



**UNIVERSITÀ DEGLI STUDI
DI CAGLIARI**

FACULTY OF MEDICINE AND SURGERY
DEPARTMENT OF MEDICAL SCIENCES AND PUBLIC HEALTH
SPORT AND EXERCISE SCIENCES



**Fondazione
di Sardegna**



**CENTRO
UNIVERSITARIO
SPORTIVO
CAGLIARI**

FIBROGENHIIT

Exercise as Medicine in Fibromyalgia

WEARABLE MONITORING

- Heart Rate
- HRV
- Activity
- Sleep
- Recovery

HEART RATE
148 bpm

HRV
72 ms

RECOVERY
83%
GOOD

POLAR SENSORS

- H10 Chest Strap
- Verity Sense
- Connected

**CARDIOPULMONARY TEST
CPET**

VO ₂	32.6 ml/kg/min
VCO ₂	29.1 ml/kg/min
RER	1.08
VE	81.4 L/min
HR	148 bpm

HR TARGET ZONES

ZONE 1 WARM UP 50-60% HRmax 95-114 bpm	ZONE 2 FAT BURN 60-70% HRmax 114-133 bpm	ZONE 3 AEROBIC 70-80% HRmax 133-152 bpm
ZONE 4 THRESHOLD 80-90% HRmax 152-171 bpm	ZONE 5 MAXIMUM 90-100% HRmax 171-190 bpm	

**HEART RATE
MONITORING**

**HRV
ANALYSIS**

**MOBILE APP
INTEGRATION**

**POLAR
SENSORS**

**DATA SECURITY
& PRIVACY**

MAIN CHARACTERISTICS OF THE PROJECT



A. PRECISION EXERCISE

Personalized HIIT protocols based on physiological and genetic profiles.



B. INDOOR vs OUTDOOR HIIT

Comparison between indoor and green exercise environments in fibromyalgia.



C. DIGITAL MONITORING

Real-time monitoring of heart rate, HRV, symptoms and recovery through wearable technologies and mobile app integration.



D. MULTIDISCIPLINARY APPROACH

Sports medicine, rheumatology, psychiatry, genetics, cardiology and exercise sciences working together.



FUTURE PERSPECTIVES

1 FIBROGENHIIT METHOD GYMS

- Certified Fibrogenhiit METHOD gyms specialized in fibromyalgia care
- Trained professionals and standardized protocols
- Digital monitoring and continuous outcome evaluation
- A network of centers to bring precision exercise therapy closer to patients



MAKING PRECISION EXERCISE ACCESSIBLE, SAFE AND SUSTAINABLE.

2 JOIN A MULTICENTER STUDY ON PRECISION EXERCISE IN FIBROMYALGIA (FIBROGENHIIT®)

- RANDOMIZED CONTROLLED TRIAL (RCT)**
Developed at the Department of Medical Sciences and Public Health, University of Cagliari (Italy), under the coordination of Professor Myosotis Massidda, with the support of Fondazione di Sardegna.
- INTEGRATED "EXERCISE AS MEDICINE" PLATFORM**
Combining exercise physiology, autonomic regulation, genetic profiling, and environmental modulation (indoor vs outdoor) to deliver individualized therapeutic strategies.
- BEYOND ONE-SIZE-FITS-ALL**
A mechanism-based, biologically informed, and data-driven approach, grounded in physiological phenotyping and gene x environment interactions.

DIGITAL HEALTH & AI-READY INFRASTRUCTURE

Supported by a dedicated mobile application for real-time monitoring of training sessions (heart rate, HR recovery, symptoms), standardized data collection, and centralized database integration.

Designed to support advanced analytics, including future AI-driven models for adaptive exercise prescription and clinical decision support.



PRECISION



PERSONALIZATION



INNOVATION



COLLABORATION



IMPACT



Discover more about the project

www.fibrogenhiit.com



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