

**Surgical Treatment for Dysphonia**

Code: 101723  
ECTS Credits: 6

Degree	Type	Year	Semester
2500893 Speech therapy	OT	4	2

**Contact**

Name: Juan Lorente Guerrero  
Email: [juan.lorente@uab.cat](mailto:juan.lorente@uab.cat)

**Use of Languages**

Principal working language: spanish (spa)  
Some groups entirely in English: No  
Some groups entirely in Catalan: No  
Some groups entirely in Spanish: Yes

**Teachers**

Juan Fernando Fuentes Cabrera  
Jhonder Xavier Salazar Guilarte  
Paula Lopez Mesa  
Silvia Naches Solsona

**Prerequisites**

Official prerequisites are not required.

It is desirable for the student to have general knowledge in the anatomy and physiology of the organs that compose the phonatory system: mouth, nose, pharynx, larynx, trachea, bronchi, lungs and diaphragm. Anatomical and physiological knowledge of the nervous system is also important, as it is the system that integrates the sensitive information and executes the motor responses of the phonatory system.

It is also necessary to know the relations of the phonatory system and the nervous system in the production of language, speech and voice.

On the other hand, it is necessary that the student has knowledge about the typical alterations of the voice: dysphonies, dysglossies, rhinolalia, etc. They must know how to differentiate the different pathologies well in order to understand the medical and surgical treatment of them.

The subject Medical-surgical treatment of dysphonies is an optional subject that is taught in fourth year of the second semester of the Degree of Speech Therapy.

Language is an exclusively human and highly complex function that allows us to manifest our personality and express our feelings, so often say that the voice is the letter of presentation of the

However, some voice disorders, such as chronic dysphonia, may trigger in patients significant emotional imbalances such as depression and social isolation, etc.

The ENT specialists understand that a good portion of the injuries that have to be treated through phonosurgery, have originated and developed due to poor use of mechanisms of voice production.

If we remove the injury, but we do not correct these triggering or promoting mechanisms, we will not have treated the condition properly.

The ENT specialist is responsible for diagnosing the etiology of the dysphonia and indicating the treatment needs. These can be: pharmacological, surgical and rehabilitative/logopedic treatment, or a mixed treatment. The surgeon indicates the beginning of the rehabilitation based on the surgical evolution of the patient in addition to his general state. Once the diagnosis and the corresponding treatment have been carried out, the need for the speech therapy and the exact treatment needed, as well as the guidelines and the type of exercises required is a competence of the own speech therapist.

## **Objectives and Contextualisation**

### **OBJECTIVES OF THEORETICAL CLASSES**

1. While attending this course, the student can begin the rehabilitation of the voice, while his knowledge deepens. This will allow them to develop protocols of action in speech therapy.
2. To give the student knowledge to work in multidisciplinary teams, exchanging information with the other ENT professionals involved in the diagnosis, treatment and evolution of the patient. Emphasis is placed on risk factors, especially the signs and symptoms that should make us suspect that we are in front of a tumor recurrence. Thus, a speech therapist must know how to interpret a medical report
3. Learn now how to discriminate the needs of speech therapy, plan it and put it into practice, without forgetting the needs and preferences of the patient for one type or another of treatment. Speech therapy has gone from being barely used option to becoming an indispensable part of the recovery process

In the subject Surgical treatment of dysphonia students will learn to relate the knowledge already acquired in the subject of anatomy and physiology, as well laryngeal and resonant cavity diseases. They will practice assessment and intervention, and will learn to discriminate between normal and pathological voices, as well as the surgical and medical procedures available to ENT specialists for the treatment such diseases. The students will also be able to develop protocols of speech therapy.

## **Competences**

- Act appropriately with respect to the profession's ethical code: respect professional confidentiality, apply professional criteria in the completion and referral of treatment.
- Demonstrate an understanding of disorders in communication, language, speech, hearing, voice and non-verbal oral functions.
- Ethically commit oneself to quality of performance.
- Explain and justify the selected treatment.
- Practise the profession, respecting patients' autonomy, their genetic, demographic, cultural and economic determinants, applying the principles of social justice and comprehending the ethical implications of health in a changing global context.
- Use the exploratory techniques and instruments pertaining to the profession, and register, synthesise and interpret the data provided by integrating this into an overall information set.
- Working in intra- and interdisciplinary teams.

## **Learning Outcomes**

1. Be respectful to patients.
2. Describe the consequences of laryngectomy on patient communication.
3. Describe the etiology and characteristics of dysphonia.
4. Ethically commit oneself to quality of performance.
5. Explain the intervention techniques available, taking into account the characteristics of each case.
6. Interpret the results of ENT examination techniques and integrate the data with the evaluation of speech-therapy techniques.
7. Understand that the patient has the right to make decisions regarding the therapeutic process, once informed of the benefits and risks associated with the proposed interventions.
8. Working in intra- and interdisciplinary teams.

## Content

1. Oral communication Physiology. General aspects of the spoken voice.
2. Clinical exploration of the voice. Management of professional voice (singer's voice)
3. Verbal communication disorders. Dysphonia: etiology, physiopathology, diagnostic procedures, differential diagnoses, therapeutic methods. Occupational disability derived from dysphonia.
4. Vocal education for voice professionals. Treatment of acute dysphonia in the professional setting.
5. Functional disorders of the larynx: respiratory and protective. Treatment
6. Vocal rehabilitation. Vocal hygiene. Quality of life in voice disorders.
7. Medical treatment of voice disorders: toxics, drugs, allergies, upper and lower respiratory infections, muscular tension syndrome. Medical treatment-related voice disorders. Voice rest.
8. Medical treatment of inflammatory and endocrine dysphonia.
9. Pharyngeal and laryngeal manifestations of gastric reflux disease. Medical and surgical treatment.
10. Medical and surgical treatment of laryngeal malformations. Medical, surgical and behavioral treatment of pediatric dysphonia: indications, complications and results.
11. Neurological dysphonia. Spasmodic dysphonia. Bilateral vocal cord paralysis. Botulinum toxin injection in spasmodic dysphonia. Electrical stimulation of laryngeal muscles.
12. Diagnosis and treatment of external and internal laryngeal trauma and its sequels. Diagnosis and treatment of peripheral laryngeal paralysis. Timing of intervention and repair techniques.
13. Phonosurgery. History, principles and development. Indications, initial assessment and preoperative planning, surgical techniques, complications and results. Preoperative and postoperative (role of the phoniatrist ).
14. Surgery of benign and functional laryngeal lesions. Vocal nodules and polyps, papilloma, Reinke's edema, granulomas, membranes, cysts and other benign neoplasms.
15. Malignant laryngeal lesions. Treatment indications (radiotherapy, chemotherapy and surgery), surgical techniques (chordectomy, partial laryngectomy, total laryngectomy, neck dissection), complications and results. Tracheostomy. Pharyngeal and esophageal repair.
16. Rehabilitation and follow up of laryngectomy patients. Voice assessment after laryngeal carcinoma surgery. Voice rehabilitation after laryngeal carcinoma treatment. Psychosocial and quality of life impact of laryngeal cancer diagnosis and treatment.
17. Surgical rehabilitation techniques after total laryngectomy. Phonatory tracheoesophageal punctures. Procedure, indications, complications and results. Tracheoesophageal speech prostheses
18. Structural laryngeal surgery. Indications, techniques; thyroplasty , arytenoid abduction, combined procedures. Complications and results.
19. Assessment and surgical treatment of laryngeal injuries. Vocal cord scars, laryngotracheal stenosis. Timing of surgical intervention, repair techniques, splints and grafts, additional treatment.
20. Laser in phonosurgery. Procedure, indications, complications and results.
21. Medical-surgical treatment of swallowing disorders: indications, complications and results. Tracheostomy and swallowing issues.
22. Medical and surgical treatment of diseases that cause oropharyngeal dysphagia or aspiration. Enteral nutrition, gastrostomy.

## Methodology

### Program sessions

Expositions of content from the program with iconographic material stimulating the discussion of the subject.

### Hospital Practices

The hospital practice will be carried out in the outpatient consult of the Otorhinolaryngology Department of the Vall d'Hebron University Hospital.

Students will be integrated into a healthcare team in outpatient consult: they will observe how complementary diagnostic explorations (endoscopes, stroboscopes, etc) are performed, as well as the evolution and observation of the anatomical and functional alterations after treatment.

Students who wish to go to the operating room to observe the various steps of the vocal microsurgery (preparation for surgery, instrumental and techniques, etc.) are encouraged to do so.

All students in the class will be divided into 6 groups. Each group will attend 2 days, previously assigned, to the hospital from 9 to 15 hours. No changes can be made.

#### Presentation of a clinical case

Completion of a practical work on a clinical case provided by the teacher. The student will have to elaborate a bibliographic review on the subject, given in writing to the professor and defended in public, during the assessment weeks.

The active participation of students through questions, opinions and personal contributions will be encouraged at all times, both about acquired knowledge of each topic as well as from bibliographic research.

Annotation: Within the schedule set by the centre or degree programme, 15 minutes of one class will be reserved for students to evaluate their lecturers and their courses or modules through questionnaires.

## Activities

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Hospital practices	12	0.48	7, 4, 3, 2, 5, 6, 1, 8
Theoretical sessions	24	0.96	7, 3, 2, 5, 6
Type: Supervised			
Oral presentation and defense of the clinical case	4	0.16	7, 4, 3, 2, 5, 6, 8
Tutoring session for coursework	6	0.24	7, 3, 2, 5, 6, 8
Type: Autonomous			
Bibliographic search	22	0.88	7, 2, 5, 6, 8
Coursework development	20	0.8	7, 3, 2, 5, 6, 8
Preparation of the clinical case oral presentation	15	0.6	7, 4, 3, 2, 5, 6, 1, 8
Studying	43	1.72	7, 3, 2, 5, 6, 8

## Assessment

The competences of this course will be evaluated:

Theoretical content:

A multiple-choice exam (EV3), questions with 5 answers, of which only one is correct. The exam will include at least two questions by topic, although this number can be increased depending on the theoretical content and the relevance of these at the time of consolidating the theoretical bases of the subject. There's a penalty for guessing, three wrong answers erase one good answer. Only one option is incorrect. The minimum grade to pass the subject is 5. This represents 40% of the grade of the subject. It is mandatory to attend 80% of the theoretical classes.

Hospital practices: Attendance and student participation and involvement will be assessed, presentation and defense of the clinical case together with the written case (EV2) will COUNT FOR 40% OF THE FINAL GRADE

The attendance to all the practices (EV1) will be MANDATORY AND WILL COUNT FOR 20% of the final grade and each student will give a summary about the clinical cases seen in consultations.

All assessments are individual. The clinical case will be delivered on-line.

A minimum note will be established for each assessment module from which the student will be able to pass the subject

#### Final note:

The subject will be composed of the following formula: Theoretical content is equivalent to 40% + Clinical case represents 40% of the final grade + Attendance to the practices is equivalent to 20% of the final grade . To do this weighted calculation it is necessary to have obtained at least a 4 in each of the three areas- .

Assessable student: when the student delivers evidence of learning with a weight that is at least 40%.

Passing the subject: when the student has a final grade of 5 or more points, it is essential to have attended the 80% of the theoretical classes and have attained a final test score of at least 5.

No unique final synthesis test for students who enrol for the second time or more is anticipated.

General assessment guidelines:

<https://www.uab.cat/web/estudiar/graus/graus/avaluacions-1345722525858.htm>

## Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
EV1. Attendance at hospital practices, and brief report of the observed cases	20%	2	0.08	3, 2
EV2. Work report, oral presentation and defense of the clinical case	40%	2	0.08	7, 4, 3, 2, 5, 6, 1, 8
EV3. Multiple choice exam	40%	0	0	7, 4, 5, 6, 1, 8

## Bibliography

Basic References:

Ramírez C. Manual de Otorrinolaringología, Ed. McGrawHill. Madrid 2007

Bleeckk. Disfagia: Evaluación y reeducación de los trastornos de la deglución. Ed. McGrawHill 2004.

Jaume G, Tomas M. Manejo de la disfagia y aspiración. Ed. Ergon 2007

Casado J. C. Pérez A. Trastornos de la voz: Del diagnóstico al tratamiento. Ed. Aljibe. Malaga 200

Practica para la elaboracion de informes logopedicos. Mendizábal, N. - Santiago, R. - Jimeno, N. - García, N. - Díaz-Empananza, M .Editorial: Medica Panamericana . 2013

Patología de la voz. I Cobeta, F. Nuñez, S Fernández. Ponencia Oficial de la SEORL PCF Ed. Marge Médica Books 2014

#### Further readings:

1. Courtat P., Peytral C, Elbaz P. Exploraciones funcionales en ORL. Ed. Massón. Barcelona 1994
2. Cobeta, I. - Nuñez, F. - Fernández, S. Patología de la Voz. Editorial: Marge Books 2014
3. Hirano, H. Clinical examination of voice. Springer. Berlín 1981.
4. Sataloff R.T. Profesional voice. Raven Press. New York 1991.
5. Le Huche F, Allali A. La voz Tomo (1, 2, 3, 4). Ed. Massón. Barcelona 2004
6. Ramírez C. Manual de Otorrinolaringología, Ed. McGrawHill. Madrid 2007
7. Educación de la voz. Anatomía, patologías y tratamiento. Ed Ideaspropias. 2004.
8. Núñez F., Maldonado, Suárez C. Cuidados y rehabilitación del paciente traqueotomizado. Servicio de publicaciones Universidad de Oviedo. 2000
9. Puyuelo M. Casos Clínicos en logopedia. Ed. Massón 1997
10. Novo JJ, Videgain J, Videgain G. et al. Tratamiento conservador en el carcinoma de laringe. Ponencia oficial del XV Congreso de la Sociedad Vasca de ORL. Ed. Universidad del País Vasco. Bilbao 2001.
11. Casado J. C. La evaluación clínica de la voz. Fundamentos médicos y logopédicos. Ed. Aljibe. Málaga 2002.
12. Menaldi J. La Voz Patológica. Ed. Panamericana 2002
13. Suárez A. Martínez J.D., Moreno J.M, García ME. Trastornos de la voz. Estudio de casos. Ed. EOS 2003.
14. Bleeckk. Disfagia: Evaluación y reeducación de los trastornos de la deglución. Ed. McGrawHill 2004.
15. Jaume G, Tomas M. Manejo de la disfagia y aspiración. Ed. Ergon 2007
16. Navarro S., Navarro F., Romero P. Voz: Trastornos y rehabilitación. Ed. CEP 2007
17. Casado J. C. Pérez A. Trastornos de la voz: Del diagnóstico al tratamiento. Ed. Aljibe. Málaga 200
18. Calais-Germain, B. - Germain, F. Anatomía para la voz. entender y mejorar la dinámica del aparato vocal. Editorial: La liebre de marzo 2014.
19. PRACTICA PARA LA ELABORACION DE INFORMES LOGOPEDICOS. Mendizábal, N. - Santiago, R. - Jimeno, N. - García, N. - Díaz-Emparanza, M. Editorial: Medica Panamericana . 2013
20. Patología de la voz. I Cobeta, F. Nuñez, S Fernández. Ponencia Oficial de la SEORL PCF Ed. Marge Méica Books 2014

#### Software

No special software needed