

# Postgraduate Diploma Sports Nutrition in Diabetes, Vegetarianism and Veganism

Endorsed by the NBA





## Postgraduate Diploma Sports Nutrition in Diabetes, Vegetarianism and Veganism

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Technological University
- » Dedication: 16h/week
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtute.com/us/medicine/postgraduate-diploma/postgraduate-diploma-sports-nutrition-diabetes-vegetarianism-veganism](http://www.techtute.com/us/medicine/postgraduate-diploma/postgraduate-diploma-sports-nutrition-diabetes-vegetarianism-veganism)

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01

# Introduction

The main objective of this program is the development of theoretical and practical learning of nutrition for athletes with diabetes, vegans or vegetarians, so that the medical professional can master in a practical and rigorous way the different special situations that may arise from the practice of sports.





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*This Postgraduate Diploma provides training in simulated environments, which allows for an immersive learning experience designed to train for real" life situations"*

Medical professionals must bring their knowledge of nutrition up to date so that they can provide the best dietary recommendations that are aimed at not only preventing disease but also enabling optimal health in sportsmen and women facing challenging sporting situations. The meticulous choice of foods, which not only establishes a varied and balanced diet in sufficient quantity but which also is essential for the correct development of the individual.

Vegan and vegetarian athletes require a diet that covers all the nutrients needed to perform at their best during physical activity. Therefore, it is essential that medical professionals update their knowledge of sports nutrition in special populations to improve the service they offer, specializing in the structure of muscle tissue and its implication in sport.

This intensive program aims to be a tool to help physicians in relation to the comprehensive care of the vegan or vegetarian user who practices some type of physical activity, and aims to study the relationship and importance of nutrition and sport, and provide current scientific knowledge in sports nutrition, as well as the mechanisms by which the health of the athlete can be enhanced.

This **Postgraduate Diploma in Sports Nutrition in Diabetes, Vegetarianism and Veganism** contains the most complete and up-to-date scientific program on the market.

The most important features include:

- ♦ The graphic, schematic and practical contents of the course are designed to provide all the essential information required for professional practice
- ♦ Exercises where the self-assessment process can be carried out to improve learning
- ♦ An algorithm-based interactive learning system, designed for decision making for patients with nutritional challenges
- ♦ 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



*Learn the most suitable diets for each type of athlete and you will be able to give more personalized advice"*

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*This Postgraduate Diploma is the best investment you can make in the selection of a refresher program for two reasons: in addition to updating your knowledge in sports nutrition, you will obtain a degree from the leading digital university in Spanish: TECH Technological University”*

Its teaching staff includes professionals belonging to the field of nutrition, who contribute their work experience to this 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 education programmed to learn in real situations.

This program is designed around Problem-Based Learning, whereby the professional must try to solve the different professional practice situations that arise during the academic year. The professional will be assisted by an innovative interactive video system created by renowned and experienced experts in sports nutrition.

*Food and sport must go hand in hand, as it is essential that athletes follow a proper diet to help them improve their performance.*

*Immerse yourself in this comprehensive Postgraduate Diploma university and improve your skills in nutritional counseling for athletes.*



02

# Objectives

The main objective of the program is the development of theoretical and practical learning, so that the medical professional can master in a practical and rigorous way the study of sports nutrition in special populations.







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*This refresher program will provide you with a sense of confidence in your daily work, which will help you grow both personally and professionally”*



## General Objectives

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- ♦ Handle advanced knowledge on nutritional planning in professional and non-professional athletes for the healthy performance of physical exercise
- ♦ Manage advanced knowledge on nutritional planning in professional athletes of various fields in order to achieve maximum sports performance
- ♦ Learn advanced knowledge about nutritional planning in professional athletes from team sports to achieve the highest sports performance
- ♦ Manage and consolidate the initiative and entrepreneurial spirit to implement projects related to nutrition in physical activity and sport
- ♦ Know how to incorporate the different scientific advances into one's own professional field
- ♦ Working in a multidisciplinary environment
- ♦ Understand the context in which the area of their specialty is developed.
- ♦ Manage advanced skills in the detection of possible signs of nutritional changes associated with sports activities
- ♦ Manage the necessary skills through the teaching-learning process that will allow them to continue training and learning in the field of sports nutrition both with the contacts established with teachers and professionals of this training as well as in an autonomous way
- ♦ Specialize in the structure of muscle tissue and its role in sports
- ♦ Know the energetic and nutritional needs of athletes in different pathophysiological situations
- ♦ Specialize in the energetic and nutritional needs of athletes in the different situations specific to age and gender
- ♦ Become a specialist in the dietary strategies for the prevention and treatment of injured athletes
- ♦ Specialize in the energetic and nutritional needs of child athletes
- ♦ Specialize in the energetic and nutritional needs of Paralympic athletes



*A path to achieve education and professional growth that will propel you towards a greater level of competitiveness in the employment market"*



## Specific Objectives

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### Module 1. Different Stages or Specific Population Groups

- ♦ Explain the specific physiological characteristics to be taken into account in the nutritional approach of different groups
- ♦ Understand in depth the external and internal factors that influence the nutritional approach to these groups

### Module 2. Vegetarianism and Veganism

- ♦ Differentiate between the different types of vegetarian athletes
- ♦ Gain an in-depth understanding of the main mistakes made
- ♦ Treat the notable nutritional deficiencies of sportsmen and sportswomen
- ♦ Manage skills to provide the athlete with the most effective tools to combine foods

### Module 3. The Type 1 Diabetic Athlete

- ♦ Establish the physiological and biochemical mechanism of diabetes both at rest and during exercise
- ♦ Deepen the understanding of how the different insulins or medications used by diabetics work
- ♦ Assess the nutritional requirements for people with diabetes both in their daily life and in exercise to improve their health
- ♦ Deepen the knowledge necessary to plan nutrition for athletes of different disciplines with diabetes in order to improve their health and performance
- ♦ Establish the current state of evidence on Performance Enhancing Drugs in diabetics



03

# Course Management

The teaching team, experts in Sports Nutrition, has a wide prestige in the profession and are professionals with years of teaching experience who have come together to help the student to boost their profession. To this end, this Postgraduate Diploma has been developed with recent updates in the field that will allow professionals to train and increase their skills in this sector.





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*Learn from the best professionals and become a successful professional yourself”*

## Management



### Dr. Marhuenda Hernández, Javier

- ♦ Fellow of the Spanish Academy of Human Nutrition and Dietetics
- ♦ Professor and researcher at the Catholic UCAM University San Antonio in Murcia
- ♦ Ph.D. in Nutrition
- ♦ Master's Degree in Clinical Nutrition
- ♦ Graduate in Nutrition

## Professors

### Dr. Javier Martínez-Noguera

- ♦ Professional career associated from the beginning with nutrition in high performance sports (soccer, tennis, athletics, karate, etc.) and research
- ♦ He currently provides consultations in several sports centers and multidisciplinary clinics in Murcia and Alicante
- ♦ He carries out professional activities with high performance athletes at the Research Center for High Performance Sports (UCAM)
- ♦ He belongs to the OPENRED-UCAM research group, where he has carried out all his scientific production
- ♦ Collaboration with the Spanish Research Network on Cycling and Women

### Dr. Arcusa, Raúl

- ♦ Graduate in Human Nutrition and Dietetics
- ♦ Master's Degree in Nutrition in Physical Activity and Sport
- ♦ Anthropometrist ISAK level 1
- ♦ He is currently a doctoral student at the Department of Pharmacy of the UCAM, in the research line of Nutrition and Oxidative Stress, activity that he combines with his work as a nutritionist in the youth team of C.D. Castellón
- ♦ Possesses experience in different soccer teams in the Valencian community, as well as extensive experience in face-to-face clinical consultation



**Dr. Ramírez, Marta**

- ♦ Graduate in Human Nutrition and Dietetics
- ♦ Master's Degree in Nutrition in Physical Activity and Sport
- ♦ Anthropometrist ISAK level 1
- ♦ Extensive professional experience both in the Clinical and Sports field, where she works with athletes in Triathlon, Athletics, Bodybuilding, CrossFit, Powerlifting, among others, specializing in strength
- ♦ Experience as an instructor and speaker giving seminars, courses, workshops and conferences on Sports Nutrition for Dietitians-Nutritionists, Students of Health Sciences and the general population, in addition to a continual training in nutrition and sport in international congresses, courses and conferences

# 04

# Structure and Content

The structure of the contents has been designed by a team of professionals knowledgeable about the implications of the program in daily practice, aware of the current relevance of sports nutrition education and committed to quality teaching through new educational technologies.







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*This Postgraduate Diploma in Sports Nutrition in Diabetes, Vegetarianism and Veganism contains the most complete and up-to-date scientific program on the market”*

## Module 1. Different Stages or Specific Population Groups

- 1.1. Nutrition in the Female Athlete
  - 1.1.1. Limiting Factors
  - 1.1.2. Requirements
- 1.2. Menstrual Cycle
  - 1.2.1. Luteal Phase
  - 1.2.2. Follicular Phase
- 1.3. Triad
  - 1.3.1. Amenorrhea
  - 1.3.2. Osteoporosis
- 1.4. Nutrition in the Pregnant Female Athlete
  - 1.4.1. Energy Requirements
  - 1.4.2. Micronutrients
- 1.5. The Effects of Physical Exercise on the Child Athlete
  - 1.5.1. Strength Training
  - 1.5.2. Endurance Training
- 1.6. Nutritional Education in the Child Athlete
  - 1.6.1. Sugar
  - 1.6.2. Eating Disorders
- 1.7. Nutritional Requirements in the Child Athlete
  - 1.7.1. Carbohydrates
  - 1.7.2. Proteins
- 1.8. Changes Associated with Aging
  - 1.8.1. Body Fat Percentage
  - 1.8.2. Muscle Mass
- 1.9. Main Problems in Older Athletes
  - 1.9.1. Joints
  - 1.9.2. Cardiovascular Health
- 1.10. Interesting Supplements for Older Athletes
  - 1.10.1. Whey Protein
  - 1.10.2. Creatine

## Module 2. Vegetarianism and Veganism

- 2.1. Vegetarianism and Veganism in the History of Sport
  - 2.1.1. The Beginnings of Veganism in Sport
  - 2.1.2. Vegetarian Athletes Today
- 2.2. Different Types of Naturopathic Food
  - 2.2.1. The Vegan Athlete
  - 2.2.2. The Vegetarian Athlete
- 2.3. Common Errors in the Vegan Athlete
  - 2.3.1. Energy Balance.
  - 2.3.2. Protein Consumption
- 2.4. Vitamin B12
  - 2.4.1. B12 Supplementation
  - 2.4.2. Bioavailability of Spirulina Algae
- 2.5. Protein Sources in the Vegan/Vegetarian Diet
  - 2.5.1. Protein Quality
  - 2.5.2. Environmental Sustainability
- 2.6. Other Key Nutrients in Vegans
  - 2.6.1. Conversion of ALA to EPA/DHA
  - 2.6.2. Fe, Ca, Vit-D and Zn
- 2.7. Biochemical Assessment/Nutritional Deficiencies
  - 2.7.1. Anaemia
  - 2.7.2. Sarcopenia
- 2.8. Vegan Diet vs. Omnivorous Diet
  - 2.8.1. Evolutionary Food
  - 2.8.2. Current Food
- 2.9. Ergogenic Aids
  - 2.9.1. Creatine
  - 2.9.2. Vegetable Protein
- 2.10. Factors that Decrease Nutrient Absorption
  - 2.10.1. High Fiber Intake
  - 2.10.2. Oxalates

**Module 3. The Type 1 Diabetic Athlete**

- 3.1. Knowing about Diabetes and its Pathology
  - 3.1.1. The Incidence of Diabetes
  - 3.1.2. Pathophysiology of Diabetes
  - 3.1.3. The Consequences of Diabetes
- 3.2. Exercise Physiology in People with Diabetes
  - 3.2.1. Maximal, Submaximal Exercise and Muscle Metabolism during Exercise
  - 3.2.2. Differences in the Metabolic Level during Exercise in People with Diabetes
- 3.3. Exercise in People with Type 1 Diabetes
  - 3.3.1. Exercise in People with Type 1 Diabetes
  - 3.3.2. Exercise Duration and Carbohydrate Intake
- 3.4. Exercise in People with Type 2 Diabetes. Blood Sugar Control
  - 3.4.1. Risks of Physical Activity in People with Type 2 Diabetes
  - 3.4.2. Benefits of Exercise in People with Type 2 Diabetes
- 3.5. Exercise in Children and Adolescents with Diabetes
  - 3.5.1. Metabolic Effects of Exercise
  - 3.5.2. Precautions during Exercise
- 3.6. Insulin Therapy and Exercise
  - 3.6.1. Insulin Infusion Pump
  - 3.6.2. Types of Insulins
- 3.7. Nutritional Strategies during Sport and Exercise in Type 1 Diabetes
  - 3.7.1. From Theory to Practice
  - 3.7.2. Carbohydrate Intake Before, During and After Physical Exercise
  - 3.7.3. Hydration Before, During and After Physical Exercise
- 3.8. Nutritional Planning in Endurance Sports
  - 3.8.1. Marathon
  - 3.8.2. Cycling
- 3.9. Nutritional Planning in Team Sports
  - 3.9.1. Soccer
  - 3.9.2. Rugby
- 3.10. Sports Supplements and Diabetes
  - 3.10.1. Potentially Beneficial Supplements for Athletes with Diabetes



05

# Methodology

This academic program offers students a different way of learning. Our methodology uses a cyclical learning approach: **Relearning**.

This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.



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*Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"*

## At TECH we use the Case Method

What should a professional do in a given situation? Throughout the program, students will face multiple simulated clinical cases, based on real patients, in which they will have to do research, establish hypotheses, and ultimately resolve the situation. There is an abundance of scientific evidence on the effectiveness of the method. Specialists learn better, faster, and more sustainably over time.

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



According to Dr. Gervas, 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 power 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.

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*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 achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that evaluate real situations and the application of knowledge.
2. Learning is solidly translated into 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.
4. 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 course.



## Relearning Methodology

At TECH we enhance the case method with the best 100% online teaching methodology available: Relearning.

This 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, a real revolution with respect to the mere study and analysis of cases.

*Professionals will learn through real cases and by resolving complex situations in simulated learning environments. These simulations are developed using state-of-the-art software to facilitate immersive learning.*





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

With this methodology, more than 250,000 physicians have been trained with unprecedented success in all clinical specialties regardless of surgical load. Our pedagogical methodology is developed in a highly competitive environment, with a university student body with a strong socioeconomic profile and an average age of 43.5 years old.

*Relearning will allow you to learn with less effort and better performance, involving you more in your specialization, 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 (learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

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



This program offers the best educational material, prepared with professionals 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.

These contents are then applied to the audiovisual format, to create the TECH online working method. All this, with the latest techniques that offer high quality pieces in each and every one of the materials that are made available to the student.



#### Surgical Techniques and Procedures on Video

TECH introduces students to the latest techniques, the latest educational advances and to the forefront of current medical techniques. All of this in direct contact with students and explained in detail so as to aid their assimilation and understanding. And best of all, you can watch the videos as many times as you like.



#### Interactive Summaries

The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



#### Additional Reading

Recent articles, consensus documents and international guidelines, among others. In TECH's virtual library, students will have access to everything they need to complete their course.





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

Effective learning ought to be contextual. Therefore, TECH presents real cases in which the expert will guide students, focusing on and solving the different situations: a clear and direct way to achieve the highest degree of understanding.



#### Testing & Retesting

We periodically evaluate and re-evaluate students' knowledge throughout the program, through assessment and self-assessment activities and exercises, so that they can see how they are achieving their goals.



#### Classes

There is scientific evidence on the usefulness of learning by observing experts. The system known as Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.



#### Quick Action Guides

TECH offers the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help students progress in their learning.



# 06 Certificate

The Postgraduate Diploma in Sports Nutrition in Diabetes, Vegetarianism and Veganism guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Diploma issued by TECH Technological University.



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*Include in your training a Postgraduate Diploma in Sports Nutrition in Diabetes, Vegetarianism and Veganism: a highly qualified added value for any medical professional"*

This **Postgraduate Diploma in Sports Nutrition in Diabetes, Vegetarianism and Veganism** contains the most complete and up-to-date scientific on the market.

After the student has passed the assessments, they will receive their corresponding **Postgraduate Diploma**, issued by **TECH Technological University** via tracked delivery\*.

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

Title: **Postgraduate Diploma in Sports Nutrition in Diabetes, Vegetarianism and Veganism**

Official N° of Hours: **450 h.**

**Endorsed by the NBA**



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



## Postgraduate Diploma

Sports Nutrition in Diabetes,  
Vegetarianism and Veganism

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Technological University
- » Dedication: 16h/week
- » Schedule: at your own pace
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# Postgraduate Diploma

## Sports Nutrition in Diabetes, Vegetarianism and Veganism

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