.
- Nodules, vocal polyps, laryngeal cysts, oedema, cancer.

## VOICE CARE

- Correct breathing: breathe in through the nose, lowering the diaphragm, causing abdominal distension, pause a little and breathe out through the mouth, gently.
- Muscle relaxation: During breathing, the neck muscles should not be contracted. Muscle tension should be eliminated by performing relaxation exercises:
  - Neck area: Gentle movements of the head to the left and right, tilting the head forward.
  - Collarbone area: Lift the shoulders upwards with the arms down and hold this position for a few seconds and let them fall, repeat several times with deep breaths.
- Perform voice maintenance, preparation and warm-up exercises. You can use the app "take care of your voice".



## GOOD HABITS

- Drink plenty of water that is neither hot nor cold.
- Cut down on alcohol, coffee and tobacco.
- Eat light, light and healthy meals with few spices. Vegetables, fish, white meat, cereals and wholemeal flour, fruit. Do not abuse fried or marinated foods.
- Learn to use your voice correctly and avoid vocal abuse. Do not shout.
- Control the humidity and temperature in the workplace.
- Use muscle and stress relaxation techniques.
- Learn to do abdominal breathing.
- Sleep a minimum of 6 to 8 hours.
- Carry out hearing checks. Hearing loss causes an involuntary increase in the pitch of the voice.
- Consult an ear, nose and throat specialist in the event of any voice alteration.

## COMMON MISTAKES

- Failure to hydrate during the speaking session.
- Not performing good vocal hygiene.
- Using a monotonous tone without modulation.
- Abuse of coffee and tobacco.
- Excessive consumption of alcohol and carbonated drinks.
- Frequent talking throughout the working day; alternating speaking with non-speaking spaces.
- Not using voice amplifiers in open or very large spaces.
- Do not take a break from speaking once the session is over. Silence is good for the voice.
- Repeated and intense throat clearing.
- Coughing abruptly, try to soften the cough by taking deep breaths.
- Failure to control the temperature and humidity in the classroom. Humidity above 50% is important.
- Failure to maintain an adequate physical condition.
- Shouting.