



**BARÇA**  
**INNOVATION HUB**  
Universitas

**PROFESSIONAL DIPLOMA**

# **INJURY MANAGEMENT FOR TEAM SPORTS**

**100% ONLINE**

**9 MONTHS**

LEARN FROM THE BEST | ENJOY A UNIQUE EDUCATIONAL EXPERIENCE | BECOME PART OF A GLOBAL NETWORK

# INFORMATION

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## LEARN TO:

Propose efficient prevention strategies based on a process founded on scientific evidence.

Handle pathologies and specific injuries corresponding to each sport.

Improve critical analysis by completing a training program on the different professional roles of sports science and health.

Improve sports performance and injury prevention through a deepened understanding of the methodology to use in strength training and muscle power programs.

Apply the appropriate methodology to the design of the post-injury rehabilitation process in situations where strength development plays a significant role.

Analyze workload monitoring data to orientate the training process towards preventing injuries and consequently successfully optimize sports performance.

Acquire specific strategies for resolving specific situations that arise in the athletic environment on a regular basis.



**DELIVERY MODE ONLINE**

**DURATION 9 MONTHS**

**ACADEMIC DEGREE EXECUTIVE EDUCATION**

**DELIVERED IN ENGLISH AND SPANISH**

# PROFESSORS



## **Paco Seirul-lo Vargas**

Head of FC Barcelona's Methodology area.



## **Joan Ramon Tarrago**

Head of FC Barcelona's Sports Performance area.



## **Gil Rodas Font**

Medical Doctor and Surgeon. Specialist in Physical Education and Sports Medicine. Head of the Barça Innovation Hub Medical Service area.



## **Daniel Romero Rodriguez**

Physiotherapist. Physical trainer and rehabilitator of competitive high performance athletes. Performance, prevention and post-injury rehabilitation advisor for various professional football players.



## **Francesc Cos**

Former Head of Strength Training for FC Barcelona's first team football squad (2004-2016). Former Director of the Performance area of Barça Innovation Hub (2016-2018). Currently Director of Performance of the New York City (MLS).



## **Tim Gabbett**

High Performance Consultant. 20 years experience working as an applied sport scientist with athletes and coaches from a wide range of sports.



## **Asker Jeukendrup**

Sports nutrition scientist. Professor of Exercise Metabolism. Performance consultant in elite sport. Entrepreneur. Ironman triathlete.



## **Ana Merayo García**

Sports Psychologist. Instructor. Coordinator of the SAIE (Service for Comprehensive Athlete Care) at Masia 360, FC Barcelona.

# PROGRAM

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## 1. Injury Prevention

### **MODULE 1: BASIC CONCEPTS IN EPIDEMIOLOGY AND INJURY PREVENTION**

Unit 1: Basic Concepts in Injury Prevention

Unit 2: Epidemiology in Team Sports

### **MODULE 2: MUSCLE INJURY PREVENTION**

Unit 1: Prevention of the Most Frequent Muscle Injuries

Unit 2: The Preventive Approach to Muscle Injury Prevention

### **MODULE 3: PREVENTION OF JOINT INJURIES**

Unit 1: Prevention of the Most Frequent Lower Limb Joint Injuries ACL (Anterior Cruciate Ligament) Injury

Unit 2: Prevention of the Most Frequent Upper Limb Joint Injuries (Shoulder Injuries)

### **MODULE 4: INTEGRATIVE READING**

## 2. Team Sports Pathology

**MODULE 1: Management of medical pathology 1**

**MODULE 2: Management of medical pathology 2**

**MODULE 3: Sports Specific pathologies**

**MODULE 4: Special sports and competitions**

## 3. Neuromuscular Basis for Strength Training

**MODULE 1: Characteristics of the musculoskeletal system.**

Unit 1: Movement from the central nervous system.

Unit 2: Function of the skeletal muscles.

**MODULE 2: Muscle action and its relationship to sports.**

Unit 1: Types of muscle action.

Unit 2: Interrelationship of muscle action in movement and posture maintenance.

**MODULE 3: Systemic changes in detraining and immobilisation.**

Unit 1: Detraining in relation to the skeletal muscle.

Unit 2: Muscle hypertrophy.

**MODULE 4: Assessment of muscular properties in relation to sport.**

Unit 1: Surface electromyography.

Unit 2: Tensiomyography.

## 4. Strength training methodology: its application in the improvement of sports performance and post-injury rehabilitation for competition

**MODULE 1: Contextualization: how can we adapt strength training to team sports?**

**MODULE 2: Strength workload methodology in situation sports.**

**MODULE 3: Integrating strength workload into planning and programming of situation sports.**

**MODULE 4: Strength in the design of sports specific tasks. Examples based on football.**

# PROGRAM

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## **5. Strength and muscle power as a key feature of rehabilitation from sports injuries**

**MODULE 1:** Analysis of injury in sports: injury mechanisms and associated risk factors.

**MODULE 2:** Sports injuries and their relationship with the quality of strength.

**MODULE 3:** Strength manifestations and muscle power in the post-injury rehabilitation process.

**MODULE 4:** New paradigms in strength training: muscle building through vascular occlusion.

## **6. A Best Practice Approach to Workload Monitoring**

**MODULE 1:** Why do injuries occur?

**MODULE 2:** Fitness-fatigue model

**MODULE 3:** Acute:chronic workload ratio and injury

**MODULE 4:** Recent controversies, and practical applications of the data

## **7. The Training - Injury Prevention Paradox**

**MODULE 1:** The training-performance relationship, and training load plus injury

**MODULE 2:** Is training really the problem?

**MODULE 3:** Importance of a good pre season. Moderators and mediators

**MODULE 4:** Common questions and Interpreting athlete monitoring data

## **8. Nutrition, Recovery and Training Adaptations**

**MODULE 1:** Exercise and fatigue

Unit 1: What is fatigue?

Unit 2: Delaying fatigue

**MODULE 2:** Recovery and adaptation

Unit 1: Recovery

Unit 2: Adaptation

**MODULE 3:** Optimising recovery and adaptation

Unit 1: Optimising recovery with nutrition

Unit 2: Optimising adaptation with nutrition

**MODULE 4:** Recovery from injury

Unit 1: Different phases of injury

Unit 2: Strategies

## **9. Daily Situations in Sport**

**MODULE 1:** Managing Injured Players

**MODULE 2:** Possibilities for a Dual Career

**MODULE 3:** Difficulty Management I

**MODULE 4:** Difficulty Management II

# EXPERIENCE

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All your learning experience will take place in an online platform where you will find all the resources you need to study:

## LECTURES

which address the main topics.

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## VIDEOS

that deepen some subjects of the readings.

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## ACTIVITIES

to apply the content addressed in each module.

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## RUBRICS

that will evaluate you in each module.

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## ONLINE EXPERT

In every course, you will have the support and virtual follow-up of a subject-matter expert. This online expert will perform interventions throughout the different modules to ensure your learning, as well as the interaction with the rest of your peers.

In addition, he will be available in the forum and by internal messaging so that you can appeal to him as many times as you need.

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## FORUMS

where you can interact with your colleagues.

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## SELF-ASSESSMENTS

which will help you measure your learning progress.

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# BENEFITS

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**World-class content, designed by experts and sports-industry oriented for an immediate impact.**

**Round-the-clock access to study material, wherever you want and from any device.**

**Custom feedback for every individual and teamwork activity.**

**Spaces of discussion and interaction with industry professionals from all over the world.**

**Certificate of participation for each course, issued by Barça Innovation Hub - Universitas. If you pass each of the courses that make up the program, and complete and pass the comprehensive final exam, you will also receive a verified certificate of completion for the entire program, with confirmation of identity, issued by Barça Innovation Hub - Universitas.**



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# CREATING A NEW GENERATION OF SPORTS PROFESSIONALS

