

**Physiotherapy Prevention and Treatment in Vascular  
Processes Prevention and Treatment of  
Lymphedema**

Code: 102978  
ECTS Credits: 6

Degree	Type	Year	Semester
2500892 Physiotherapy	OT	3	2

## Contact

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## Teaching groups languages

You can check it through this [link](#). To consult the language you will need to enter the CODE of the subject. Please note that this information is provisional until 30 November 2023.

## Teachers

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## Prerequisites

It is advisable to have the knowledge acquired of Physiotherapy in the Pathology of the Locomotor System and Human Anatomy.

## Objectives and Contextualisation

The subject is programmed in the third year of the Degree in Physiotherapy.

The objectives are:

- Know and differentiate the different types of edemas in the different pathologies.
- Acquire the necessary training to be able to differentiate the indications and the contraindications of the processes vascular and lymphatic more important.
- Differentiation of the different types of amputations and their prosthetic adaptations.
- Correct planning of the treatment of Physiotherapy.

- Identification of the possible complications during the treatment of the patient.
- Correct application of Manual Lymphatic Drainage, depending on the type of origin and edema.
- Correct application of the different types of bandages according to the pathology and its etiology.

## Competences

- Act with ethical responsibility and respect for fundamental rights and duties, diversity and democratic values.
- Constantly renew one's professional knowledge, competences and skills.
- Design the physiotherapy intervention plan in accordance with the criteria of appropriateness, validity and efficiency.
- Display a strategic and flexible attitude to learning.
- Display knowledge of the physiotherapy methods, procedures and interventions in clinical therapeutics.
- Evaluate the functional state of the patient, considering the physical, psychological and social aspects.
- Integrate, through clinical experience, the ethical and professional values, knowledge, skills and attitudes of physiotherapy, in order to resolve specific clinical cases in the hospital and non-hospital environments, and primary and community care.
- Make changes to methods and processes in the area of knowledge in order to provide innovative responses to society's needs and demands.
- Take account of social, economic and environmental impacts when operating within one's own area of knowledge.
- Take sex- or gender-based inequalities into consideration when operating within one's own area of knowledge.
- Work in teams.

## Learning Outcomes

1. Analyse a situation and identify its points for improvement.
2. Apply physiotherapy methods, procedures and interventions in the therapies of the different clinical specialisations that treat vascular conditions.
3. Apply the correct physiotherapy evaluation procedures to determine the degree of damage to the vascular system and its possible functional repercussions.
4. Communicate using language that is not sexist.
5. Consider how gender stereotypes and roles impinge on the exercise of the profession.
6. Critically analyse the principles, values and procedures that govern the exercise of the profession.
7. Describe the physiotherapy techniques in therapy for vascular conditions and display up-to-date knowledge of their effectiveness.
8. Describe the principles behind the evaluation of the vascular system.
9. Describe the vascular injuries and diseases, identifying the symptoms that appear during the process, their etiology and the associated medical, surgical and rehabilitation treatments.
10. Design therapeutic exercises and activities for vascular diseases and injuries.
11. Display a strategic and flexible attitude to learning.
12. Explain the explicit or implicit code of practice of one's own area of knowledge.
13. Identify situations in which a change or improvement is needed.
14. Identify the principal forms of sex- or gender-based inequality present in society.
15. Identify the social, economic and environmental implications of academic and professional activities within one's own area of knowledge.
16. Propose new ways to measure success or failure when implementing innovative proposals or ideas.
17. Propose projects and actions in accordance with the principles of ethical responsibility and respect for fundamental rights, diversity and democratic values.
18. Use physiotherapy to treat clinical cases involving vascular conditions.
19. Work in teams.

## **Content**

### **PREVENTION AND TREATMENT OF PHYSIOTHERAPY IN VASCULAR PROCESSES**

1. Introduction.

2. Diabetes.

3. The Diabetic Foot.

3.1. Prevention Hygienic-prophylactic measures. Inspection of the foot of risk.

3.2. Importance of the multidisciplinary team. International Diabetic Concern.

3.3. Diabetic Neuropathy.

3.3.1. Poor planting: neuropathic ulcers. Contact plaster.

3.3.2. Neuropathic Arthropathy: Peu de Charcot.

3.4. Intermittent claudication Peripheral artery disease.

3.5. Physiotherapy treatment according to assessment and objectives.

3.6. Clinical cases.

4. The Amputated Vascular Patient.

4.1. Vascular-endocrine etiology of amputation.

4.2. Amputated patient profile. Associated pathologies that condition the treatment of Physiotherapy.

4.3. Performance of the multidisciplinary team

4.4. Amputation levels:

4.4.1. Upper extremity.

4.4.2. Lower extremity.

4.4.3. Placerviews.

4.5. Physiotherapy Treatment.

4.5.1. Rating and anamnesis.

4.5.2. Aims of Physiotherapy Treatment.

4.5.3. Phantom member Graduated engineered imagery.

4.5.4. Stages of action in the hospital and outpatient field. Protecting: Provisional Prosthetics and definitive prosthesis.

4.6. Preparation and bandage of the amputation blanket. Function of silicone liners.

4.7. Protecting process: Valuation scales: Functional "K" protection level, Amp Pro, etc.

4.7.1. Criteria for protection.

4.7.2. Provisional and definitive prosthesis.

4.7.3. Components of a prosthesis.

4.8. Re-training on the fly: analysis of phases and deviations in the limbed amputated patient lower.

4.9. Most frequent complications of the body and secondary to the process of protection.

4.10. Osteointegration.

4.11. Protecting the upper limb.

4.12. Clinical Cases.

## PREVENTION AND TREATMENT OF LIMFEDEMA

1. Introduction.

2. Lymphatic system. Anatomy and Physiology of the Lymphatic System.

2.1. Limbatic system components.

2.2. Physiology of the Lymphatic System.

2.3. Anatomy of the Lymphatic System.

2.3.1. Anatomy EESS.

2.3.2. EE anatomy.

3. Edema.

3.1. Edema classification.

3.1.1. Venous Edema.

3.1.2. Lymphatic Edema or Lymphedema.

3.1.2.1. Primary Lymphedema.

3.1.2.2. Secondary lymphedema.

3.1.2.3. Complications of Lymphedema.

3.1.3. Lipedema.

3.1.4. Lipolymphedema.

4. MFRHB treatment.

4.1. Lymphoedema School.

4.2. Complex Decongestant Therapy.

4.2.1. DLM.

4.2.2. Multi-Layered Emboss.

4.2.3. Pressotherapy.

4.2.4. Containment or Compression Parts.

4.2.5. Cinesiterapia.

4.2.6. Complementary techniques.

4.2.7. Hygienic-dietary measures.

5. Surgical techniques.

## Methodology

The methodology of this subject will be by means of theoretical and practical classes.

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			
LABORATORY PRACTICES (PLAB)	30	1.2	18, 2, 3, 8, 9, 10, 19
THEORY (TE)	24	0.96	2, 3, 8, 9
Type: Supervised			
TUTORIES	7.5	0.3	
Type: Autonomous			
DEVELOPMENT OF WORK	9	0.36	2, 9
READING OF ARTICLES / REPORTS OF INTEREST	9	0.36	
SELF STUDY	64	2.56	18, 2, 3, 8, 9, 19

## Assessment

This subject does not provide the single assessment system.

In order to be able to do half of the subject, it is essential to have approved all the parts.

Attendance: It is obligatory to attend 80% of the practical seminars, in order to be able to access the different ones evaluations.

Evaluation written through objective trials of multiple choice. Each question answered correctly is worth 1 point. Questions answered erroneously will subtract 0'33 points. Unanswered questions will not remain. It is approved with a 5.

Evaluation through practical cases and their resolution: based on the procedures studied. Approved with a 5.

Practical type evaluation through objective and structured clinical evaluation: continuous evaluation exercises associated to the seminars. It is approved with a 5.

Not evaluable: that student who does not attend 80% of the seminars, will be considered that he can not contribute enough evidence to be evaluated. And it will be recorded in the minutes as not evaluable.

Students who have not passed one or several parts of the subject may submit to the proof of recovery with the maximum score of 5 for the part to recover.

## Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Attendance and participation in class and seminars.	5%	0	0	11, 19
Evaluation through practical cases and problem solving.	10%	1	0.04	6, 1, 18, 2, 3, 4, 12, 15, 14, 13, 16, 17, 11, 19, 5
Practical evaluation : objective evaluation through objective and clinical evaluation structured.	40%	4	0.16	18, 2, 3, 7, 8, 9, 10, 11, 19
Written evaluation-objective tests of multiple choice questions	45%	1.5	0.06	2, 3, 7, 8, 9

## Bibliography

- Darnall BD. "Self-delivered home-based mirror therapy for lower limb phantom pain". Am J Phys Med Rehabil (2009);88:78-81.
- F. Lamandé. J.Dupré, et al. " Amputación del miembro superior".EMC-kinesioterapia (abril 2014);E-26-221-A-10
- Ferrandez J-C Theys,S. Actualizaciones del DLM en el Linfedema secundario a cáncer de mama. De la anatomía al gesto pasando por la fisiopatología. ONCE, Universidad Autonoma de Madrid, editores.2004
- Georgios Tsikandylakis MD, O` rjan Berlin MD, PhD, et al. "Implant Survival, Adverse Events, and Bone Remodeling of Osseointegrated Percutaneous Implants for Transhumeral Amputees" Clin Orthop Relat Res (2014); 472:2947-2956
- J. Foell, R. Bekrater-Bodmann, M. Diers , H. Flor ."Mirror therapy for phantom limb pain: Brain changes and the role of body representation". Eur J Pain 18 (2014); 729-739
- Johnson MI, Mulvey MR, Bagnall AM." Transcutaneous electrical nerve stimulation (TENS) for phantom pain and stump pain following amputation in adults". Cochrane Database of Systematic Reviews (2015);Issue 8. Art. No.: CD007264
- Leduc A. Leduc O. D.L.M. Teoría y Práctica. Ed Masson, 2003
- Robert S. Gailey, PhD, PT, Kathryn E. Roach, PhD, PT, et al. "The Amputee Mobility Predictor: Aninstrument to assess determinants of the lower-limb amputee's ability to ambulate". Arch Phys Med Rehabil. ( May 2002); Vol 83
- Sae Young Kim, MD, and Yun Young Kim, MD ." Mirror Therapy for Phantom Limb Pain".Korean J Pain (2012 October); Vol. 25, No. 4: 272-274
- Wittlinger H, Wittlinger D, Wittlinger A. Wittlinger M. Drenaje Manual según el Método del Dr. Vodder. Madrid: Editorial Médica Panamericana; 2012
- Xiaoyang Hu, Esmé Trevelyan, Guoyan Y, et al. "The effectiveness of acupuncture or TENS for phantom limb syndrome. II: A narrative review of case studies". European J of I Medicina (2014);6:365-3816

## Software

No specific software is required