

# Postgraduate Certificate

## Sports Nutrition in the Type 1 Diabetic

Endorsed by the NBA





## Postgraduate Certificate

### Sports Nutrition in the Type 1 Diabetic

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

Website: [www.techtute.com/us/medicine/postgraduate-certificate/sports-nutrition-type-1-diabetic](http://www.techtute.com/us/medicine/postgraduate-certificate/sports-nutrition-type-1-diabetic)

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# 01

# Introduction

With this intensive program the physician will learn to solve the doubts that may arise when dealing with a type 1 diabetic athlete, as well as to learn the basic aspects of food for the nutritional advice of the athlete with these characteristics. A unique opportunity to specialize in a sector with a high demand for professionals, from experts with wide experience in the field.





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

Medical professionals must update their knowledge of nutrition 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.

This program addresses the physiological and biochemical aspects necessary to understand how diabetes affects both daily life and exercise, and the possible problems that may arise. In addition, during the course of this Postgraduate Certificate, the student will be able to acquire the necessary knowledge to establish a nutritional plan for people with diabetes who want to take care of their health and athletes of different modalities based on current scientific evidence.

As it is an online course, the student is not restricted by fixed schedules or the need to move to another physical location, but can access the contents at any time of the day, balancing their work or personal life with their academic life.

This **Postgraduate Certificate in Sports Nutrition in the Type 1 Diabetic** 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”*

“

*This Postgraduate Certificate is the best investment you can make when selecting a refresher program, for two reasons: in addition to updating your knowledge in Sports Nutrition you will obtain a qualification endorsed by TECH Technological University”*

*The Postgraduate Certificate allows you to exercise in simulated environments that provide an immersive learning program in order to train in real situations.*

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

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.

Its 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 an 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 throughout the program. The professional will be assisted by an innovative interactive video system created by renowned and experienced experts in sports nutrition.



# 02 Objectives

The principal objective of the program is the development of both theoretical and practical learning, so that the professional can master, in a practical and rigorous way, the study of sports nutrition in special population groups.







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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
- ◆ Ability to work in a multidisciplinary environment
- ◆ To understand the context in which their area of expertise is being developed
- ◆ Manage advanced skills in the detection of possible signs of nutritional changes associated with sports activities
- ◆ To handle the necessary skills through the teaching-learning process that will allow them to continue training and learning in the field of sports nutrition both through 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



*The teaching materials of this program, elaborated by these specialists, have contents that are completely applicable to your professional experiences"*



## Specific Objectives

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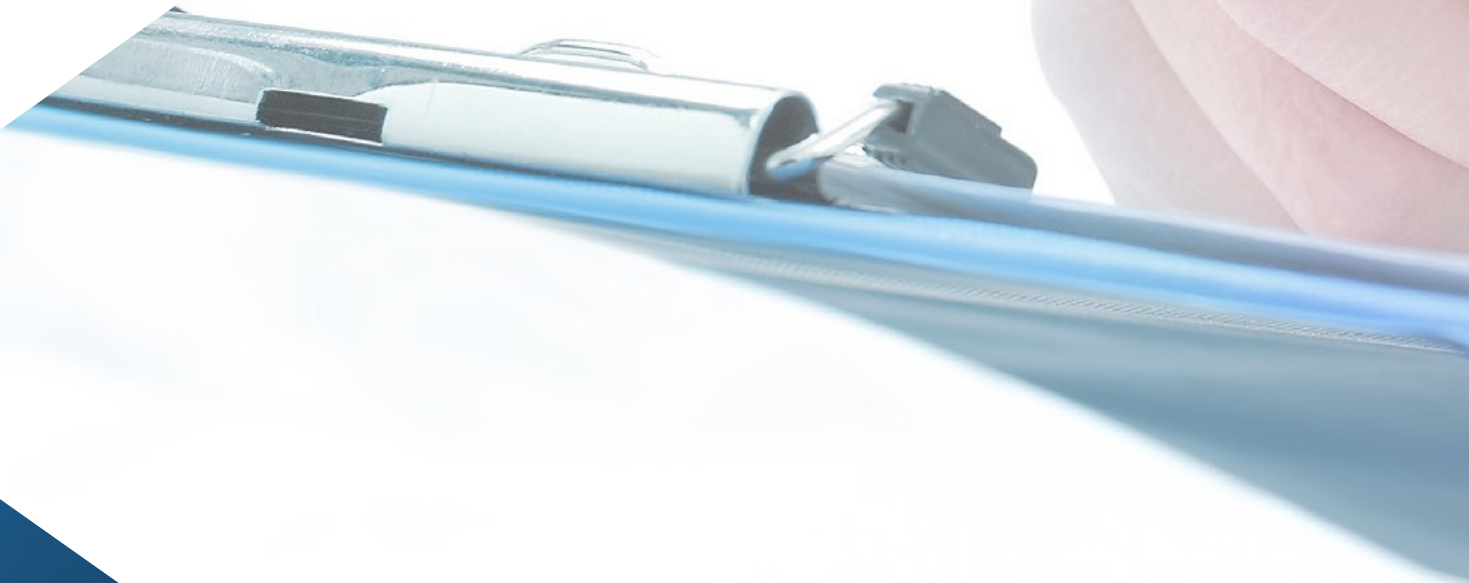
- ◆ To establish the physiological and biochemical mechanism of diabetes both at rest and during exercise
- ◆ To deepen the understanding of how the different insulins or medications used by diabetics work
- ◆ To assess the nutritional requirements for people with diabetes both in their daily life and in exercise to improve their health
- ◆ To delve into the necessary knowledge to be able to plan nutrition for athletes of different disciplines with diabetes, in order to improve their health and performance
- ◆ To establish the current state of evidence on Performance Enhancing Drugs in diabetics



03

# Course Management

Our teachers, made up of experts in Sports Nutrition, are well known in the profession and are professionals with years of teaching experience who have come together to help you boost your career. To this end, they have developed this Postgraduate Progression with the latest developments in the field that will allow you to train and increase your 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



# 04

# Structure and Content

The structure of the contents has been designed by a team of professionals knowledgeable about the implications of training 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 Certificate in Sports Nutrition in the Type 1 Diabetic contains the most complete and up-to-date scientific program on the market”*

## Module 1. The Type 1 Diabetic Athlete

- 1.1. Knowing about Diabetes and its Pathology
  - 1.1.1. The Incidence of Diabetes
  - 1.1.2. Pathophysiology of Diabetes
  - 1.1.3. The Consequences of Diabetes
- 1.2. Exercise Physiology in People with Diabetes
  - 1.2.1. Maximal, Submaximal Exercise and Muscle Metabolism during Exercise
  - 1.2.2. Differences in the Metabolic Level during Exercise in People with Diabetes
- 1.3. Exercise in People with Type 1 Diabetes
  - 1.3.1. Exercise in People with Type 1 Diabetes
  - 1.3.2. Exercise Duration and Carbohydrate Intake
- 1.4. Exercise in People with Type 2 Diabetes. Blood Sugar Control
  - 1.4.1. Risks of Physical Activity in People with Type 2 Diabetes
  - 1.4.2. Benefits of Exercise in People with Type 2 Diabetes
- 1.5. Exercise in Children and Adolescents with Diabetes
  - 1.5.1. Metabolic Effects of Exercise
  - 1.5.2. Precautions during Exercise
- 1.6. Insulin Therapy and Exercise
  - 1.6.1. Insulin Infusion Pump
  - 1.6.2. Types of Insulins
- 1.7. Nutritional Strategies during Sport and Exercise in Type 1 Diabetes
  - 1.7.1. From Theory to Practice
  - 1.7.2. Carbohydrate Intake Before, During and After Physical Exercise
  - 1.7.3. Hydration Before, During and After Physical Exercise
- 1.8. Nutritional Planning in Endurance Sports
  - 1.8.1. Marathon
  - 1.8.2. Cycling
- 1.9. Nutritional Planning in Team Sports
  - 1.9.1. Soccer
  - 1.9.2. Rugby
- 1.10. Sports Supplements and Diabetes
  - 1.10.1. Potentially Beneficial Supplements for Athletes with Diabetes





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*A unique, key, and decisive educational experience to boost your professional development”*

# 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. 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 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 Certificate in Sports Nutrition in the Type 1 Diabetic guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Technological University.





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*Add to your resume a Postgraduate Certificate in Sports Nutrition in the Type 1 Diabetic in a highly competitive professional”*

This **Postgraduate Certificate in Sports Nutrition in the Type 1 Diabetic** 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 Certificate** diploma issued by **TECH Technological University** via tracked delivery\*.

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

Title: **Postgraduate Certificate in Sports Nutrition in the Type 1 Diabetic**

Official N° of Hours: **150 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.

future  
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education information tutors  
guarantee accreditation teaching  
institutions technology learning  
community commitment  
personalized service innovation  
knowledge present  
development languages  
virtual classroom

**tech** technological  
university

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