



# Cannabis

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# CANNABIS: LEGAL SITUATION IN EUROPE

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# LEGISLATIONAL STATE OF CANNABIS

- Cannabis accounts for most (56%) drug law offenses in EU
- Most commonly used illicit drug worldwide
- UN convention 1961: scheduled Cannabis as narcotic class I drug; regulation of international trade
- UN convention 1988: requested countries to pass laws which make possession, cultivation and purchase of Cannabis for personal consumption a criminal offence > variety of national interpretations
- Debate of liberating Cannabis regulations fueled by legalization of „recreational“ Cannabis use in some states of the US and Uruguay since 2012



# WHAT UNDERLIES LEGAL CONTROL?

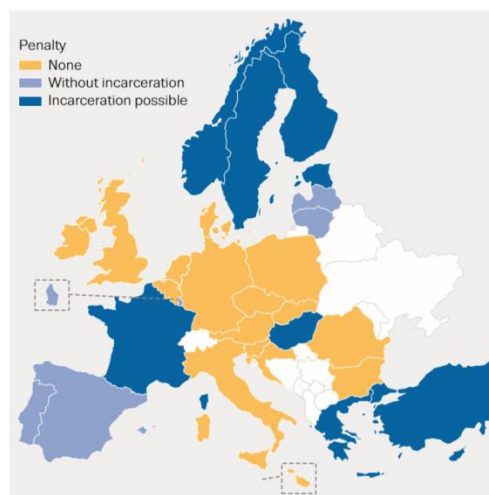
- Cannabis seeds not obligatory controlled (subject to drug control laws in Cyprus and Portugal)
- United Nation drug control treaties require national drug law control of Cannabis plants (exception for plants <0,2% THC in EU countries)
- Herbal Cannabis and resin
- Differentiation between recreational – medical – industrial use



# RECREATIONAL CANNABIS

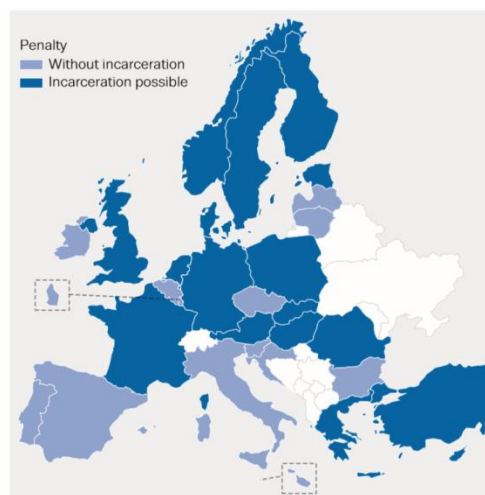
- Degree of punishment commonly related to classification of drug-related harms
  - > offences of Cannabis often not prosecuted with maximum legal response

FIGURE 2  
Penalties in law for consumption of cannabis in the European Union, Norway and Turkey



NB: In Spain consumption is penalised when the offence is committed in a public place.

FIGURE 3  
Penalties in law: possibility of incarceration for possession of cannabis for personal use (minor offence)



NB: In Spain possession is penalised when the offence is committed in a public place.

unauthorized possession:  
since 2000 trend to reduce  
imprisonments

Directive for non-custodial  
penalties / dismissals for  
minor „personal use“  
offences (F, UK, NL, D, DK)

EMCDDA (2017) *Cannabis legislation in Europe: an overview*

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# RECREATIONAL CANNABIS

- **Decriminalization:** removal of criminal status from specific actions; rather for personal possession and use than for supply; ≠ legal action, confiscation / non-criminal penalties possible  
e.g. Netherlands, Portugal, Luxembourg, Croatia, Slovenia
- **Depenalization:** possibility to close criminal cases without punishment because of e.g. „minor“ or „not in public interest“  
e.g. Germany, Austria, Poland
- **Legalization:** making a previously prohibited act lawful; removing all criminal and non-criminal penalties although, regulations may limit extent of permission  
e.g. Uruguay, Alaska/Washington/Oregon/Colorado (US)

# MEDICAL CANNABIS

- Use for medical and scientific purposes is not restricted by the UN conventions
- Cannabis-based medicines need approval by European Medicines Agency

Authorised cannabis-based medicines in Europe at a glance

Brand name	Description	Indications	Form
Sativex (Nabiximols)	Extract of cannabis (oil): THC and CBD	Multiple sclerosis	Sublingual spray
Marinol (Dronabinol)	Synthetic delta-9-THC	Cancer treatment, AIDS, multiple sclerosis	Gelatin capsule
Cesamet (Nabilone)	Synthetic cannabinoid similar to THC	Cancer treatment	Capsule
Bedrocan	Dried flower tips (sometimes powdered); five different strains available	Various	Plant material

EMCDDA (2017) *Cannabis legislation in Europe: an overview*

- Since 2001 the Office of Medicinal Cannabis controls the distribution and supply of Cannabis to pharmacies and practitioners within the EU

# MEDICAL CANNABIS / NATIONAL REGULATIONS



Czech Republic: State Agency for Medical Cannabis regulates prescription and distribution of medical Cannabis; special register since 11/2014; prescription limit 180 g/month; 16 accredited doctors & 26 pharmacies; domestic harvest from 03/2016



Italy: Ministry of Health issues permits for cultivation, production, possession and use from 11/2015; non-repeatable prescription for defined indications to support standard treatment; domestic harvest delivered to the ministry > production > distribution to pharmacy via vouchers (mode of use: vaporising or herbal infusion)



Croatia: from 10/2015 new regulations allow use of Cannabis for medical purposes; non-repeatable prescription for symptom relief of defined indications; max. 30 days and 7.5 grams THC (vaporizing or smoking not allowed); no domestic harvest



Germany: from 03/2017 new regulations approved herbal cannabis and its extracts as drugs; prescription by any general practitioner for any indication if conventional therapy failed or not applicable; prescription limit 100g/month; registry with scientific survey; from 2019 Cannabis Agency for regulation and control of domestic harvest



# CANNABIS PHARMACEUTICALS

## **Dronabinol (Marinol ®)**

THC capsule

## **Nabilone (Cesamet ®)**

Synthetic analogue of THC

## **Nabiximols (Sativex ®)**

Spray with standardised cannabis extrakt (THC:CBD = 1:1)

## **Marihuana**

THC, CBD and other cannabinoides

## **Cannabidiol (CBD)**

Not psychoactive component of marihuana and hashish



# EPIDEMIOLOGY OF RECREATIONAL CANNABIS USE

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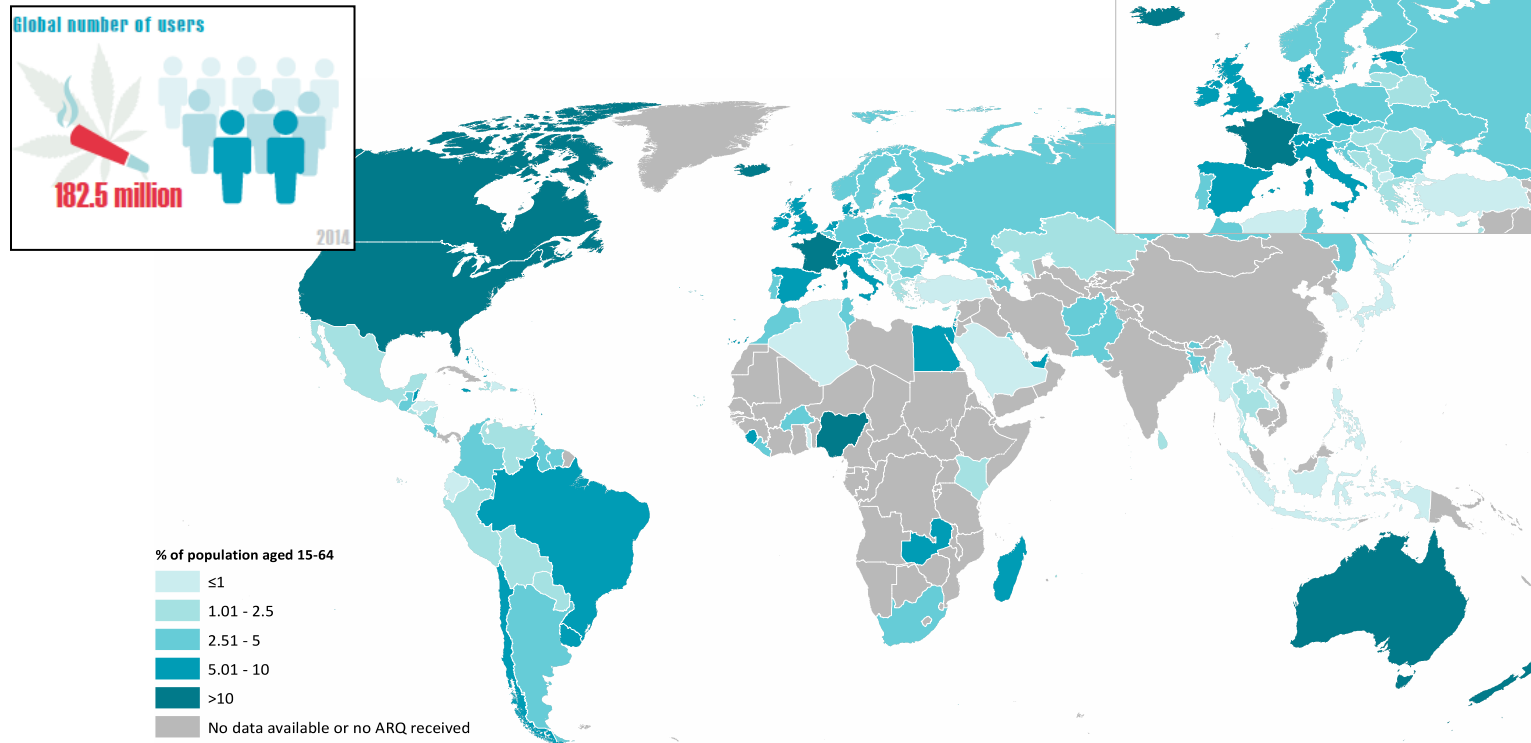
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# WORLD DRUG REPORT: PREVALENCE OF CANNABIS USE

**2015**  
(or last year available)



**2.6–5.0% of world population**  
**(119.000.000 - 224.000.000 users)**

UNODC (2016)

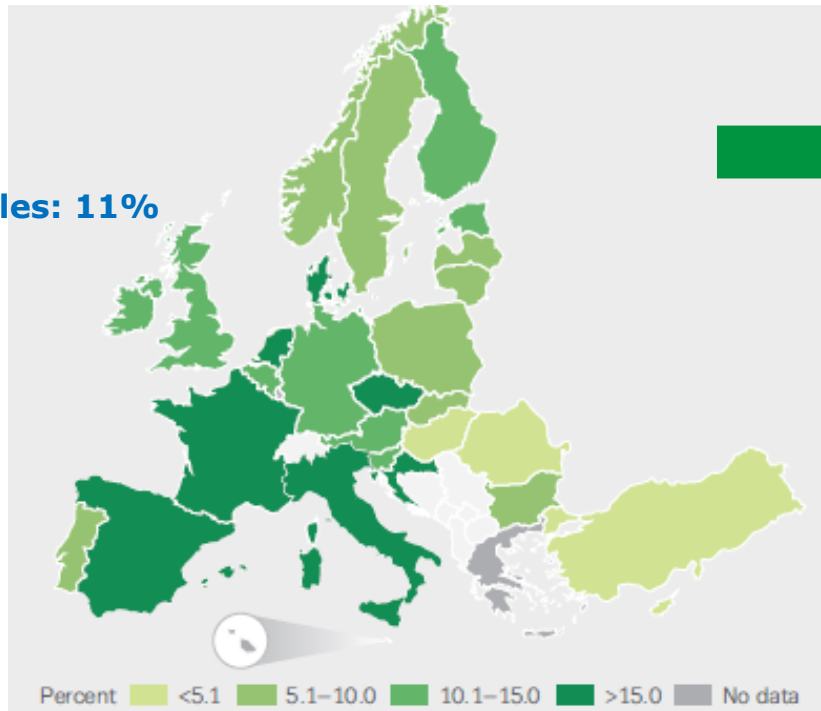
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# EUROPEAN DRUG REPORT: PREVALENCE OF CANNABIS USE

**Last year prevalence of cannabis use**  
(15–34 yrs.)

**England and Wales: 11%**



**Adults (15–64 yrs.)**  
7.0% (23.5 mio.)

**Adolescents and young adults  
(15–34 yrs.)**  
13.9% (17.1 mio.)

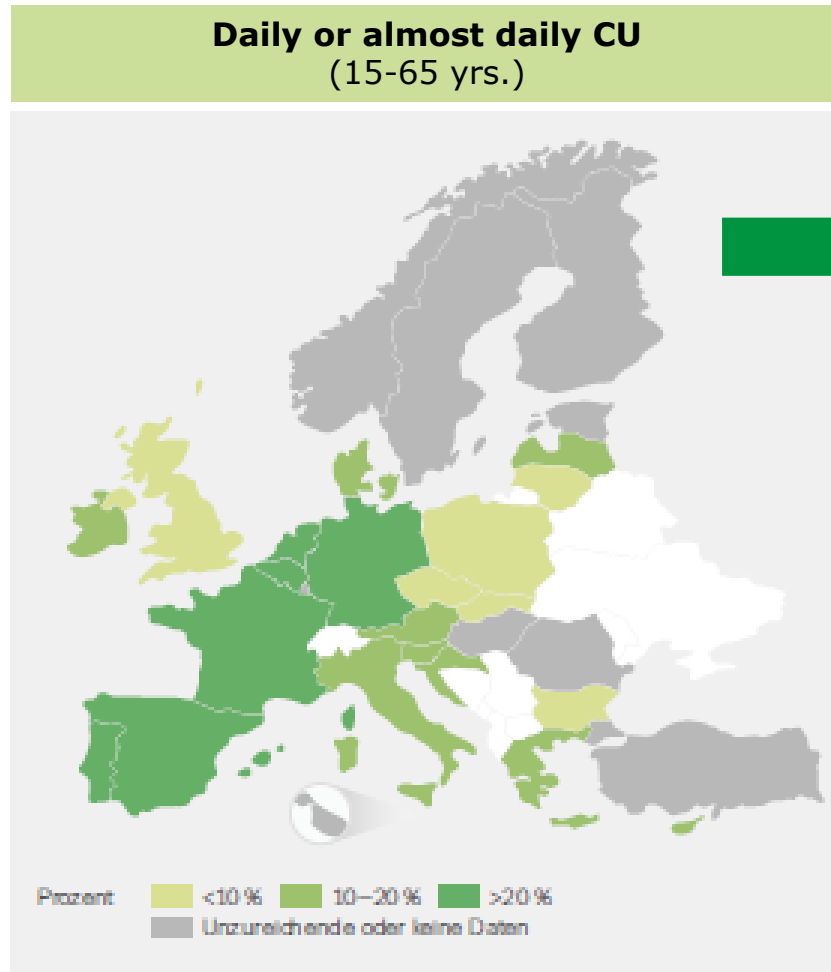
**Range: 3.3%–22.1%**

EMCDDA (2017)

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# EUROPEAN DRUG REPORT: INTENSIVE CANNABIS USE



**Adults (15-64 yrs.)**

1% (3 mio.)

Range: 0.05%–2.6%

**Global Burden  
of Disease Study:  
13.1 million  
cannabis dependents  
worldwide**

EMCDDA (2015) Degenhardt et al. (2013)

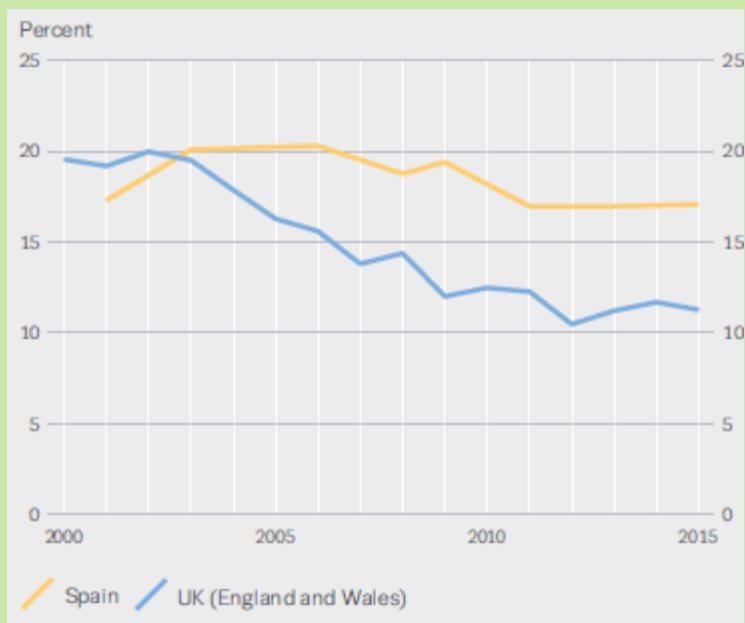
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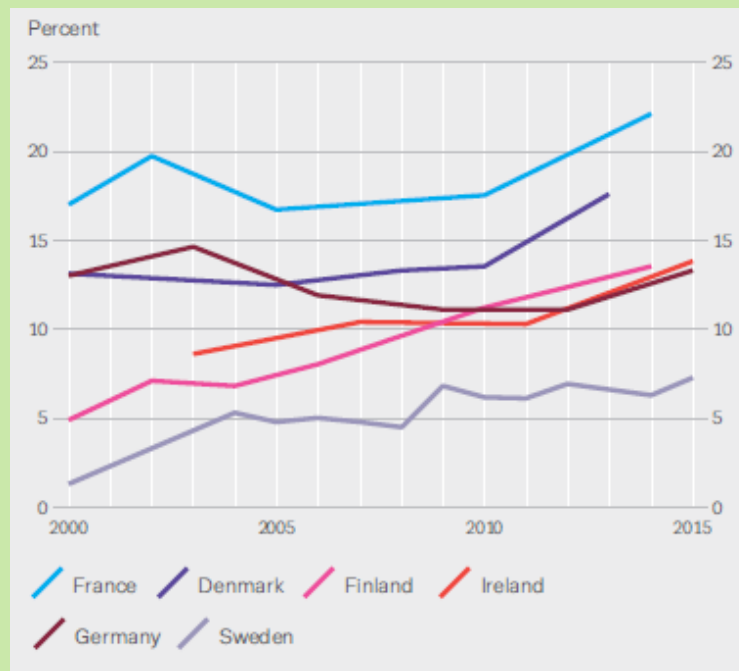
# EUROPEAN DRUG REPORT: PREVALENCE OF CANNABIS USE

**Last year prevalence\***  
(15–34 yrs.)

## Stable use



## Increasing use

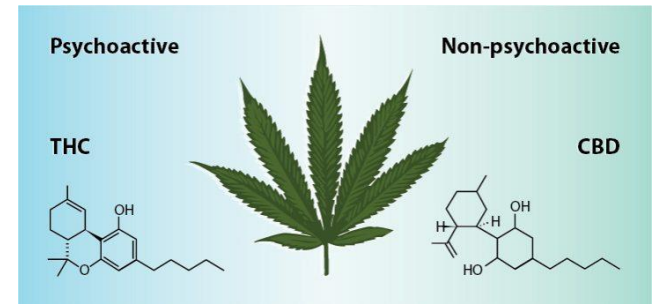


EMCDDA (2017)

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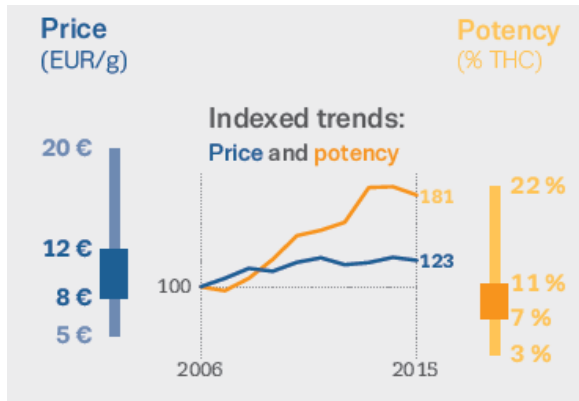
# CANNABIS AND CONSTITUENTS



- 700–1000 chemicals can be found in *Cannabis sativa* L., most of them are not psychoactive.
- Over 60 cannabinoids have been identified, but many of these are not explored for their properties (Elsohly & Slade, 2005).
- The most important cannabinoids are (Yamaori et al. 2010)
  - **Delta-9-tetrahydrocannabinol ( $\Delta^9$ -THC):** Psychoactive properties.
  - **Cannabidiol (CBD):** Anxiolytic, antipsychotic, anti-inflammatory, antiemetic, and neuroprotective actions.

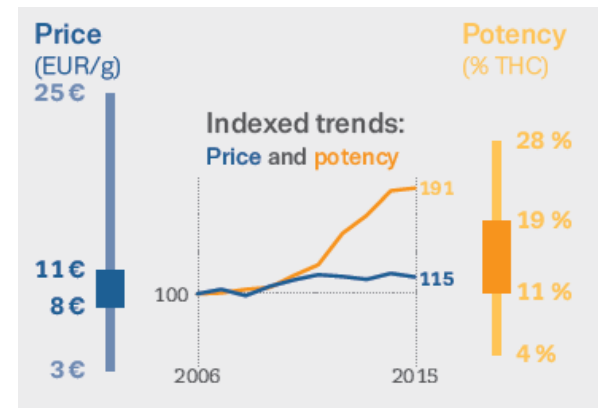
# EUROPEAN DRUG REPORT: THC IN CANNABIS PRODUCTS

## Herbal Cannabis (Marijuana)



EMCDDA (2017)

## Resin



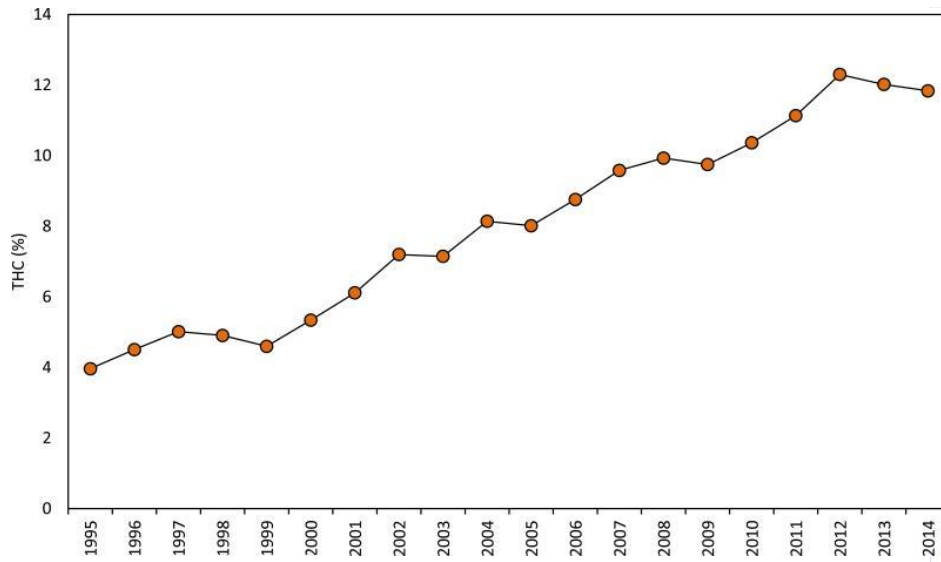
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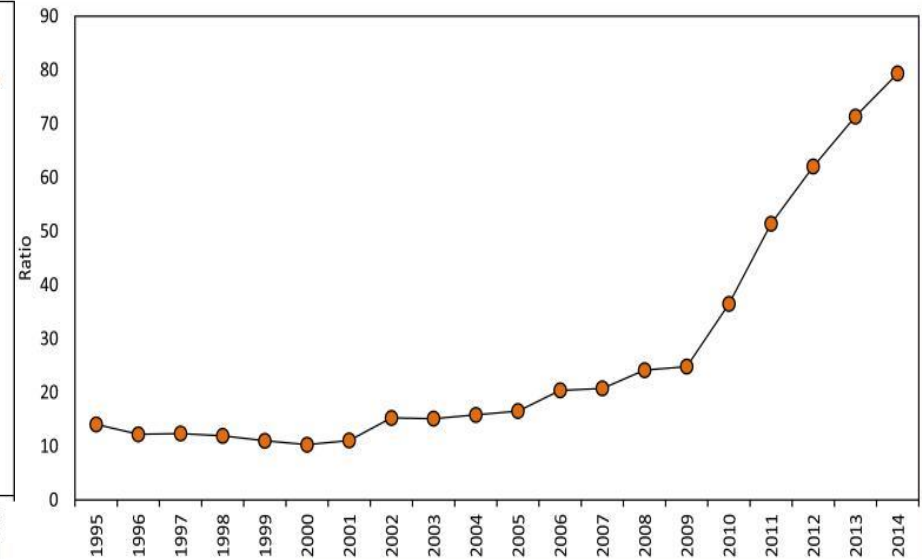


# UNIVERSITY OF MISSISSIPPI: THC-MONITORING PROGRAM

**Average THC concentration\***



**Average THC to CBD ratio\***



\*n=38,681 cannabis samples

ElSohly et al. (2016)

# „CANNABIS: POTENTIAL AND RISKS (CAPRIS)“

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NAME DER EINRICHTUNG.  
KANN AUCH 2 ZEILIG SEIN



# "CANNABIS: POTENTIAL AND RISIKS" (CAPRIS)

Gefördert durch:



Bundesministerium  
für Gesundheit

aufgrund eines Beschlusses  
des Deutschen Bundestages

**Funding:** Federal Ministry of Health

**Duration:** November 2015 - September 2017

## **Scientific expertise:**

- **Part A:** What are the mental, physical and social consequences of recreational cannabis use?
- **Part B:** How effective, tolerable and safe is medical cannabis for patients with different mental and physical disorders?

**Aim:** Comprehensive analysis of the scientific knowledge on risks and benefits of cannabis. Translation of findings to practice

**Trial Registration:** PROSPERO:CRD42016033249 und CRD42016053592

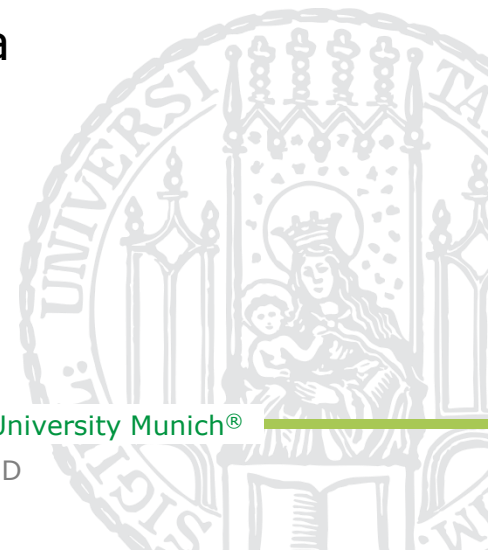
# "CANNABIS: POTENTIAL AND RISIKS" (CAPRIS)

## **A. Risks of recreational cannabis use**

1. Kognition
2. Physical health
3. Psychosocial consequences
4. Driving
5. Anxiety, affective disorders (incl. suicidality), bipolar disorders
6. Psychotic disorders
7. Synthetisc cannabinoids

## **B. Efficacy, tolerability and safety of medical cannabis**

1. Chronic pain
2. Spasticity due to multiple sklerosis and paraplegia
3. Nausea, vomitting and appetite stimulation
4. Physical disorders
5. Mental disorders



# SYSTEMATIC LITERATURE RESEARCH (SINCE 1.1.2006)

Pubmed

Medline

PsycInfo

EMBASE

**Clinical questions**



**1 Global search for systematic reviews / meta-analyses**

SIGN checklists, evidence tables, Levels of Evidence (LoE), Risk of Bias (ROBIS), confidence in Evidence



**12 de-novo searches for systematic reviews, RCTs, cohort studies**

SIGN checklists, evidence tables, Levels of Evidence (LoE), Risk of Bias (ROBIS), confidence in Evidence



**Cannabis: „Benefit and risk profile“ based on 2.100 publications**



# TREATMENT OF CANNABIS USE DISORDERS IN EUROPE

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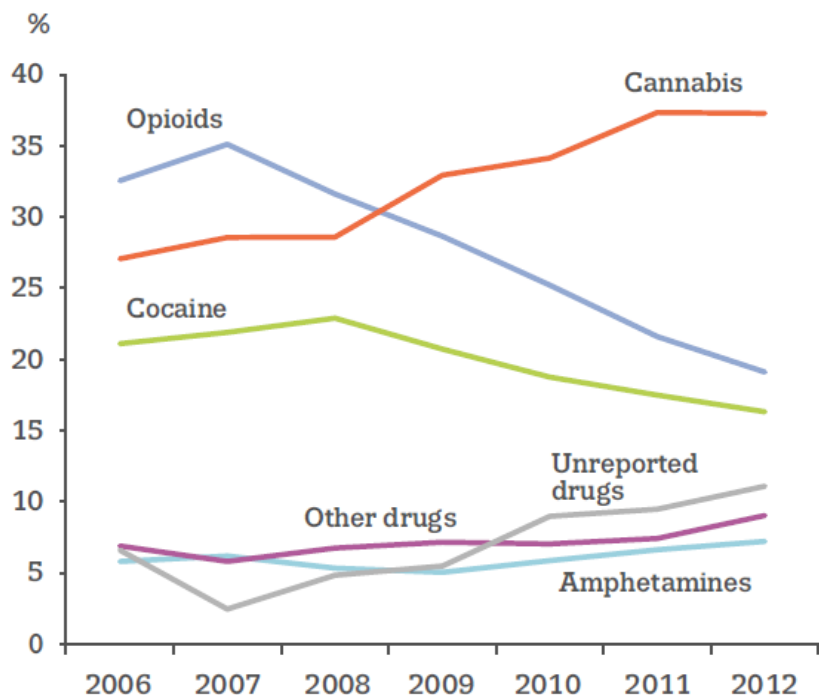
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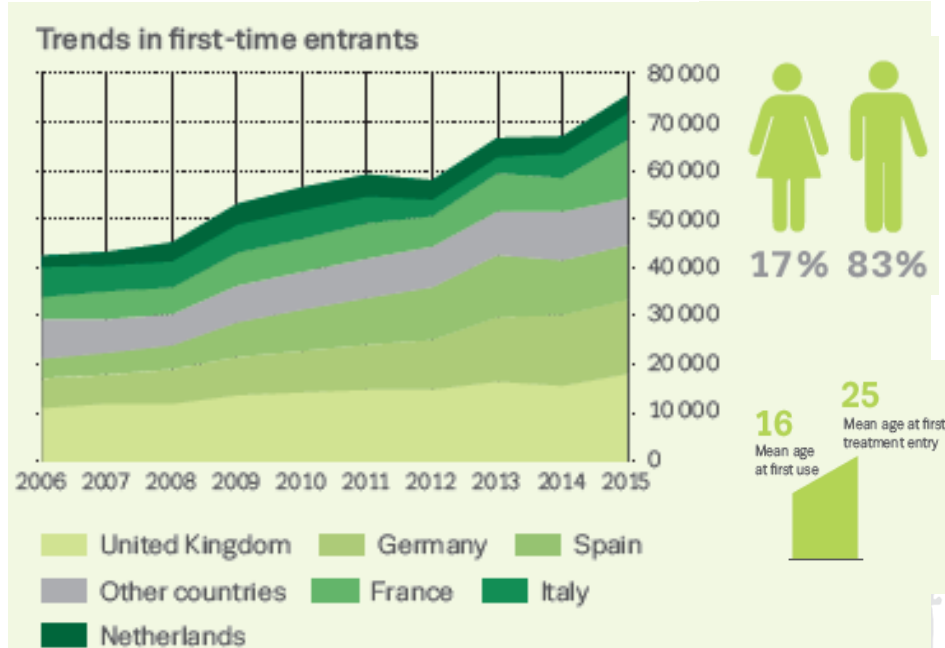
# EUROPEAN DRUG REPORT: TREATMENT DEMAND DUE TO ILLICIT DRUG USE

**Trends in first-time treatment entrants  
(by primary drug)**



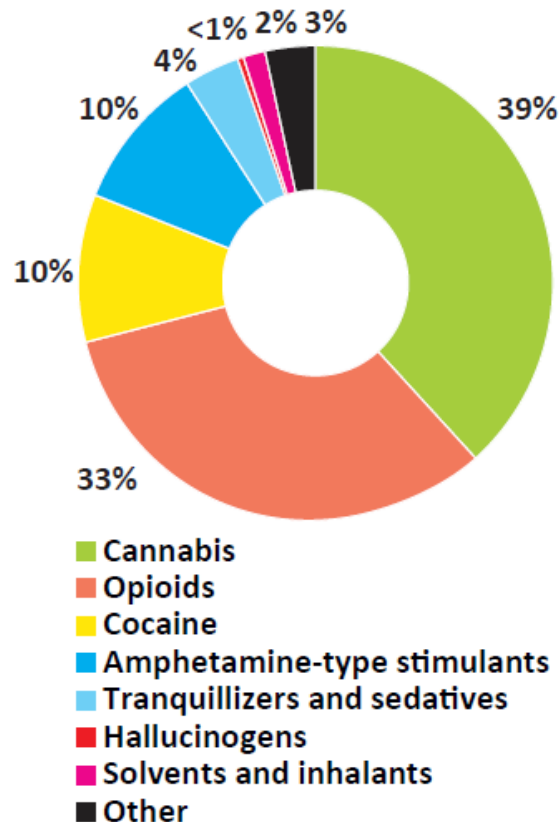
EMCDDA (2015)

**Trends in first-time treatment entrants  
(by country)**



EMCDDA (2017)

# WORLD DRUG REPORT 2017: PEOPLE IN TREATMENT DUE TO ILLICIT DRUG USE



2017:  
Most people in  
treatment because  
of cannabis!



Limited access to treatment!

[https://www.unodc.org/wdr2017/field/Booklet\\_2\\_HEALTH.pdf](https://www.unodc.org/wdr2017/field/Booklet_2_HEALTH.pdf)

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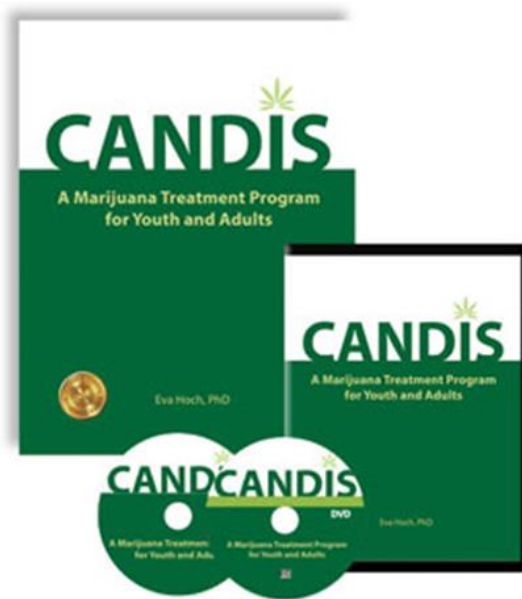
## Availability of cannabis-specific treatment (CST) in European countries

Country	CST available	CST coverage <sup>(1)</sup>	Implementation of CST planned <sup>(2)</sup>	Type of treatment offered
Belgium	Yes	Full	n.a.	CBT, MDFT, MI
Bulgaria <sup>(3)</sup>	No	n.a.	Yes	n.a.
Czech Republic <sup>(3)</sup>	Yes	Rare	n.a.	–
Denmark	Yes	Full	n.a.	CBT
Germany	Yes	Extensive	n.a.	CANDIS, CAN Stop, Quit the Shit, Realize It!, MDFT
Estonia	No	n.a.	Yes	n.a.
Ireland <sup>(3)</sup>	No	n.a.	No	n.a.
Greece	Yes	Full	n.a.	–
Spain	No	n.a.	–	n.a.
France	No	n.a.	No	n.a.
Croatia <sup>(3)</sup>	Yes	Full	n.a.	–
Italy <sup>(3)</sup>	Yes	Extensive	n.a.	–
Cyprus	No	n.a.	Yes	n.a.
Latvia	No	n.a.	No	n.a.
Lithuania <sup>(3)</sup>	Yes	Extensive	n.a.	–
Luxembourg <sup>(3)</sup>	Yes	Extensive	n.a.	CANDIS
Hungary	No	n.a.	Yes	n.a.
Malta	No	n.a.	–	n.a.
Netherlands	Yes	Extensive	n.a.	MDFT, CBT
Austria <sup>(4)</sup>	Yes	–	n.a.	CANDIS
Poland	Yes	Rare	n.a.	CANDIS <sup>(5)</sup>
Portugal	Yes	Limited	n.a.	–
Romania <sup>(3)</sup>	Yes	Limited	n.a.	–
Slovenia	No	n.a.	–	n.a.
Slovakia	Yes	Full	n.a.	CBT, MI
Finland	No	n.a.	–	n.a.
Sweden <sup>(4)</sup>	Yes	Extensive	n.a.	
United Kingdom	No	n.a.	–	n.a.
Turkey <sup>(3)</sup>	No	n.a.	–	n.a.
Norway <sup>(3)</sup>	Yes	Limited	n.a.	Out of the Fog

**CANDIS treatment program is offered various European countries.**



# WHAT IS CANDIS CURRICULUM



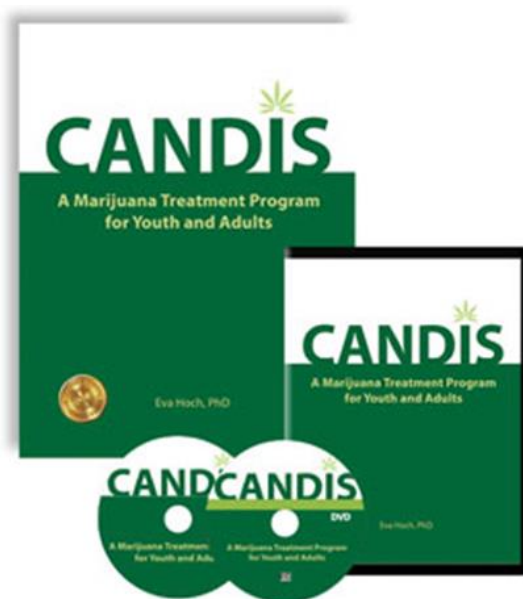
- **Evidence-based treatment program for cannabis use disorders**
- **Adolescents and adults**
- **10 individual sessions**
- **Treatment manual, DVD & video**
- **Can be used various settings (outpatient setting, inpatient setting, criminal justice settings, primary health care)**
- **Training available!**

[www.hazelden.org/web/go/candis](http://www.hazelden.org/web/go/candis)

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# CANDIS IS BASED ON BEST TREATMENT PRACTICES



- **Motivational Enhancement Therapy (MET)**  
Helps to identify and increase the participant's willingness to change his or her cannabis use.
- **Cognitive Behavioral Therapy (CBT)**  
Information and skills are presented to help the participant stop using cannabis and learn to lead an abstinent life.
- **Psychosocial Problem-Solving (PPS)**  
Improves problem-solving abilities and helps the participant to recognize and solve current and future mental or social problems.

# WHAT ARE THE GOALS OF CANDIS?

***Participant  
learns to...***

solve mental and social  
problems effectively

remain abstinent by using relapse  
prevention strategies

stop using cannabis

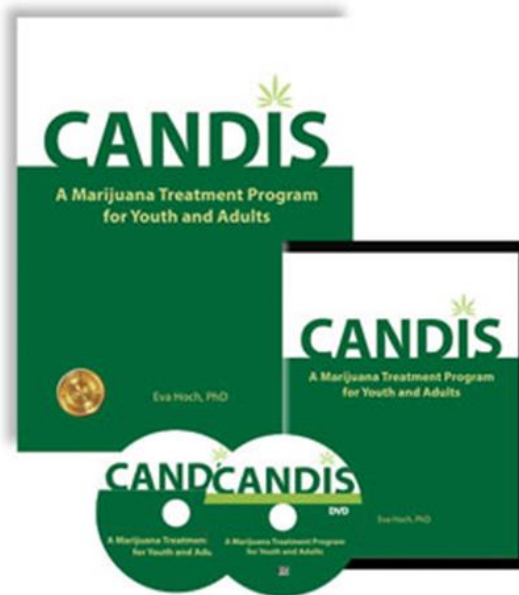
choose abstinence as his or her goal of treatment

accept therapy and participate regularly in treatment

recognize his or her problems associated with cannabis

# WHAT ARE THE MATERIALS

## 10 Sessions (50 - 90 mins.)



Session 1: Introduction to CANDIS-program

Session 2: Benefits of use and benefits of change

Session 3: Understanding cannabis use patterns

Session 4: Preparing a target day

Session 5: Debriefing the target day, dealing with craving

Session 6: Relapse prevention

Session 7: Problem solving, part 1

Session 8: Problem solving, part 2

Session 9: Cannabis and mental disorders

Session 10: Dealing with social pressure to use



Specific topics, clear goals, learner outcomes.

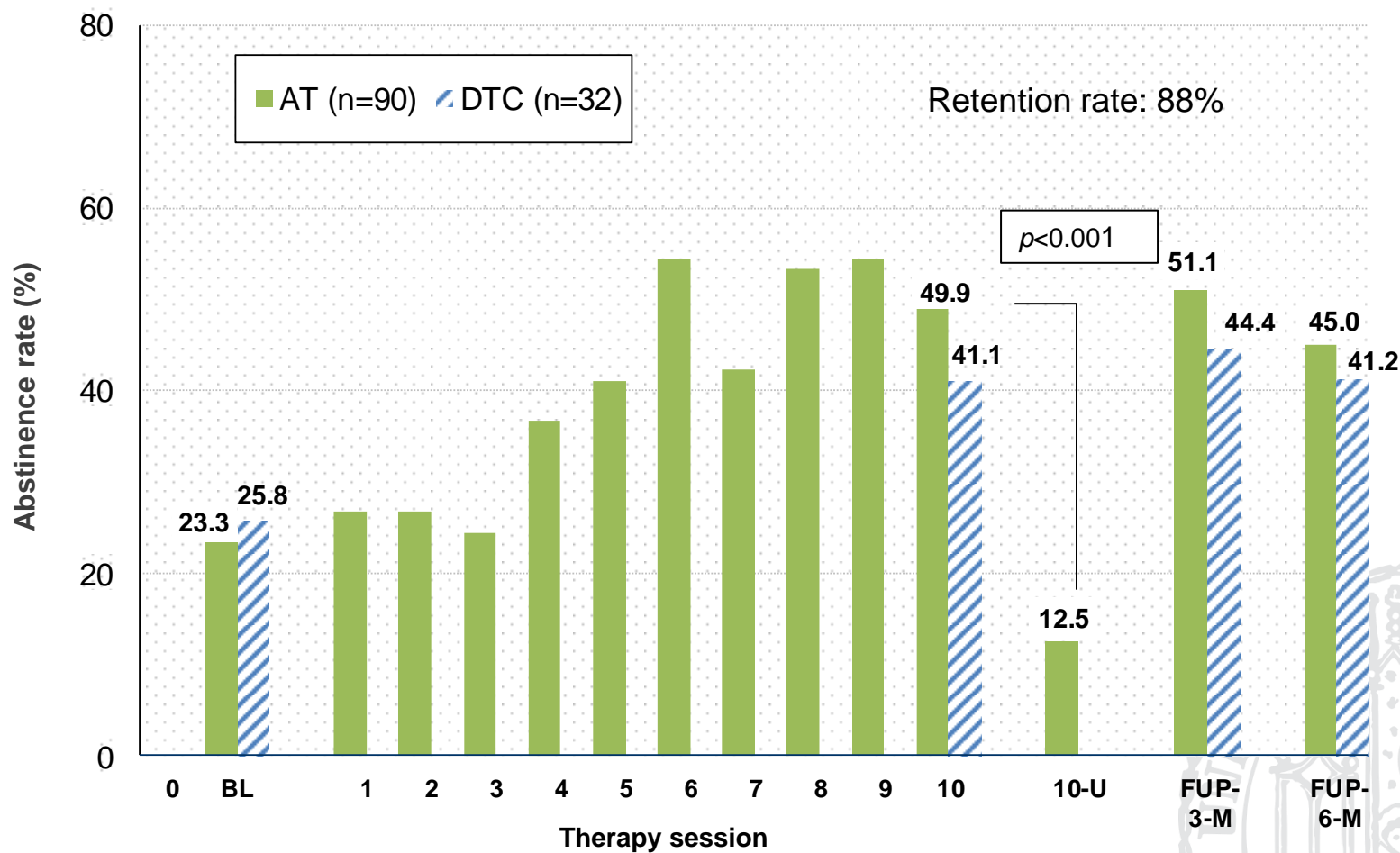
Exercises and materials enhance the participants change and learning process!

# EFFICACY OF CANDIS (2 RANDOMISED-CONTROLLED TRIALS)

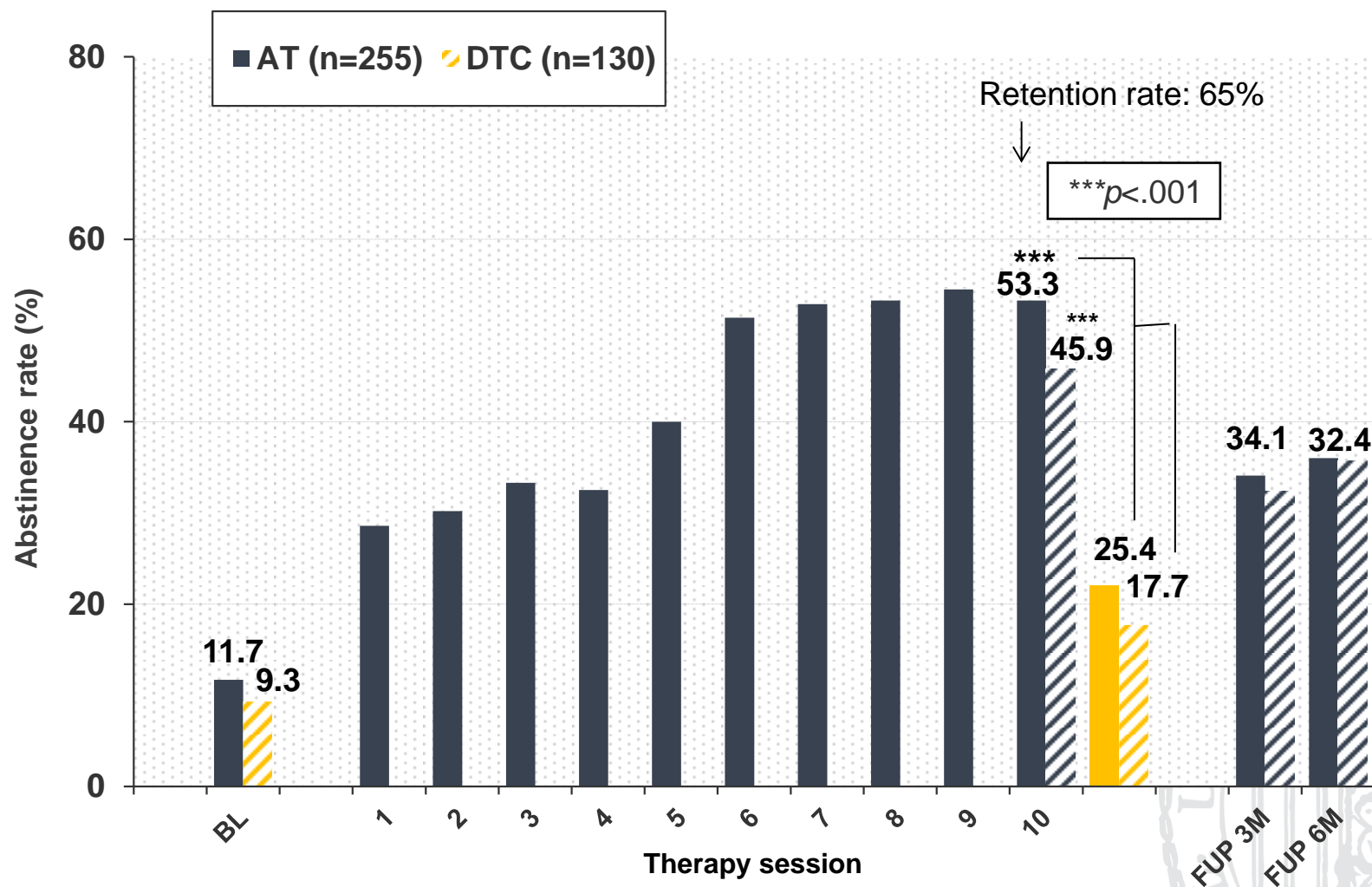
FUNDING: FEDERAL MINISTRY EDUCATION AND RESEARCH (400.000€)  
FEDERAL OF HEALTH (300.000 €)



# CANDIS I: ABSTINENCE RATES



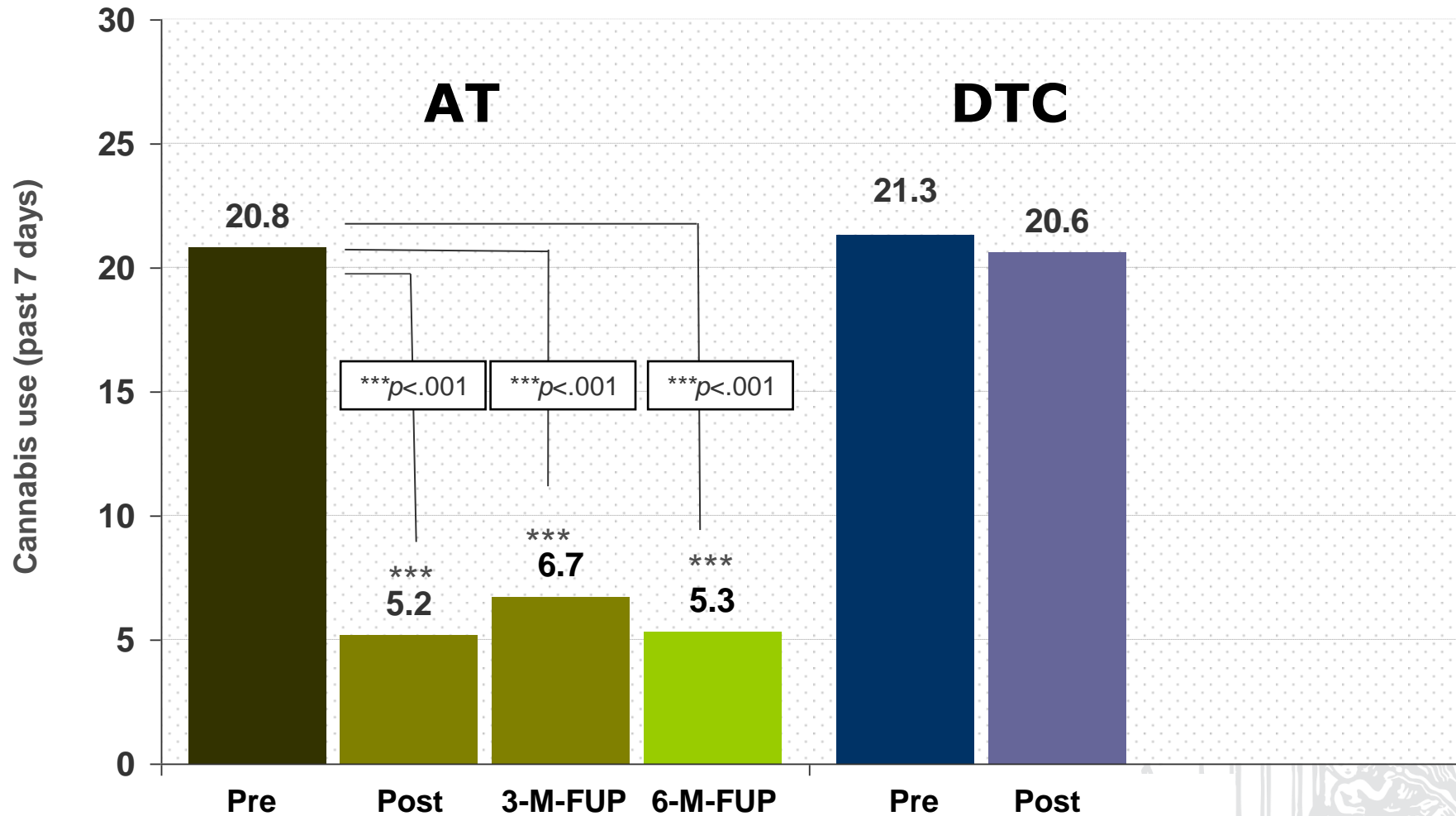
# CANDIS II: ABSTINENCE RATES



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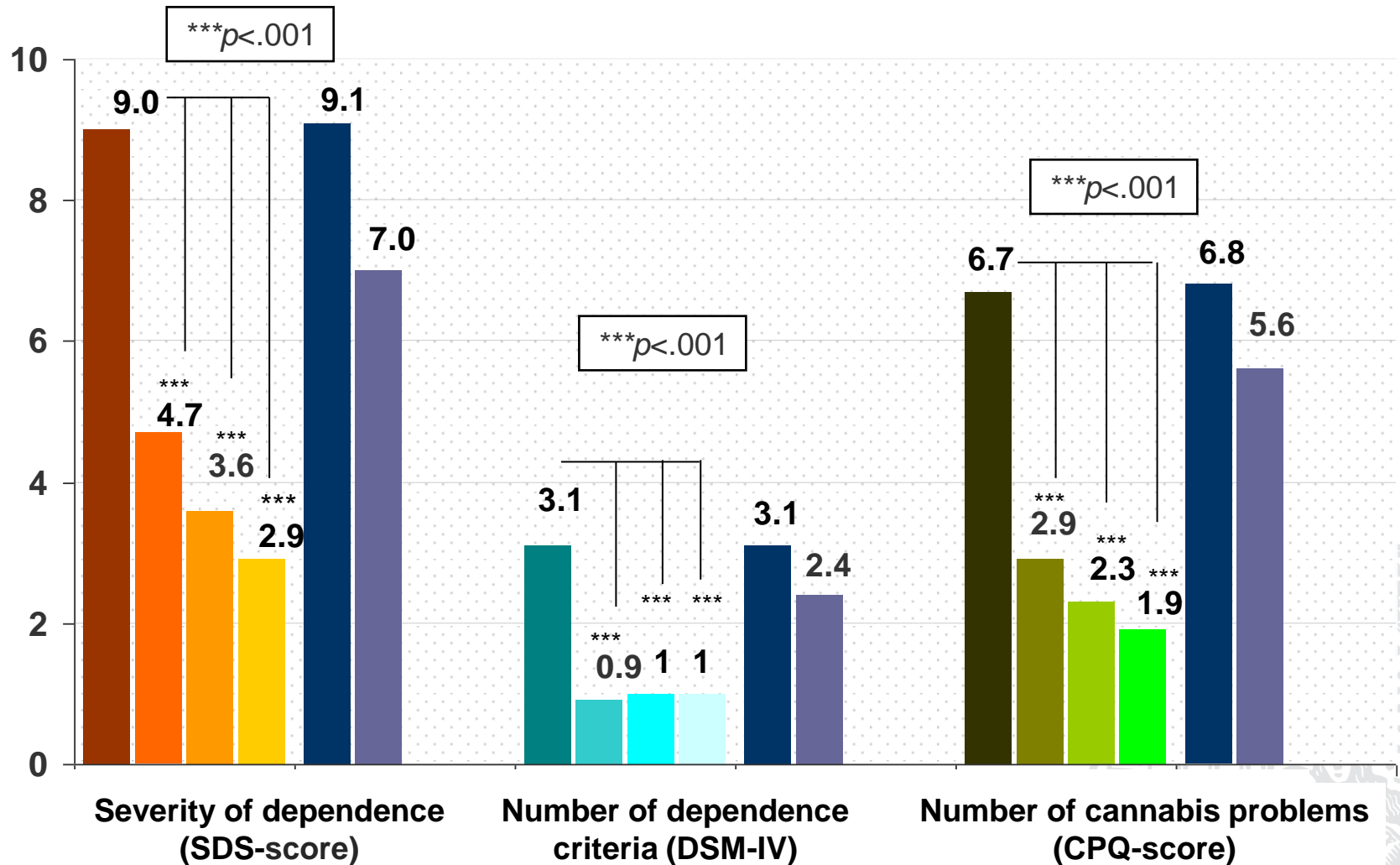


# CANDIS II: REDUCTION OF CANNABIS USE



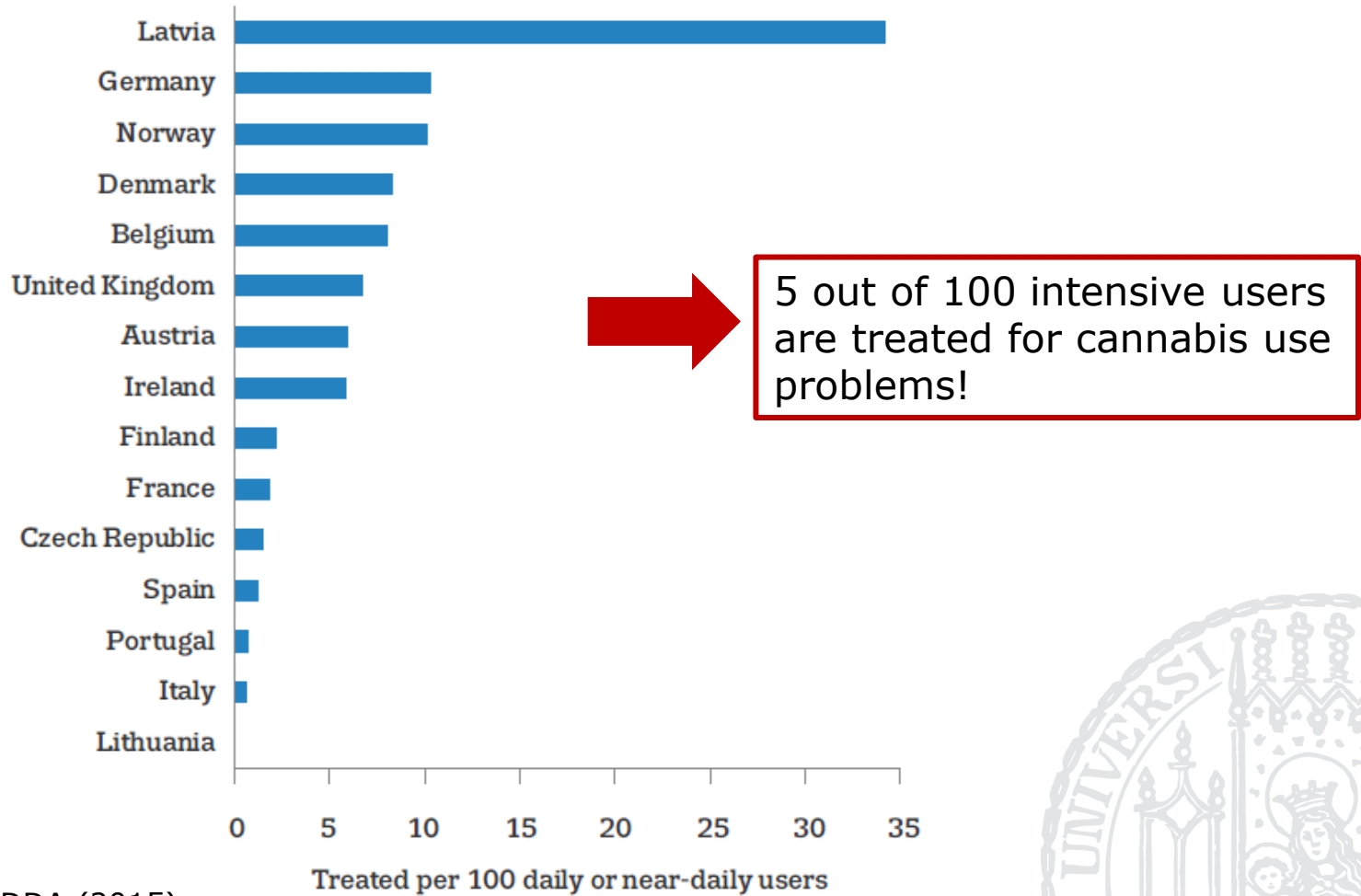
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# CANDIS II: DEPENDENCE AND CU PROBLEMS



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# EUROPEAN CANNABIS INSIGHT: UNMET TREATMENT NEEDS



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# SUMMARY AND CONCLUSION

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## SUMMARY

1. Cannabis is the most widely used illegal drug worldwide and prevalence of rates are increasing in many countries. The strength of cannabis products is increasing.
2. Progressing legalization tendencies of recreational and medical cannabis use
3. Medical benefit for chronic pain, nausea/vomiting/appetite stimulation, spasticity due to multiple sclerosis and paraplegia.
4. Scientific evidence indicates adverse effects: Cognitive impairment, poor educational outcome, mental problems (psychosis, depression, anxiety) and addiction.
5. Initiation of cannabis use in younger age, greater frequency of use and male gender increase the likelihood of developing these problems.
6. Cannabis is the principal reason for first illicit drug treatment in Europe.
7. Effective cannabis-specific treatment is available (e.g. CANDIS curriculum)
8. Large treatment gap: Only 5 treated cases per 100 daily users.

# THANK YOU FOR YOUR ATTENTION

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# Thank you!

**TWIST**  **Training With Stakeholders**  
Applying EU Addiction Research

[www.twist-train.eu](http://www.twist-train.eu)



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