

Residency Program - Orthopaedics and Trauma - Portugal
“Portaria 50 / 97”

1 - Duration - 72 months.

2 - Structure, preferred sequence and duration of internships:

2.1 - 1 year of internship:

2.1.1 - General Surgery - 9 months:

a) This rotation obligatory initiates the program;

b) At least one month should be in intensive special care unit.

2.1.2 - Vascular Surgery - 3 months.

2.2 - 2 year of internship:

2.2.1 - Orthopaedics - 12 months.

2.3 - 3 year of internship:

2.3.1 - Orthopaedics - 9 months;

2.3.2 - Plastic Surgery - 3 months.

2.4 - 4 year of internship:

2.4.1 - Orthopaedics - 9 months;

2.4.2 - Neurosurgery - 3 months.

2.5 - 5 year of internship:

2.5.1 - Orthopaedics - 6 months;

2.5.2 - Paediatric Orthopaedics - 6 months. This rotation is done in an Orthopaedic Department with differentiation in Paediatric Orthopaedics or in the Department of Paediatric Orthopaedics directed by Orthopaedic Surgeon.

2.6 - 6 year of internship:

2.6.1 - Orthopaedics - 12 months.

2.7 – The internship in Paediatric Orthopaedics and the ones with 3 months should not be interrupted for more than one third of the vacation time.

3 – Places for internship – To be held in the Departments of each speciality recognized by the Medical Council

3.1 – Internship in General Surgery – Department of General Surgery

3.2 – Internship in Vascular Surgery – Department of Vascular Surgery;

3.3 - Internship of Plastic Surgery – Department of Plastic Surgery;

3.4 - Internship Neurosurgery - Department of Neurosurgery;

3.5 - Internship Paediatric Orthopaedics - This rotation is done in the Orthopaedic Department with differentiation in Paediatric Orthopaedics or in the Department of Paediatric Orthopaedics directed by Orthopaedic Surgeon;

3.6 - Internship Orthopaedics – Department of Orthopaedics.

4 – Internship proposal:

4.1 - General

4.1.1 – Performance target – Each internship should allow the resident to integrate progressively the daily activities of the department, with assigned tasks in different sectors: inpatient,

outpatient, operating room, emergency department; according to their degree of differentiation and in order to stimulate his knowledge:

4.1.1.1 - Appropriate clinical experience:

- a) Analyzing and criticizing clinical aspects;
- b) Evaluation of risk / benefit of each medical act;
- c) Correct use of all diagnostic tools available;
- d) Performing a correct diagnosis;
- e) Defining therapeutic plans;
- f) Judging properly the results obtained and the evolution of the disease.

4.1.1.2- Humanities, ethics and professional qualities:

- a) Relationship with the patient and family;
- b) Respect for life and the patient's decision;
- c) Understanding the implications of the disease (psychological, social, economic and ethical phenomena);
- d) Professional secrecy.

4.1.1.3 - Technical capacity. - Continuous learning should give progressive and sustained increase in capacity to deliver differentiated care, always keeping in mind the welfare and interest of the patient.

4.1.2 Learning Objectives - During the internship it must be pursued an in-depth theoretical knowledge concerning large areas of orthopaedics and traumatology as well as of related specialties. In order to complete the training, the resident should attend seminars and courses that will be awarded with credits:

- a) Course on basic sciences related to orthopaedics ;
- b) Course on muscle-skeletal imaging
- c) Seminar on pathology of the muscle-skeletal system ;
- d) Postgraduate training on Paediatric Orthopaedics (comprising five courses dealing with different aspects of the loco motor system by age group) ;
- e) Monographic courses on upper limb, lower limb, spine and bone tumour pathology;
- f) Course on IT and hospital management .

4.1.3 - Each internship should also develop and encourage clinical and laboratory research, organization, presentation and publication of scientific papers, organize and structure their files, computerization and the organization of the Department.

4.1.3.1 - At the end of the internship the resident should have completed at least three papers as first author, published or presented at meetings of national or international scope.

4.2 - Specific objectives of the first year of internship:

4.2.1 - General Surgery Internship (9 months).

4.2.1.1 - Performance targets :

- a) Study of the surgical and polytrauma patient;
- b) Preparation of pre and post-operative care;
- c) Surgical Complications;

- d) Training and conducting ancillary diagnostic tests;
- e) Collaboration in surgical instrumentation, anaesthesia and resuscitation;
- f) carrying out surgical instruments and basic anaesthetics.

4.2.1.2 - Objectives of Knowledge:

- a) Surgical anatomy; path physiology;
- b) The operative act; endocrine-metabolic response;
- c) Electrolyte balance;
- d) Infection and antibiotic therapy;
- e) Introduction to anaesthesia and resuscitation;
- f) The trauma patient.

4.2.2 - Vascular surgery Internship (3 months).

4.2.2.1 - Performance targets :

- a) Study of patients with vascular pathology ;
- b) Training and conducting ancillary diagnostic tests;
- c) vascular sutures and ligatures ; vascular grafts.

4.2.2.2 - Objectives of Knowledge :

- a) Surgical Anatomy ;
- b) Introduction to the path physiology of the vascular system ;
- c) Traumatic vascular lesions of the limbs;
- d) Venous pathology ; thromboembolism ;
- e) Diagnosis in vascular pathology .

4.3 - Specific objectives of the 2nd year of internship:

4.3.1 – Orthopaedics rotation (12 months) :

4.3.1.1 - Performance targets:

- a) Study of patients with pathology of the muscle skeletal system;
- b) Introduction of routine work in outpatient, inpatient and emergency department ;
- c) Practice of immobilizations;
- d) Realization of plaster casts;
- e) Simple traction techniques and skeletal traction;
- f) Introduction to the diagnostic tools;
- g) Initiation in surgery - collaboration in surgical interventions (minimum 20 procedures) .

4.3.1.2 - Objectives of Knowledge:

- a) Basic sciences: cartilage, bone, muscle and joints;
- b) Embryology and development of the skeleton;
- c) Anatomy and physiology of the locomotor system;
- d) Semiology of the locomotor system;
- e) Diagnostic investigation with special relevance for imaging.

4.4 - Specific objectives of the 3rd year of internship:

4.4.1 – Orthopaedics rotation (9 months):

4.4.1.1 – Performance targets :

- a) the pre and postoperative care;

- b) The use of the image intensifier;
- c) Articular exploration :
 - c1) Arthrography (technique) ;
 - c2) Introduction to Arthroscopy ;
- d) Ultrasound of the soft tissues;
- e) Adaptation to progressive techniques: internal fixation and arthroplasties;
- f) Practice consultation supervised ;
- g) Collaboration and performance of surgical procedures, aiming to make 80 operations as an assistant and 20 as a surgeon.

4.4.1.2 - Objectives Knowledge :

- a) Imaging applied to orthopaedics ;
- b) Surgical anatomy, physiology and osteo-articular path physiology ;
- c) Trauma of the upper and lower limb ;
- d) Degenerative joint diseases .

4.4.2 - Plastic surgery internship (3 months) :

4.4.2.1 - Performance targets :

- a) Evaluation of skin and soft tissue lesions;
- b) Practice of different types of suture and skin repair;
- c) Pre and postoperative care in plastic surgery ;
- d) Introduction to micro-surgery .

4.4.2.2 - Objectives Knowledge :

- a) Path physiology of skin and wound healing;
- b) Skin grafts, pedicle flaps and musculocutaneous grafts:
- c) Use of soft tissue expanders .

4.5 - Specific objectives of the 4th year of internship:

4.5.1 - Stage orthopaedics (9 months) :

4.5.1.1 - Performance targets:

- a) Organization chart identical to the previous stage set for orthopaedics , taking into account the progressive differentiation technique in the field of traumatology and orthopaedics
- b) Soft tissue, articular and bone biopsy;
- c) Interventional radiology
- d) Practical consultation
- e) Collaboration and performance of surgical procedures with increasingly differentiation, with the aim of performing 70 operations as an assistant and 30 as surgeon.

4.5.1.2 - Objectives Knowledge :

- a) Spine trauma ;
- b) infections, and tumour and para tumoral conditions ;
- c) Muscle diseases ;
- d) Basis of pathology and histopathology of the locomotor system and its application to clinical practice.

4.5.2 – Neurosurgery internship (3 months):

4.5.2.1 - Performance targets :

- a) Neurologic exam and interpretation of the clinical exams;
- b) Interpretation of ancillary diagnostic tests / imaging;

- c) Introduction to surgery of the nervous system;
- 4.5.2.2 - Objectives Knowledge :
 - a) Pathology and pathophysiology of the nervous system ;
 - b) Neurological conditions affecting the musculo skeletal system;
 - c) Spine and neurological disorders;
 - d) Peripheral nerves .

4.6 - Specific objectives of the 5th year of internship:

4.6.1 – Internship of orthopaedics (6 months) :

4.6.1.1 - Performance targets:

- a) Implementation of different techniques of treatment and diagnosis of traumatic and orthopaedic disorders, with special emphasis on fractures and their complications , joint diseases , infectious and tumour conditions;
- b) Non supervised consultations;
- c) Collaboration and performance of surgical procedures with increasingly differentiation, with the aim of performing 40 operations as an assistant and 40 as surgeon..

4.6.1.2 - Objectives of Knowledge:

- a) Spine diseases;
- b) Rheumatic and metabolic diseases;
- c) Biomechanics in Orthopaedics;
- d) Arthroplasty .

4.6.2 – Internship Children's Orthopaedics (6 months) :

4.6.2.1 - Performance targets:

- a) Clinical exam of a child;
- b) Imaging during growth;
- c) Plasters in children;
- d) Initiation to surgery in Paediatric Orthopaedics

4.6.2.2 - Objectives of Knowledge :

- a) Paediatric trauma;
- b) Congenital Malformations;
- c) Growing diseases.

4.7 - Specific objectives of the 6th year of internship:

4.7.1 – Internship of orthopaedics (12 months) :

4.7.1.1 - Performance targets :

- a) Independent out patient clinic;
- b) Participation in multidisciplinary clinics;
- c) Coordination of activities in the area of ambulatory surgery;
- d) Improving orthopaedic techniques with the aim of achieving greater differentiation as a surgeon, in particular the treatment of fractures and their complications, diseases

of the development, degenerative joint diseases as well as infections, tumours and congenital malformations;
e) Involvement in surgical procedures either as an assistant (30 procedures) or as a surgeon (70 procedures).

4.7.1.2 - Objectives Knowledge :

- a) General diseases which impact the locomotor system ;
- b) Complications in orthopaedics, prevention and resolution;
- c) Legal aspects of the profession;
- d) Organization and management of health services .

4.8 - The total number of orthopaedics procedures of orthopedics must have a component of 80 % of trauma and 20% orthopaedics, obeying the distribution by anatomical areas as much as possible according to the usual incidence of pathologies.

5 - Assessment :

5.1 - Performance measurement:

5.1.1 - The performance evaluation is done in a continuously way during the course of each internship, at the end of which the procedure shall be evaluated on a scale of 0 to 20, taking into account the following parameters and their weights:

- a) Ability to technical implementation – weighing 3 ;
- b) Interest in professional development – weighing 2 ;
- c) Professional liability - weighing 3 ;
- d) Human relations at work - weighing 2 ;

5.1.2 - It is recommended the systematic recording of the developed activities, observed pathologies and technical conditions applicable.

5.2 - Evaluation:

5.2.1 – Internship of orthopaedics:

5.2.1.1 - Periods of 12 months. – Annual assessment graded from 0 to 20:

- a) Oral exam which should include the assessment of the activity report ;
- b) Clinical exam that will include a patient observation and the clinical history, preparation of indicating the diagnosis, test ordering, discussion, prognostic and treatment.

5.2.1.2 - Periods 6 and 9 months . - The assessment will be made at the end of each internship through the submission of written report followed by discussion.