



# **PRECISION** **PERFORMANCE**

By

**VITALIZE**  
✱ ✱ ✱ ✱ **Dx**

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# About us



**VitalizeDx** is an innovative startup founded by neuroscientist and entrepreneur Lavinia Alberi Auber, whose **multidisciplinary team** aims to support sports and corporate teams in enhancing their performance.

By monitoring key biomarker indicators of biological, psychological, physical, and biomechanical stress, **we help teams achieve maximum condition and avoid injuries.**

**How we do it:** We use non-invasive detection of **salivary biomarkers** and, through their **intersection with self-reported and wearable biometrics**, we create a digital model of each athlete that reflects their condition. The tests are repeatable without any need for medical staff and with the necessary periodicity (even daily).







# Overtrain and Injuries

## Prevalence & Risk

- 7–31% of elite athletes suffer from Overtraining Syndrome yearly
- Overuse accounts for 50–60% of all professional athlete injuries
- Up to 15–35% of male elite athletes suffer from underperformance due to overtraining

## Human & Economic Cost

- Recovery costs per injury (e.g., ACL): €50K–€150K
- In European top leagues, injuries cost clubs €732K/year in salaries
- In elite basketball (League A): just 2 injuries can mean €600K in season losses

## Impact on Team Performance

- Injury downtime correlates with lost matches, lower rankings & reduced revenue
- In football: 136 days of injury absence = 1 league point lost
- Long recovery periods (avg. 44 days) lead to training gaps, mental fatigue & career disruption

The real-time, predictive monitoring of **VitalizeDx** can prevent **up to 40% of** missed performances, improve recovery, and reduce injury recurrence with **savings of more than half a million/season.**



# TRAIN SMARTER

- PREDICT
- PREVENT
- PERFORM

## Empowering Teams to Win

### Insights:

VitalizeDx, by integrating salivary "fingerprints" with physiological, psychological, and biomechanical metrics via proprietary Artificial Intelligence algorithms, creates **Biodynamic Digital Twins** for each athlete that can monitor certain biological, physical, and mental levers that significantly affect team performance.

### Benefits:

- Optimize team recovery
- Improve athletes' physical and mental resilience
- Maximize performance levers
- Reduce the risk of injuries







# KEY FEATURES

The tests, validated by an AI Basketball team and numerous Triathlon athletes ensure:

## • Accessibility

- Non-invasive testing
- Self-administered without medical staff
- Repeatable according to the need (daily to weekly)
- Digital front-end for athletes and coach on mApp
- Interoperability with other softwares and wearable signals

## • Accuracy

- 98% detection accuracy
- 86% predictive power

## • Actionability

- Real-time insights
- Personalized recommendations to optimize recovery and training

## • Confidentiality

- Maximum confidentiality
- Data encryption with player and coach privacy
- Full control over data access and use

# How we operate

We offer a modular product that is affordable for every league and athlete:

- Weekly personalized performance scorecards
- Predictive reports with deep analytics of the team
- On-site and online assistance

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## Determininig the Need

- Analysis in consultation with the team leader (coach or performance manager)
- Defining testing schedule and reporting

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## Non-invasive Testing

- Non-invasive testing before or after the sporting event
- Salivary sampling of up to 10 biomarkers

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## Twin Definition

- Real-time Intersection of biomarkers with psychological, physical, and biomechanical metrics
- Proxies of cardiometabolic tone and risk of injury

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## AI Pipeline

- Players' classification/scores
- Detailed performance drivers and risk factors/Player
- Team performance landscape
- Drivers Interaction maps

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## Reporting

- Automated personalized scorecards
- Team condition profiles
- Team landscape analysis
- Singles determinants' and Network Analysis

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## Post-Testing Support

- On-site specialists for activation in high load periods
- AI assistant for daily support and rapid interpretation





# Contact us



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