



Nutrition and Physical Activity Applied to Anti-Aging Medicine

» Modality: online

» Duration: 6 months

» Certificate: TECH Technological University

» Dedication: 16h/week

» Schedule: at your own pace

» Exams: online

We bsite: www.techtitute.com/pk/medicine/postgraduate-diploma/postgraduate-diploma-nutrition-physical-activity-applied-anti-aging-medicine/postgraduate-diploma-nutrition-physical-activity-applied-anti-aging-medicine/postgraduate-diploma-nutrition-physical-activity-applied-anti-aging-medicine/postgraduate-diploma-nutrition-physical-activity-applied-anti-aging-medicine/postgraduate-diploma-nutrition-physical-activity-applied-anti-aging-medicine/postgraduate-diploma-nutrition-physical-activity-applied-anti-aging-medicine/postgraduate-diploma-nutrition-physical-activity-applied-anti-aging-medicine/postgraduate-diploma-nutrition-physical-activity-applied-anti-aging-medicine/postgraduate-diploma-nutrition-physical-activity-applied-anti-aging-medicine/postgraduate-diploma-nutrition-physical-activity-applied-anti-aging-medicine/postgraduate-diploma-nutrition-physical-activity-applied-anti-aging-medicine/postgraduate-diploma-nutrition-physical-activity-applied-anti-aging-medicine/postgraduate-diploma-nutrition-physical-activity-applied-anti-aging-medicine/postgraduate-diploma-nutrition-physical-activity-applied-anti-aging-medicine/postgraduate-diploma-nutrition-physical-activity-applied-anti-aging-medicine/postgraduate-diploma-nutrition-physical-activity-applied-anti-aging-medicine/postgraduate-diploma-nutrition-aging-medicine/postgraduate-diploma-nutrition-aging-medicine/postgraduate-diploma-nutrition-aging-agi

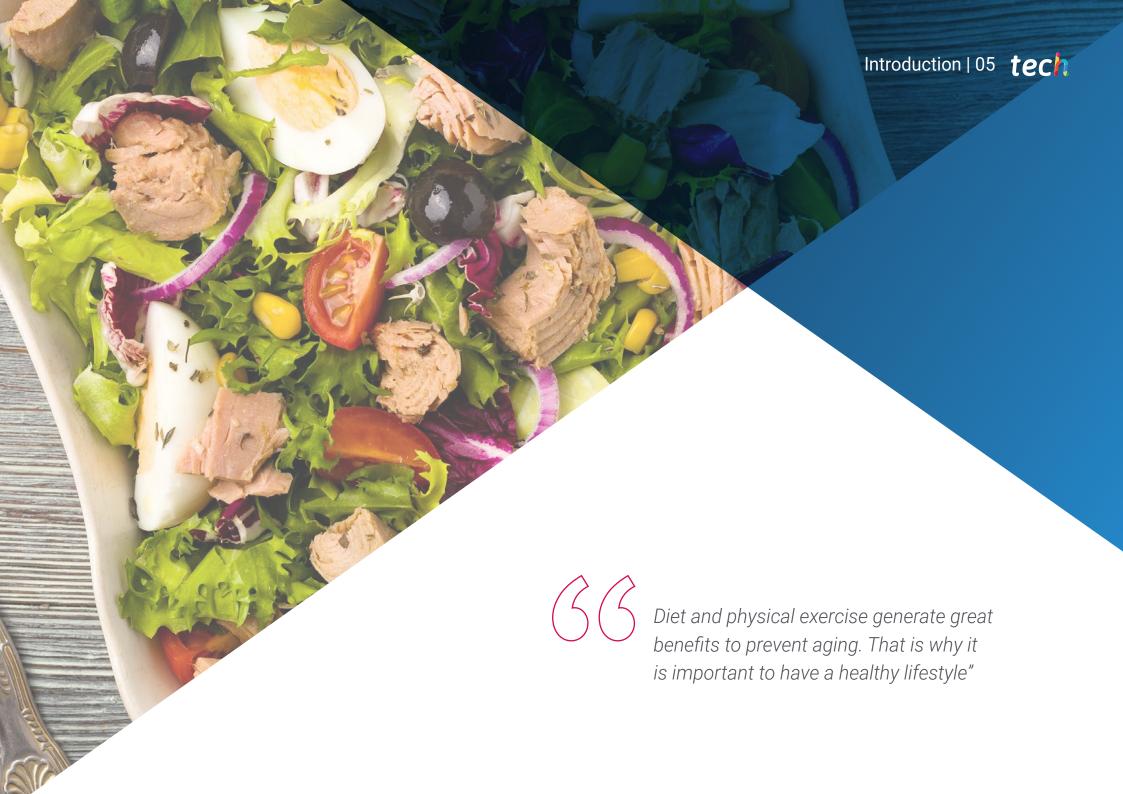
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# tech 06 | Introduction

The Postgraduate Diploma in Nutrition and Physical Activity Applied to Anti-Aging Medicine aims to provide our students with a superior and multidisciplinary training in these areas that will allow them to offer their patients comprehensive and effective care to improve their physical appearance.

The practice of physical exercise generates a series of benefits for certain pathologies (coronary heart disease, arterial hypertension, cancer, diabetes, psychological benefits, musculoskeletal mobilization and so forth), but it also keeps our organism active, oxygenated, favoring a continuous metabolic exchange that makes us eliminate many toxins from our body. Furthermore, it acts on the free radicals that cause oxidative stress in the organism, which, in turn, can precipitate the normal aging of our body and the arrival of senescence, which entails a poorer quality of life. This precipitation may also be advanced by a sedentary lifestyle and obesity.

There are nutrients that have an antioxidant effect that help prevent premature aging, so it is important to know the properties and benefits of different types of foods.

Moreover, it is necessary to bear in mind that anti-aging medicine, like so many other medical disciplines, is a specialty that is developed mainly in consultation and, for that reason, it is necessary to make an exhaustive analysis of all the basic and fundamental elements necessary for the development of an adequate activity, taking into account all the aspects involved, from how to approach the consultation with the patient, to what to do if any problem of a legal nature arises.

To increase knowledge in this field, at TECH we have designed this Postgraduate Diploma, which specializes the professional to carry out a comprehensive approach to their patients from a multidisciplinary point of view. This way, we understand that only from a source of knowledge in disciplines that at first may seem independent, but which are closely interrelated, can a process as complex and multifactorial as aging be approached with guarantees.

This Postgraduate Diploma in Nutrition and Physical Activity Applied to Anti-Aging Medicine contains the most complete and up-to-date education program on the market. The most important features of the program include:

- The development of case studies presented by experts in Nutrition and Physical Activity Applied to Anti-Aging Medicine.
- The graphic, schematic, and eminently practical contents with which they are created provide scientific and practical information on the disciplines that are essential for professional practice.
- Latest developments in Nutrition and Physical Activity Applied to Anti-Aging Medicine
- Practical exercises where the self-assessment process can be carried out to improve learning.
- · Special emphasis on innovative methodologies in anti-aging techniques.
- Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments.
- Content that is accessible from any fixed or portable device with an Internet connection.



# Introduction | 07 tech



This Postgraduate Diploma is the best investment you can make in selecting a refresher program for two reasons: in addition to updating your knowledge of nutrition and physical activity applied to anti-aging medicine, you will obtain a degree from the main online University in Spanish: TECH"

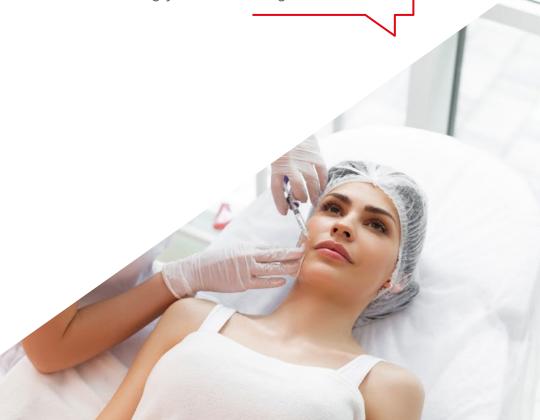
The teaching staff includes professionals from the field of Esthetics Medicine, who bring their experience to this training program, as well as renowned specialists from leading societies and prestigious universities.

The multimedia content, developed with the latest educational technology, will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide immersive training programmed to train in real situations.

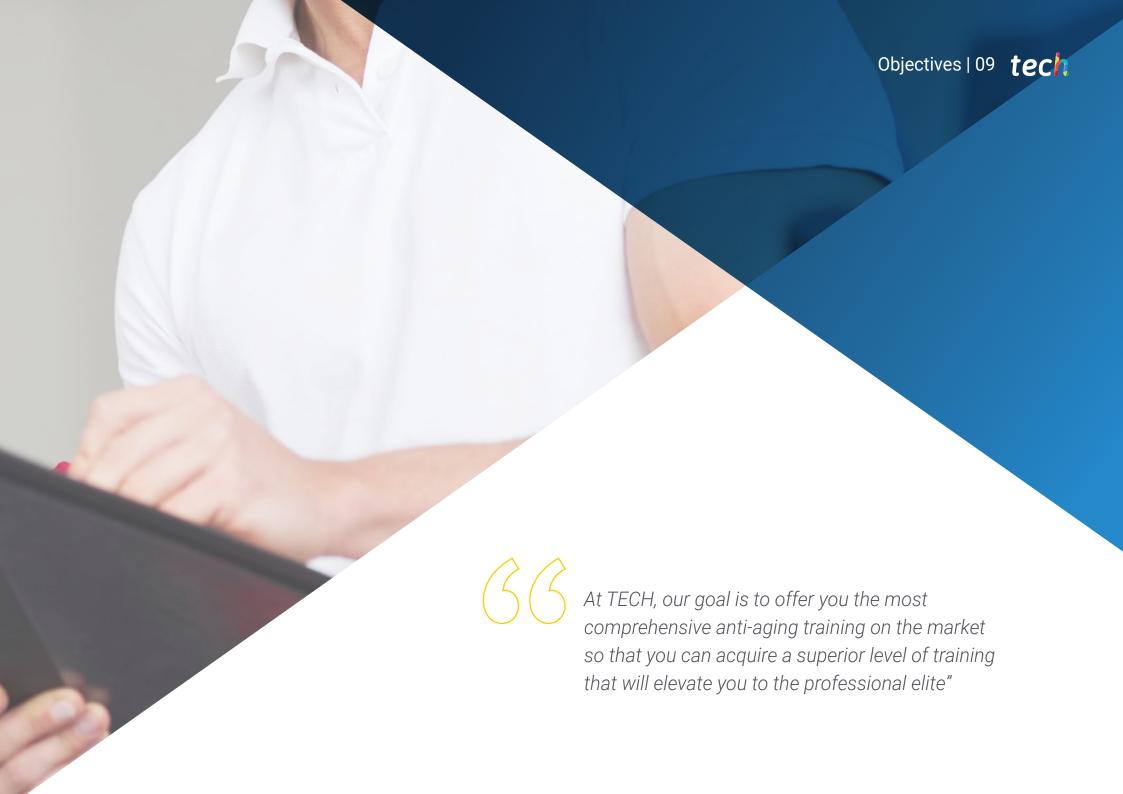
This program is designed around Problem Based Learning, whereby the Surgeon must try to solve the different professional practice situations that arise during the academic year. For this purpose, the professional will be assisted by an innovative interactive video system created by renowned and extensively experienced experts in Nutrition and Physical Activity Applied to Anti-Aging Medicine.

Do not hesitate to take this training with us. You will find the best teaching material with virtual lessons.

This 100% online Postgraduate Diploma will allow you to combine your studies with your professional work while increasing your knowledge in this field.







# tech 10 | Objectives

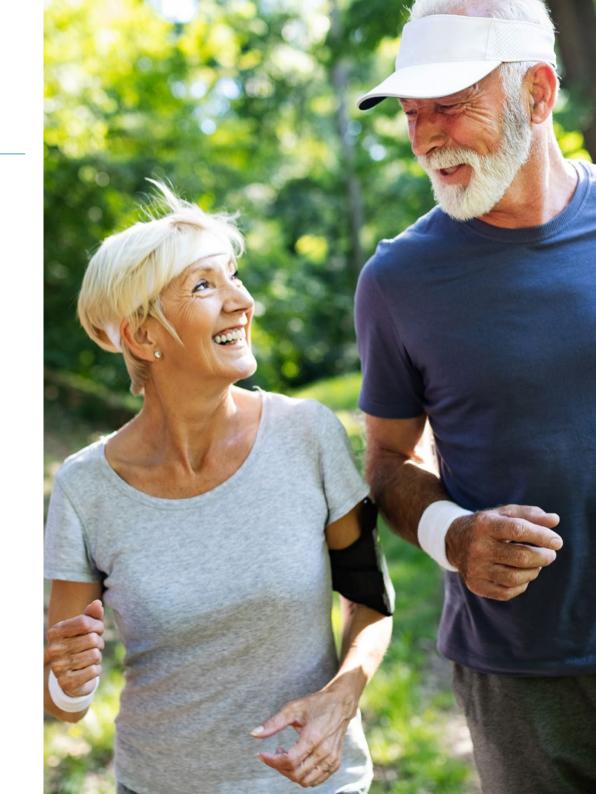


# **General Objectives**

- Establish the physiological fundamentals for understanding the functioning of the human organism during physical exercise.
- Identify organ adaptations and training programs, as well as physiological assessments and implementations in order to improve physical performance.
- Develop a physical activity plan adapted to the patient's particular characteristics.
- Establish the specific approach to obesity through the use of medication.
- Develop the different types of nutrients found in foods.
- Examine different types of foods with particular health benefits.
- Present specific types of diets.
- Examine the legal, organizational, and component aspects of an anti-aging clinic.
- Analyze the patient comprehensively.
- Evaluate results and follow-ups together with the patient and other specialties.



With this program we want to meet your objective of acquiring superior training in this highly demanded field"



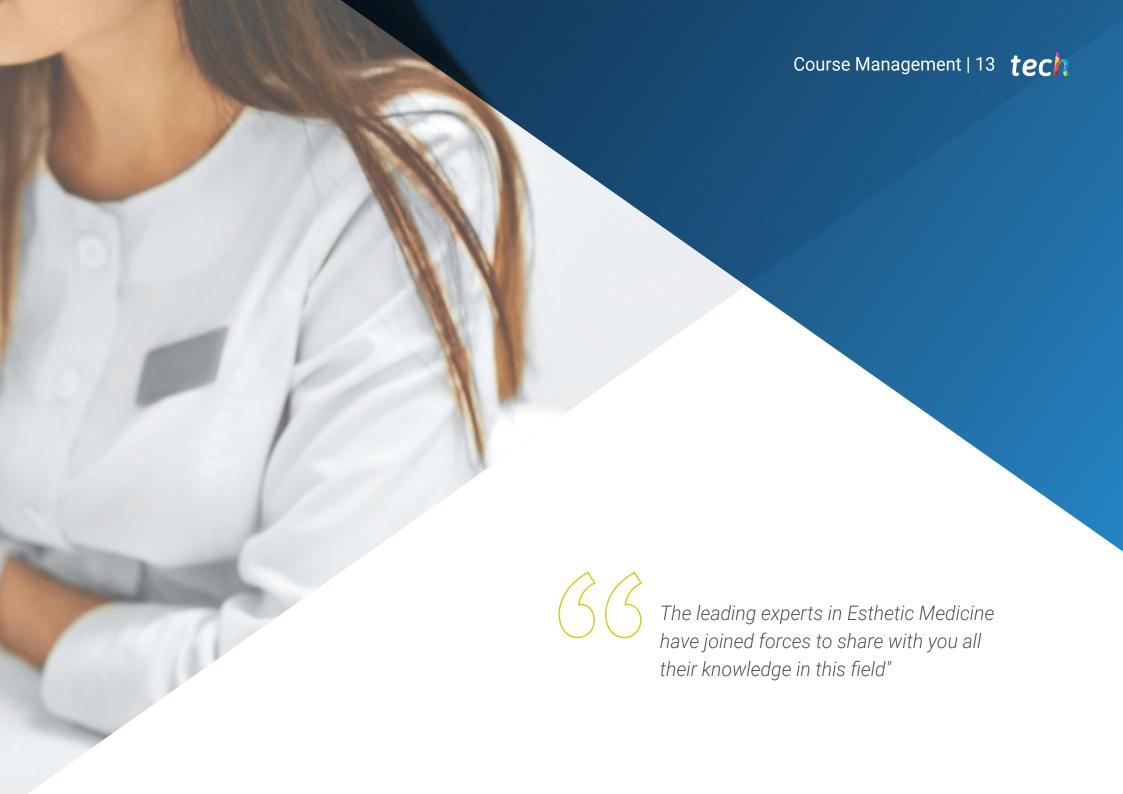


### **Specific Objectives**

- Examine the metabolic response during physical exercise.
- Determine the different techniques for the physiological evaluation of the patient.
- Analyze the basic principles of sports training to develop an adapted physical activity plan.
- Know the importance of physical activity in certain pathologies such as cancer, musculoskeletal, cardiovascular and respiratory pathologies.
- Analyze trends for recovery and readaptation to effort.
- Establish how obesity and sedentary lifestyles contribute to accelerated aging.
- Determine the guidelines and indications for pharmacological treatment of obesity.
- Establish the contribution of micronutrients to normal nutritional status.
- Identify diseases developed by nutritional deficiencies and how to avoid them.
- Present the different types of functional foods, nutraceuticals, as well as the differences between the two
- Examining the health contribution of prebiotics and probiotics.
- Analyze the theory of aging associated with cellular oxidation and the role of antioxidants present in foods.
- Identify the different food additives and their functions in foods.
- Present specific types of diets and their contribution to improving the body's functions.

- Determine the essential legal aspects of an anti-aging medicine consultation
- Apply an appropriate marketing strategy when recruiting patients to the clinic.
- Establish basic aspects of the patient's medical history.
- Define a comprehensive approach to the anti-aging medicine patient when dealing with them in the consultation room.
- List the main laboratory tests necessary for a complete anti-aging medicine consultation, as well as to be able to expand to more advanced studies.
- Plan an integrative and adequate treatment
- Evaluate results and schedule follow-ups, as well as interdisciplinary relationships if necessary.





# tech 14 | Course Management

### Management



### Dr. Morante Tolbaños, Cristina

- Hair Surgeon at the Medical Laser Institute
- Professor of the Master in Hair Transplant at the Catholic University of Murcia since 2020
- Professor of the Master in Hair Medicine and Transplant at the Alcalá University of Henares since 2016
- Medical hair treatments and hair surgery Medical Management Hair Transplant 360° Hair Transplant. 2020-2021
- Medical Director Hair Surgery Unit MAN Clinic Madrid. 2019-2020
- Doctorate in Legal and Forensic Medicine from the Complutense University of Madrid
- Master's Degree in Hair Medicine and Transplant at Alcalá de Henares University
- Master' in Esthetics and Anti-Aging Medicine at Complutense University of Madric
- Master in Accident and Emergency Medicine at the Complutense University of Madrid
- Master's Degree in Health and Social Action Center Management at Universidad Complutense de Madrid.

### **Professors**

### Dr. Calvache Castillo, Sergio

- Teaching and Improvement of Swimming in Children (Servisport)
- Sociocultural Animator (Cascabel Teatro Association)
- Technical Team at the Sports Service of the University of Granada
- International Relations Office At Granada University Medical School
- Volunteering at the Spanish Association Against Cancer Physical Activity Program
- Teacher for Massive Cardiopulmonary Resuscitation Workshops (Organized by Emergency Healthcare Ministry of Health and Social Welfare)
- Currently Resident Physician of Pneumology 4th Year at Dr Preset Hospital (Valencia)

### Dr. Soriano Micó, María

- Assistant physician and head of the Brain Injury Unit of the Military Hospital of Mislata (Valencia).
- Assistant Physician at the Rehabilitation Service at De Manises Hospital Musculoskeletal Rehabilitation and Brain Injury Outpatient Clinic
- Assistant physician and head of the Brain Injury Unit of the Military Hospital of Mislata (Valencia).

### Dr. Villacampa Crespo, Beatriz

- Primary Care Pharmacist General Hospital of Elche (Alicante)
- Assistant pharmacist in pharmacy office in Vinaroz (Castellón)
- Pharmacist in the REFAR program (Review of chronic polymedicated patients) in the department of Vinaroz.
- Trainee in the Department of Pharmaceuticals and Assistance of the Department of Health.
- Assistant pharmacist in a pharmacy office in Valencia, Spain
- Assistant pharmacist at the pharmacy office in Zaragoza

### Dr. Vera López, Inés

- Development of healthy eating plans and personalized nutritional follow-up.
- Dietitian-nutritionist at Dorsia clinics
- Indoor Cycling Instructor
- Curricular internship at IVRE (Institut Valencià de Rehabilitació Esportiva)
- Intern at the City Council of Gestalgar

#### Dr. Cuerva, Laura

- · Aesthetic Physician at Clínica Simarro, Lipedema Institute in Madrid
- Medical Aesthetician at Arques Clinic in Puerto Banus, Malaga
- Graduate in Medicine from the Complutense University of Madrid.
- Master's Degree in Regenerative and Anti-Aging from the University of Alcalá de Henares
- Master's Degree in Hair Transplantation and Capillary Medicine from the University of Alcalá de Henares
- Master's Degree in Esthetic Medicine, Rey Juan Carlos University, Madrid





# tech 18 | Structure and Content

### Module 1. Physical Activity. Sedentary Lifestyle. Obesity

- 1.1. Physiology of Physical Activity
  - 1.1.1. Nervous and Muscular Control of Movement
  - 1.1.2. Metabolism in Exercise
  - 1.1.3. Adaptive Responses to Physical Exercise
    - 1.1.3.1. Hematology
    - 1.1.3.2. Cardiovascular
    - 1.1.3.3. Pulmonary
    - 1.1.3.4. Muscular
- 1.2. Physiological Evaluation and Interpretation I
  - 1.2.1. Anthropometry
  - 1.2.2. Aerobic and Anaerobic Functional Capacity
  - 1.2.3. Laboratory Tests
  - 1.2.4 Field Tests
- 1.3. Physiological Evaluation and Interpretation II
  - 1.3.1. Stress Tests
  - 1.3.2. Stress Test Interpretation
  - 1.3.3. Clinical Cases
- 1.4. Personalized Prescription of Physical Activity in Young Adults
  - 1.4.1. Fundamentals of Strength Training
  - 1.4.2. Fundamentals of Endurance Training
  - 1.4.3. Injury Prevention
    - 1.4.3.1. Sensory-motor Training
    - 1.4.3.2. Flexibility Training





# Structure and Content | 19 tech

- 1.5. Personalized Prescription of Physical Activity for the Elderly
  - 1.5.1. Fundamentals of Cardiovascular Training and its Differences in Young Adults
  - 1.5.2. Fundamentals of Strength and Endurance Training
  - 1.5.3. Prevention from Falls
- 1.6. Physical Activity, Longevity and Quality of Life
  - 1.6.1. Cardiovascular Diseases
  - 1.6.2. Pulmonary Diseases
  - 1.6.3. Neuromuscular Diseases
  - 1.6.4. Musculoskeletal Disorders
  - 1.6.5. Special Problems:
    - 1.6.5.1. Pregnancy
    - 1.6.5.2. Advanced Age
- 1.7. Strategies for Rehabilitation and Recovery from Exertion
  - 1.7.1. Recovery Techniques
    - 1.7.1.1. Physical Measurements
    - 1.7.1.2. Nutrition (Hydration, Diet)
  - 1.7.2. Hypoxic Preconditioning
- 1.8. Sedentary Lifestyles and Obesity
  - 1.8.1. Current Situation of Obesity Worldwide and in Spain
  - 1.8.2. Obesity as a Metabolic Disease
  - 1.8.3. Obesity Prevention Strategies and Sedentary Lifestyles

### tech 20 | Structure and Content

- 1.9. Pharmacological Treatment of Obesity GLP1 Liraglutide
  - 1.9.1. Pharmacological Mechanism of Action
  - 1.9.2. Indications and Contraindications
  - 1.9.3. Usefulness in Clinical Practice and its Applications
- 1.10. Dietary Supplementation
  - 1.10.1. Vitamins.
  - 1.10.2. Antioxidants
  - 1.10.3. Coenzyme Q 10
  - 1.10.4. Calcium
  - 1.10.5. Chondroprotectors
  - 1.10.6. Nutricosmetics

### Module 2. Nutrition

- 2.1. Micronutrition
  - 2.1.1. Micronutrient Concept
  - 2.1.2. Vitamins.
  - 2.1.3 Minerals
  - 2.1.4. Trace Elements
  - 2.1.5. Other Micronutrients
- 2.2. Orthomolecular Nutrition
  - 2.2.1. Orthomolecular Nutrition Concept
  - 2.2.2. Nutripharmaceuticals
  - 2.2.3. Orthomolecular Nutrition Benefits
- 2.3. Supplementation
  - 2.3.1. Concept of Nutritional Supplements
  - 2.3.2. Types of Nutritional Supplements
  - 2.3.3. Usefulness of Nutritional Supplements in Anti-Aging Medicine

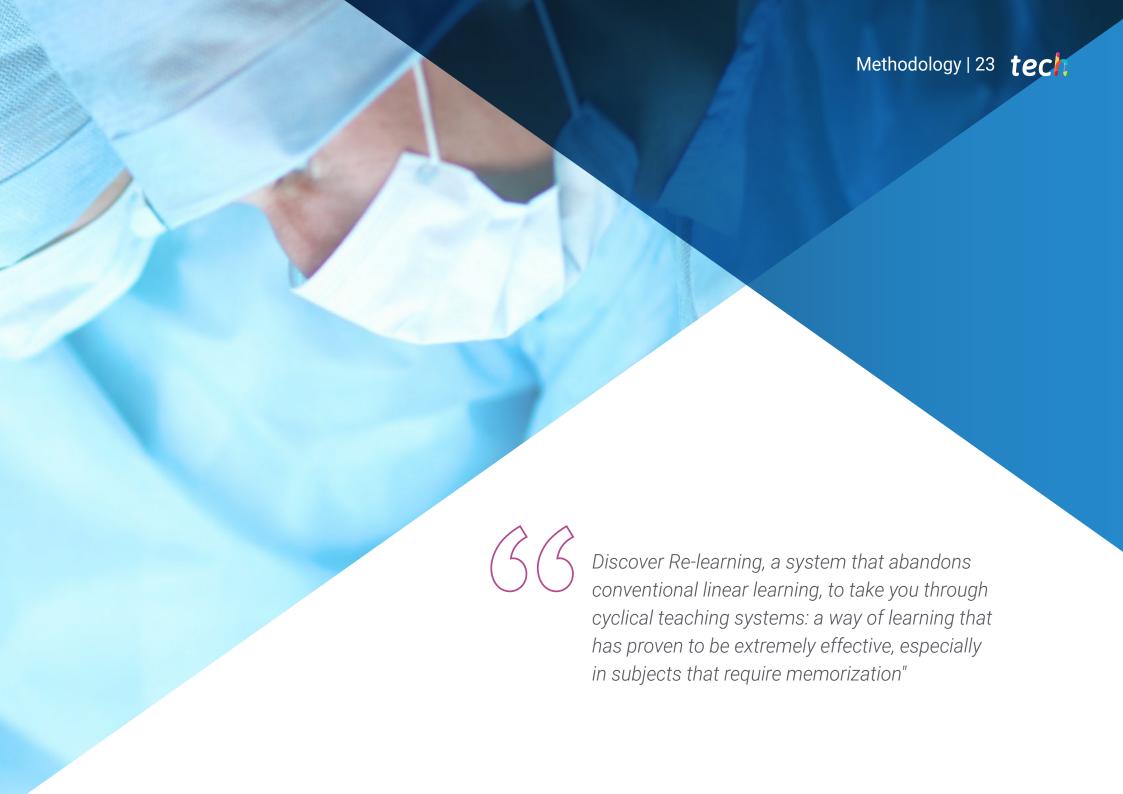
- 2.4. Nutrigenetics. Nutrigenomics.
  - 2.4.1. Nutrigenetics Concept
  - 2.4.2. Nutrigenomics Concept
  - 2.4.3. Applications of Nutrigenetics and Nutrigenomics
- 2.5. Vitamins and Disease Prevention
  - 2.5.1. Types of Vitamins
  - 2.5.2. Hypovitaminosis and Hypervitaminosis
  - 2.5.3. Hypovitaminosis Treatment and Prevention
- 2.6. Food Additives
  - 2.6.1. Food Additive Concept
  - 2.6.2. Functions of Food Additives
  - 2.6.3. Classification and Identification of Foodstuffs
- 2.7. Integrated Nutrition and Feeding
  - 2.7.1. Concept and foundations of Integrative Nutrition
  - 2.7.2. Anti-inflammatory Foods
  - 2.7.3. Integrative Nutrition and the Future
- 2.8. Nutraceuticals
  - 2.8.1. Nutraceuticals
  - 2.8.2. Differences Between Nutraceuticals and Food Supplements
  - 2.8.3. Most Representative Nutraceuticals
- 2.9. Prebiotics and Probiotics
  - 2.9.1. Concept of Prebiotic. Benefits of Prebiotics
  - 2.9.2. Probiotic Concept. Benefit of Probiotics
  - 2.9.3. Symbiotic Concept. Benefits of Symbiotic
- 2.10. Free Radicals and Antioxidants
  - 2.10.1. Concept of Free Radicals and their Role in Cellular Aging
  - 2.10.2. Function and Types of Antioxidants
  - 2.10.3. Role of Antioxidants in the Prevention of Aging

# **Module 3.** The Antiaging Medicine Clinic Practical Aspects Overall Approach to the Patient

- 3.1. Essential Legal Aspects Needs of an Anti-Aging Clinic
  - 3.1.1. Introduction to Health Law
  - 3.1.2. Civil Liability
  - 3.1.3. The Lex Artis ad hoc
  - 3.1.4. Medical Negligence
- 3.2. Marketing. Social Media. Ethical Aspects Medicine and Advertising
  - 3.2.1. Marketing Plan
    - 3.2.1.1. Situation Analysis (PESTEL, SWOT)
    - 3.2.1.2. Plan of Objectives
    - 3.2.1.3. Action Plan
  - 3.2.2. Digital Communication
    - 3.2.2.1. Social Media Plan
    - 3.2.2.2. Social Networks
  - 3.2.3. New Technologies
- 3.3. Medical History and Informed Consent
  - 3.3.1. Types of Medical Records
  - 3.3.2. Content of a Clinical History
    - 3.3.2.1. Informed Consent
  - 3.3.3. Legal Aspects of the Medical Record
- 3.4. General Approach to the Patient in the Anti-Aging Clinic
  - 3.4.1. Psychology of Patient Approach
  - 3.4.2. Coaching Adapted to the Consultation
  - 3.4.3. Identification of Patient Problems and Demands
- 3.5. Biological Age Assessment
  - 3.5.1. Definition of Concepts
  - 3.5.2. Evaluation Methods
  - 3.5.3. Other Calculators

- 3.6. Basic Laboratory Analysis
  - 3.6.1. Hemogram and Basic Biochemistry
  - 3.6.2. Vitamins.
  - 3.6.3. Early Detection of Diabetes Mellitus and Dyslipidemia
  - 3.6.4. Thyroid Profile
- 3.7. Specific Laboratory Analyses
  - 3.7.1. Free Radicals Study
  - 3.7.2. Telomeric Length Test
  - 3.7.3. Pathology Screening
    - 3.7.3.1. Colorectal Cancer
    - 3.7.3.2. Breast Cancer
    - 3.7.3.3. Neurodegenerative Diseases
- 3.8. Evaluation of Results and Integrated Prescription
  - 3.8.1. Detailed Study of Results
  - 3.8.2. Definition of Objectives
  - 3.8.3. Integrative Treatment
- 3.9. Follow up
  - 3.9.1. Consultation Planning
  - 3.9.2. Need for Complementary Tests
  - 3.9.3. Resetting of Objectives and Motivational Consultation
- 3.10. Complementary Specialties and the Need for Referral
  - 3.10.1. Need for Collaboration
  - 3.10.2. Diagnosis of Incidental Disease
  - 3.10.3. Related Specialties
    - 3.10.3.1. Family and Community Medicine
    - 3.10.3.2. Endocrinology and Nutrition
    - 3.10.3.3. Plastic and Reconstructive Surgery
    - 3.10.3.4. Psychiatry/Psychology



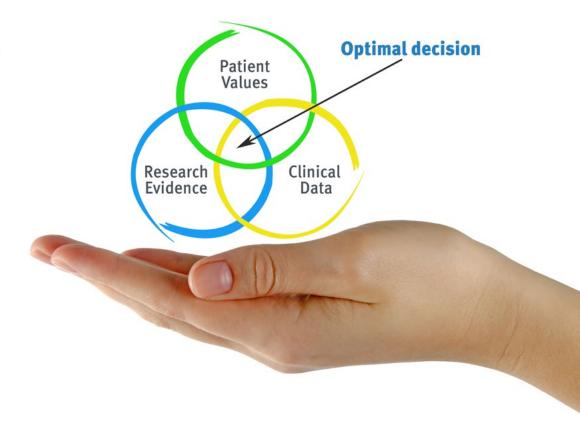


# tech 24 | Methodology

### At TECH we use the Case Method

In a given situation, what would you do? Throughout the program you will be presented with multiple simulated clinical cases based on real patients, where you will have to investigate, establish hypotheses and, finally, resolve the situation. There is abundant scientific evidence on the effectiveness of the method. Specialists learn better, faster, and more sustainably over time.

With TECH you can experience a way of learning that is shaking the foundations of traditional universities around the world.



According to Dr. Gérvas, the clinical case is the annotated presentation of a patient, or group of patients, which becomes a "case", an example or model that illustrates some peculiar clinical component, either because of its teaching potential or because of its uniqueness or rarity. It is essential that the case is based on current professional life, trying to recreate the real conditions in the physician's professional practice.



Did you know that this method was developed in 1912 at Harvard for law students? The case method consisted of presenting students with real-life, complex situations for them to make decisions and justify their decisions on how to solve them. In 1924, Harvard adopted it as a standard teaching method"

### The effectiveness of the method is justified by four fundamental achievements:

- 1. Students who follow this method not only grasp concepts, but also develop their mental capacity by evaluating real situations and applying their knowledge.
- 2. The learning process has a clear focus on practical skills that allow the student to better integrate into the real world.
- 3. Ideas and concepts are understood more efficiently, given that the example situations are based on real-life.
- Students like to feel that the effort they put into their studies is worthwhile.
   This then translates into a greater interest in learning and more time dedicated to working on the program.





### **Re-Learning Methodology**

At TECH we enhance the Harvard case method with the best 100% online teaching methodology available: Re-learning.

Our University is the first in the world to combine the study of clinical cases with a 100% online learning system based on repetition, combining a minimum of 8 different elements in each lesson, which represent a real revolution with respect to simply studying and analyzing cases.

The physician will learn through real cases and by solving complex situations in simulated learning environments.

These simulations are developed using state-of-the-art software to facilitate immersive learning.



### Methodology | 27 tech

At the forefront of world teaching, the Re-learning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best Spanish-speaking online university (Columbia University).

With this methodology we have trained more than 250,000 physicians with unprecedented success, in all clinical specialties regardless of the surgical load. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

Re-learning will allow you to learn with less effort and better performance, involving you more in your training, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to success.

In our program, learning is not a linear process, but rather a spiral (we learn, unlearn, forget, and re-learn). Hence, we combine each of these elements concentrically.

The overall score obtained by our learning system is 8.01, according to the highest international standards.

In this program you will have access to the best educational material, prepared with you in mind:



### **Study Material**

All teaching material is produced by the specialists who teach the course, specifically for the course, so that the teaching content is highly specific and precise.

This content is then adapted in an audiovisual format that will create our way of working online, with the latest techniques that allow us to offer you high quality in all of the material that we provide you with.



### **Latest Techniques and Procedures on Video**

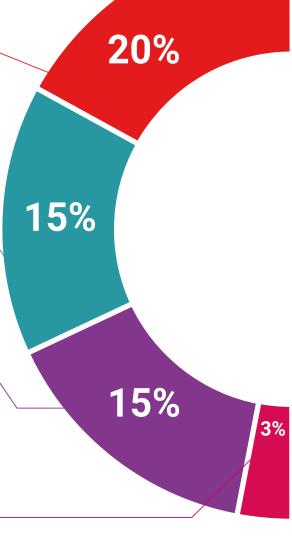
We introduce you to the latest techniques, to the latest educational advances, to the forefront of current medical techniques. All this, in first person, with the maximum rigor, explained and detailed for your assimilation and understanding. And best of all, you can watch them as many times as you want.



#### **Interactive Summaries**

We present the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

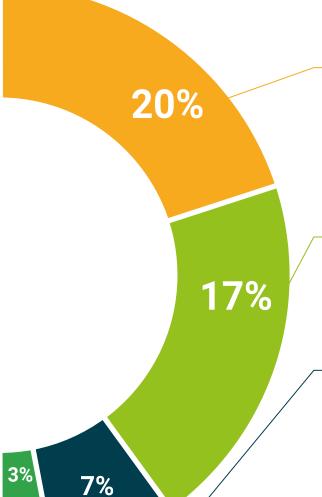
This unique multimedia content presentation training system was awarded by Microsoft as a "European Success Story".





### **Additional Reading**

Recent articles, consensus documents, international guides. in our virtual library you will have access to everything you need to complete your training.



### **Expert-Led Case Studies and Case Analysis**

Effective learning ought to be contextual. Therefore, we will present you with real case developments in which the expert will guide you through focusing on and solving the different situations: a clear and direct way to achieve the highest degree of understanding.



### **Testing & Re-testing**

We periodically evaluate and re-evaluate your knowledge throughout the program, through assessment and self-assessment activities and exercises: so that you can see how you are achieving your goals.



### Classes

There is scientific evidence suggesting that observing third-party experts can be useful.



Learning from an expert strengthens knowledge and memory, and generates confidence in our future difficult decisions.

#### **Quick Action Guides**

We offer you the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help you progress in your learning.





# tech 32 | Certificate

This **Postgraduate Diploma in Nutrition and Physical Activity Applied to Anti-Aging Medicine** contains the most complete and up-to-date scientific program on the market.

Once the student has passed the evaluation, they will receive by post, with acknowledgement of receipt, their corresponding Postgraduate Diploma issued by **TECH Technological University.** 

The certificate issued by **TECH Technological University** will specify the qualification obtained though the Postgraduate Diploma, and meets the requirements commonly demanded by labor exchanges, competitive examinations, and professional career evaluation committees.

Title: Postgraduate Diploma in Nutrition and Physical Activity Applied to Anti-Aging Medicine

Official Number of Hours: 450 hours.



<sup>\*</sup>Apostille Convention. In the event that the student wishes to have their paper certificate issued with an apostille, TECH EDUCATION will make the necessary arrangements to obtain it, at an additional cost.

health

guarantee

technological
university

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