

# The role of Sport in Addiction Recovery

Play, feel, meet, live



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## Literature review

# An overview of studies on exercise for substance use disorders treatment connected to the misuse of illegal drugs

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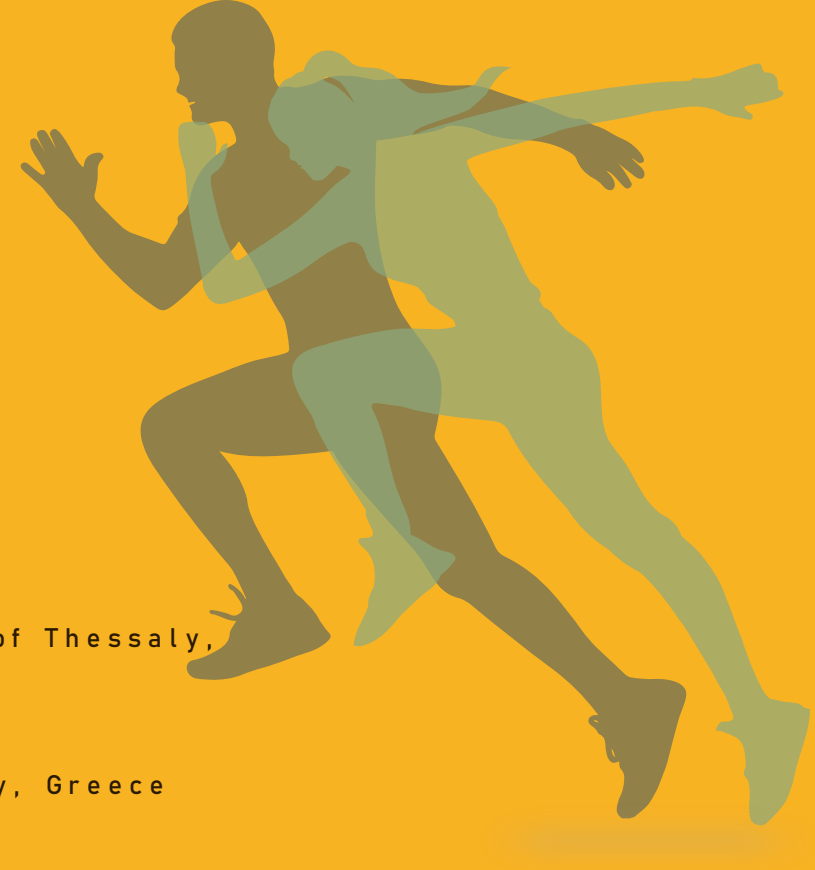
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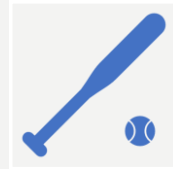
# GENERAL PURPOSE

- The purpose is to summarize/synthesize the pre-existing, published, knowledge on the relationship between physical activity and SUDs treatment.
  - To provide the necessary **information** needed to develop a training program for professionals of drug treatment organizations, sports organizations and individuals at local, national and European level on **how sports and physical activity can be a useful add-in to SUDs treatment.**
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# PROJECTS' INTERESTS



Who can deliver  
the sport  
programs?



What activities  
are best (if any)



How to design  
sport programs?



What factors  
should be taken  
under account?



How to monitor  
and evaluate  
sport programs

# AIMS

The purpose of this review is to explore previous research regarding sports and physical activity in relation to illicit drug addiction treatment (interventions, cross sectional studies and literature reviews).

The guiding research questions are as follows:

- What **research** is currently **available** regarding sports, physical activity or exercise programs related to people who are **under drug addiction** treatment?
- What are the **preferences and/or attitudes** of those with SUDs regarding sports, physical activity, or exercise?
- What are the **outcomes** of physical activity interventions **on people under drug addiction treatment?**
- What **behaviour change techniques** used at the intervention groups of effective studies?

# INCLUSION AND EXCLUSION CRITERIA

Studies were included if they met the following criteria:

- The study population should be aged **15 - 60 years old**, being in **illicit drug addiction therapy**.
- **Any type of physical activity**, exercise or sport should be part of the study focus.
- Studies could be **cross-sectional, literature reviews or interventions**.
- Publication language should be in **English**.
- **Prevention** programs were **excluded**.
- After reviewing 393 full papers, 373 papers excluded (reasons: acute exercise only effects, animal studies, prevention studies, e.t.c) and **20 papers** fulfilled the inclusion criteria and data extraction started.



# INTERVENTIONS

10 STUDIES

# DESCRIPTIVES

- **Design**
  - Two studies pre-post design and the others had a control or comparator group
  - 6 of them randomized control and two non-randomized
- **Number of participants** per study varied between 16 and 200 participants with most of the studies (5) having less than 50 participants.
- **Drug type**
  - Four studies had participants of mixed dependence (illicit drugs, alcohol, nicotine) and 5 had illicit only drug dependence (amphetamines, methamphetamine, methadone).



# DESCRIPTIVES

- Exercise **intensity** varied between light to vigorous, with the majority of the studies using moderate intensity exercises.
- All exercise interventions were **supervised**, mostly by an exercise professional.
- All exercise trainings were **delivered** face to face, except one who used a computer game platform.
- All group based except two which **delivered** individually and one mixed.
- Eight studies used **measurements for physical activity** (e.g., fitness tests, attendance), whereas one assessed exercise self-efficacy, and one craving measures, and Electroencephalographic (EEG) activity.

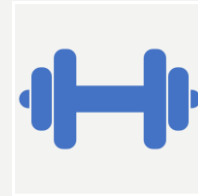
# RESULTS



Six studies reported a **decrease on substance** use (or relapses or cravings) and simultaneously an **increase on exercise** related variables (fitness or attendance).



One study reported an **improvement on fitness** measures only, one study reported a **decrease on substance use** only, and one study reported **no differences** at all between the 2 groups.



Finally, one study reported **improvements on physical and psychological** health.



# MOST USED BEHAVIOUR CHANGE TECHNIQUES

Graded tasks, 7

Self-monitoring  
of behavior 7

Instruction on  
how to perform  
the behavior, 3

Biofeedback, 3

Credible source,  
3

Provide choice,  
2

Social support  
(unspecified), 2

Material  
incentive  
(behavior), 2

Material reward  
(behavior) 2

Behavioral  
practice/  
rehearsal, 2

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# REVIEWS

5 STUDIES




- Three **systematic reviews**, one with a **meta-analysis**, and two **literature** reviews fulfilled our selection criteria.
- **85 studies** have been summarized, all of them target illicit drugs either only or in combination with other substances. All types of physical activity were used

## DESCRIPTIVES



# RESULTS

## Positive outcomes for:

- **craving,**
  - **percentage of abstinent** subjects,
  - continuous days of abstinence
  - **Psychological and social** outcomes (depression, anxiety, tension, self-concept, locus of control, employment, and dwelling were increased at least in one of the exercise conditions)
  - **Fitness** increased
  - The **effects** of physical exercise on illicit drugs abusers are significantly **greater** compared to other SUD disorders
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# RESULTS

- People with SUDs are interested in increasing their PA.

## **Facilitators/Benefits:**

- PA would provide a sense of accomplishment and confidence, would improve physical health, and could increase one's confidence to stay sober.

## **Barriers:**

- Lack of motivation, financial restrictions, disability or injury and lack of energy.

## **Social environment:**

- Preferred engaging in PA alone or with a small group or a buddy system, indicating that foster support and encouragement for PA should be a part of an intervention.

# RESULTS

## Types of preferred exercise:

- Interested in discussing exercise (women more than men), incorporating strength/resistance training, activity tracks (pedometer), Walking, Gym, bicycling, Sports, Yoga, Recreational activities, Competitive without friction,

## Exercise counseling during treatment.

- **Structure:** Face-to-face from an exercise counselor, Scheduled, Combined supervised / unsupervised or supervised, with a Mentor, Unsupervised, self-paced, or Do it yourself with professional guidance.
- **Intensity:** Moderate, Light, Multiple, ranging from easy to difficult. Emphasized it can't be too strenuous or intense



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# CROSS SECTIONAL

5 STUDIES




# DESCRIPTIVES


- 5 studies; N= 959 participants
- Mixed drugs dependence
- Any type of physical activity
- Measurements
  - Physical activity
  - Preferences
  - Barriers – Facilitators
  - Happiness with life
  - Internal Inhibition
  - Drug Craving



# RESULTS

- Women with **moderate-intensity** activity had the strongest internal inhibition and the lowest drug craving
  - Physical activity intensity was **negatively correlated** with drug craving
  - Internal inhibition played a partial **mediating effect** between physical activity intensity and drug craving
  - **Frequency of exercise** predicted the respondents' happiness with life BUT...  
Exercise intensity did not predict the respondents' happiness with life
- 

# RESULTS

- Although participants perceived many benefits of exercise and few barriers, only **38%** of participants met weekly PA recommendations
  - Nearly **25%** reported no physical activity
  - Those who **meet PA recommended** guidelines were significantly more likely to endorse **relapse prevention** as a benefit of exercise.
  - The vast majority (95%) expressed an interest in engaging in an exercise program **specifically designed** for persons in substance use recovery and 89% reported wanting to initiate an exercise program within the first 3 months of sobriety.
  - **Exercise preferences** regarding type of physical activity, exercise intervention components, perceived benefits and barriers to exercise **differed between males and females.**
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# PROJECTS' INTERESTS

Who can deliver the sport programs?  
**Exercise Specialists**

What activities are best (if any)? **Any Frequent Moderate to Light exercise or Sport**

How to design sport programs? **Needs assessment, plan, assess, replan etc... Most used BCTs**

What factors should be taken under account?  
**Person-centered approaches and more holistic approaches**

How to monitor and evaluate sport programs?

# WE WORK TOGETHER

## Project Coordinator



## Partners





We invite you to join and learn more about the RTS+ project activities and to establish strong links between all those involved in the Addiction Prevention, Care, and Recovery through sport.

Register free to our Learning Community and stay informed about project activities at:

Website: [www.rtsport.eu](http://www.rtsport.eu)

Facebook: [www.facebook.com/ketheasport/](http://www.facebook.com/ketheasport/)

Email: [rtsport@gmail.com](mailto:rtsport@gmail.com)



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