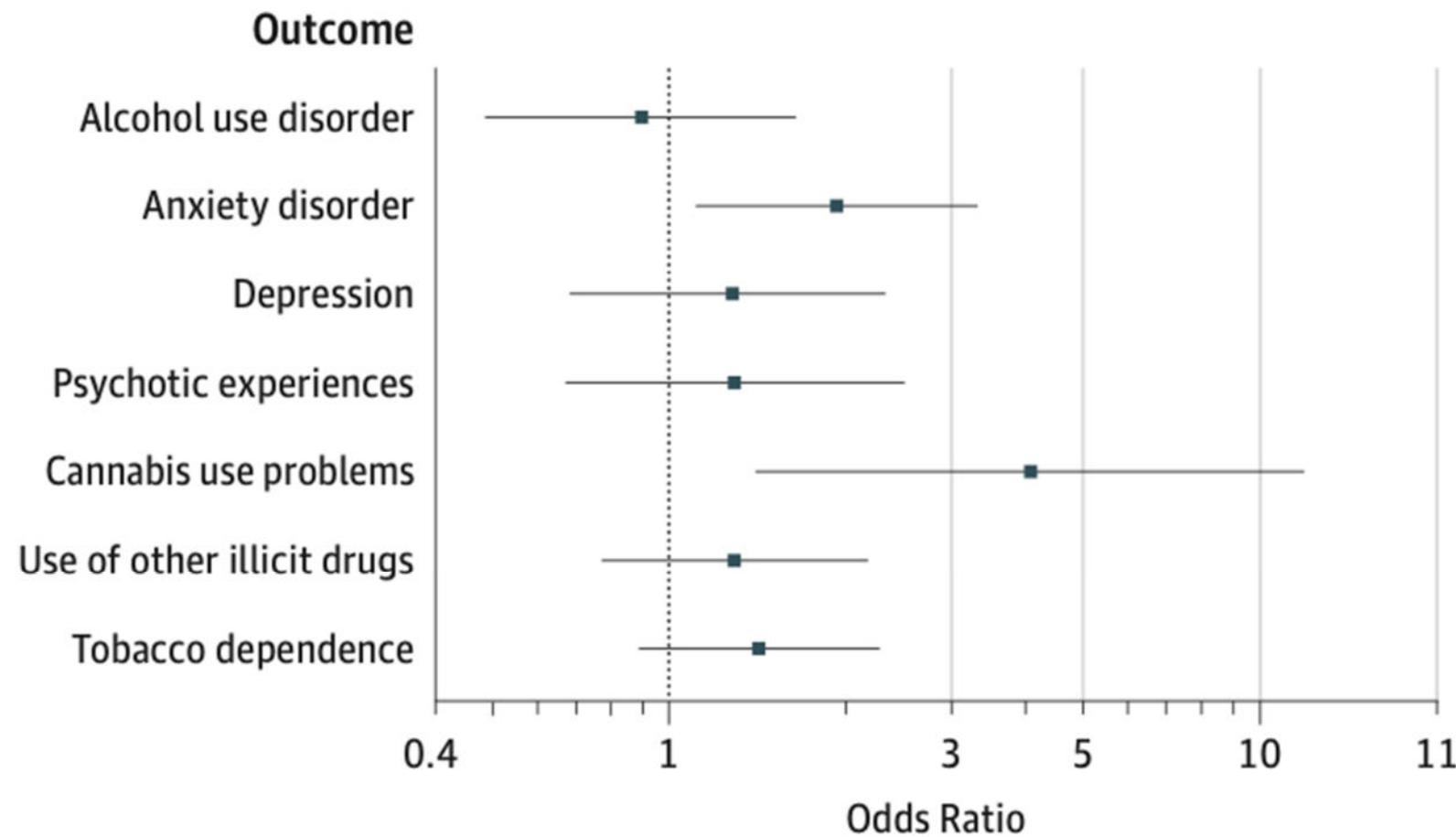




## I TRATTAMENTI TERAPEUTICI: LE NUOVE SFIDE FARMACOLOGICHE, LA CONTINUITÀ DELLE CURE E IL MIGLIORAMENTO DEGLI OUTCOME

SERGIO DE FILIPPIS

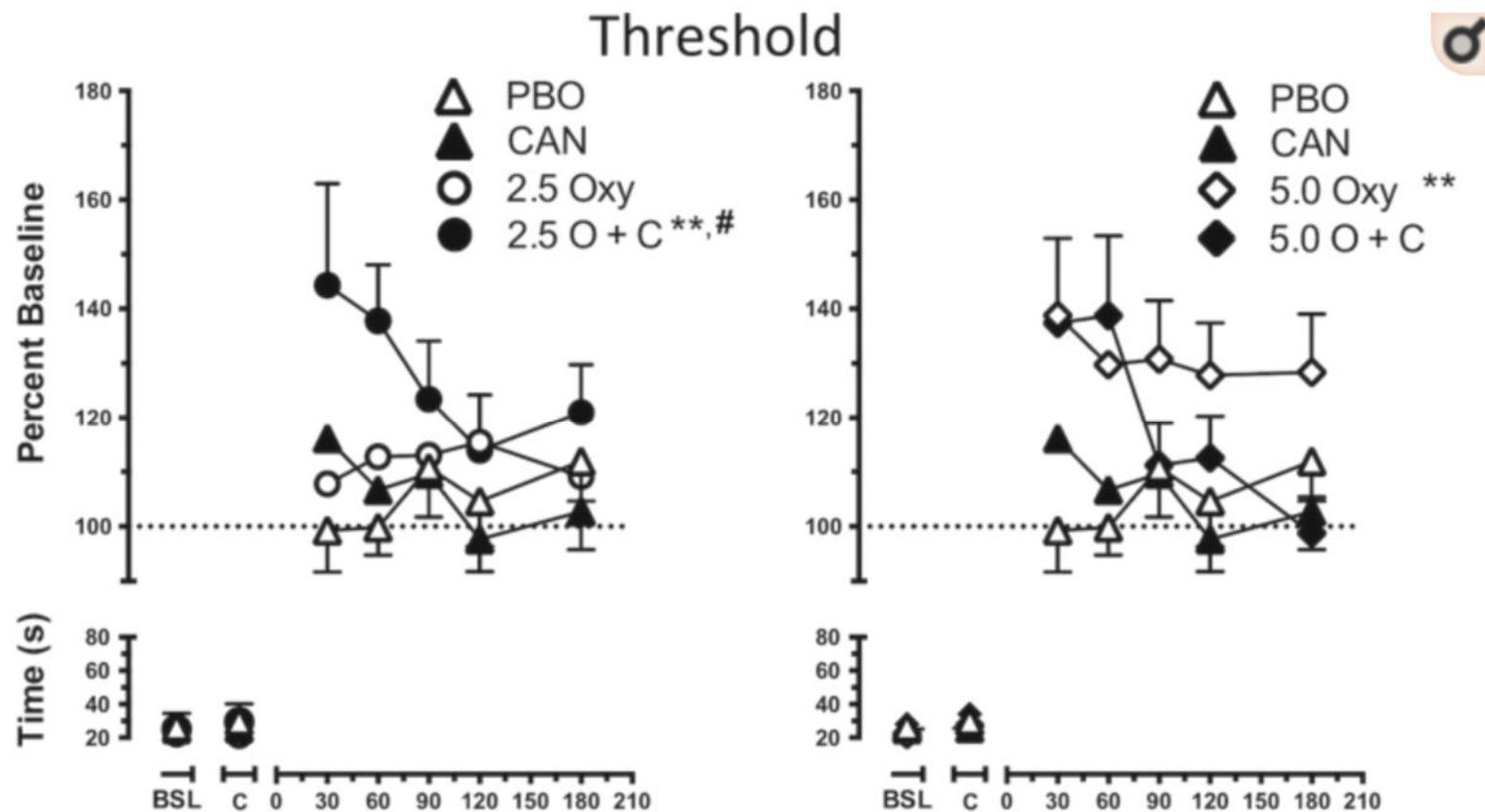
## Association of High-Potency Cannabis Use With Mental Health and Substance Use in Adolescence



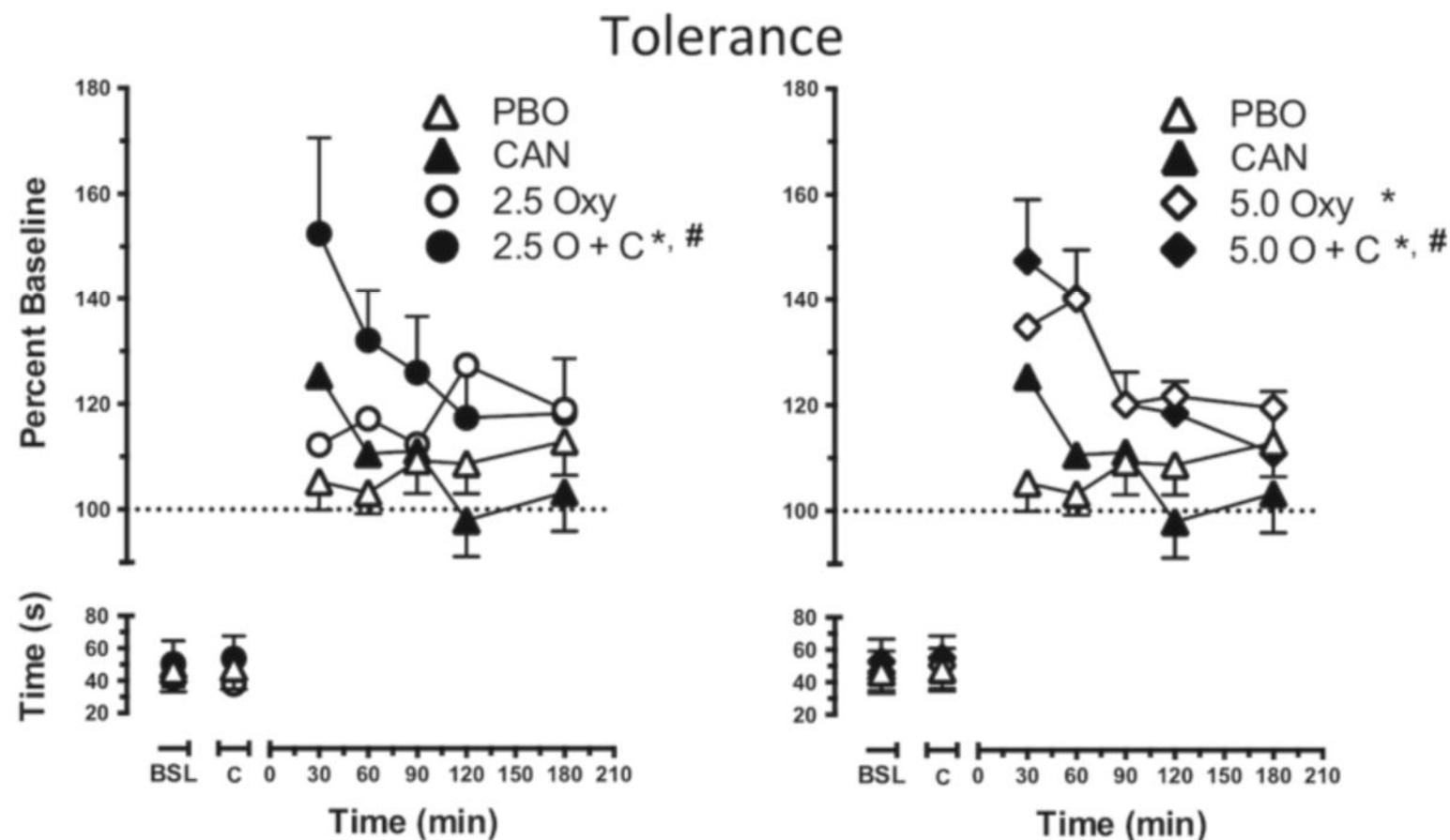
# Association of High-Potency Cannabis Use With Mental Health and Substance Use in Adolescence

| Characteristic                                 | Cannabis use, % <sup>a</sup>    |                                  | P value <sup>b</sup> |
|--|---------------------------------|----------------------------------|----------------------|
|  | High potency<br>(n = 141) 12,8% | Lower potency<br>(n = 946) 87,2% |                      |
| Regular cannabis use                           | 56.8                            | 17.6                             | ≤.001                |
| Cannabis use problems                          | 10.1                            | 0.8                              | ≤.001                |
| Use of other illicit drugs                     | 82.9                            | 66.5                             | ≤.001                |
| Tobacco dependence                             | 37.0                            | 15.1                             | ≤.001                |
| Alcohol use disorder                           | 15.1                            | 10.0                             | ≤.001                |
| Major depression (moderate or severe symptoms) | 11.7                            | 9.7                              | ≤.001                |
| Generalized anxiety disorder                   | 19.1                            | 11.6                             | ≤.001                |
| Psychotic-like experiences                     | 12.4                            | 7.1                              | ≤.001                |
| Male sex                                       | 71.6                            | 43.4                             | ≤.001                |
| Low maternal educational level                 | 19.2                            | 13.1                             | ≤.001                |
| Lower parental occupational class              | 32.2                            | 29.2                             | ≤.001                |
| Black or minority ethnic group                 | 5.3                             | 5.3                              | .94                  |
| Age at onset of cannabis use, mean (95% CI), y | 14.7 (14.3-15.1)                | 16.9 (16.8-17.2)                 | NA                   |
| MFQ score at 13 y, mean (95% CI)               | 5.6 (4.65-6.49)                 | 5.6 (5.26-5.95)                  | NA                   |
| No. PEs at 12 y, mean (95% CI)                 | 0.33 (0.18-0.48)                | 0.20 (0.16-0.24)                 | NA                   |

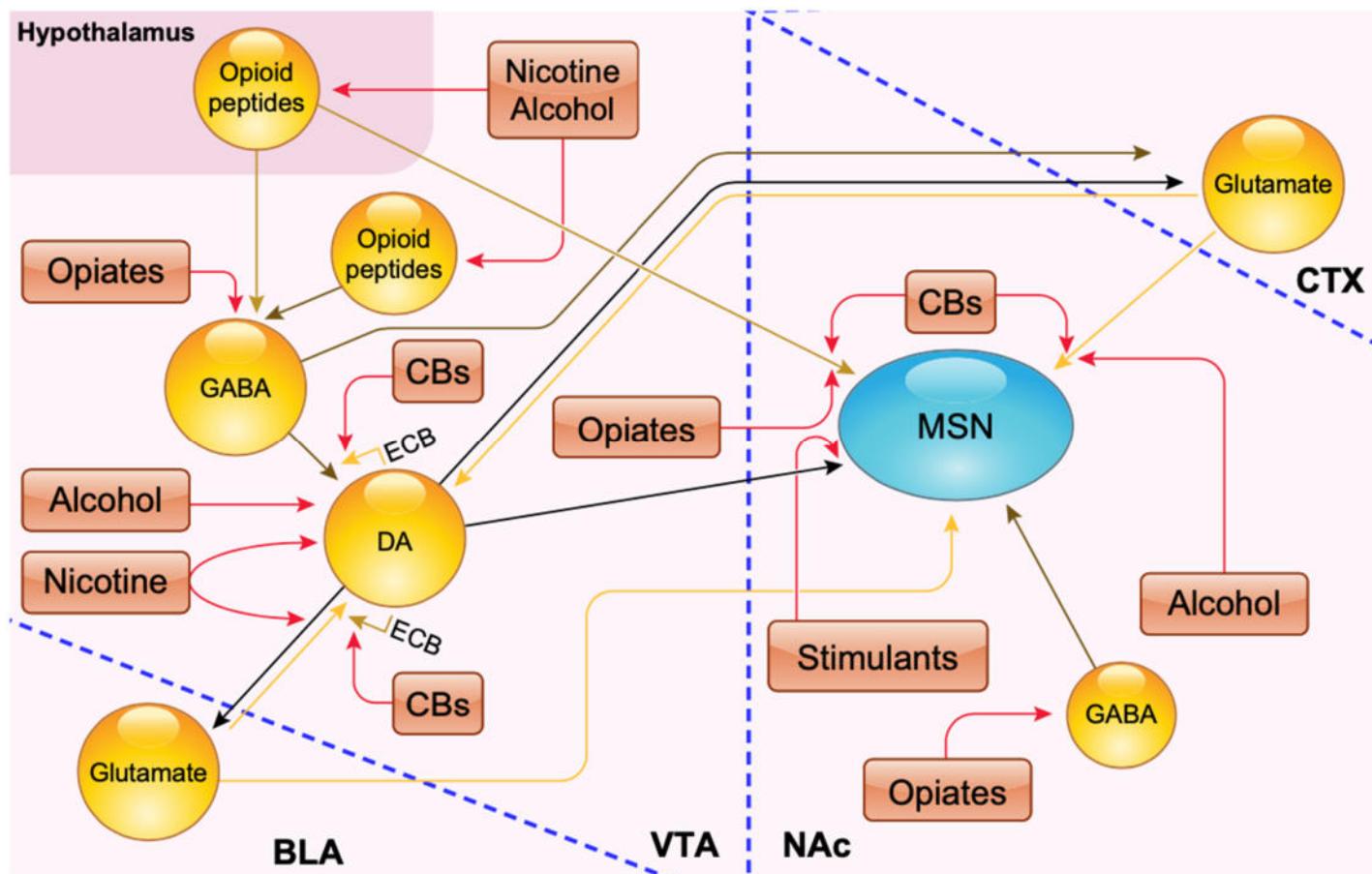
## Impact of co-administration of oxycodone and smoked cannabis on analgesia and abuse liability



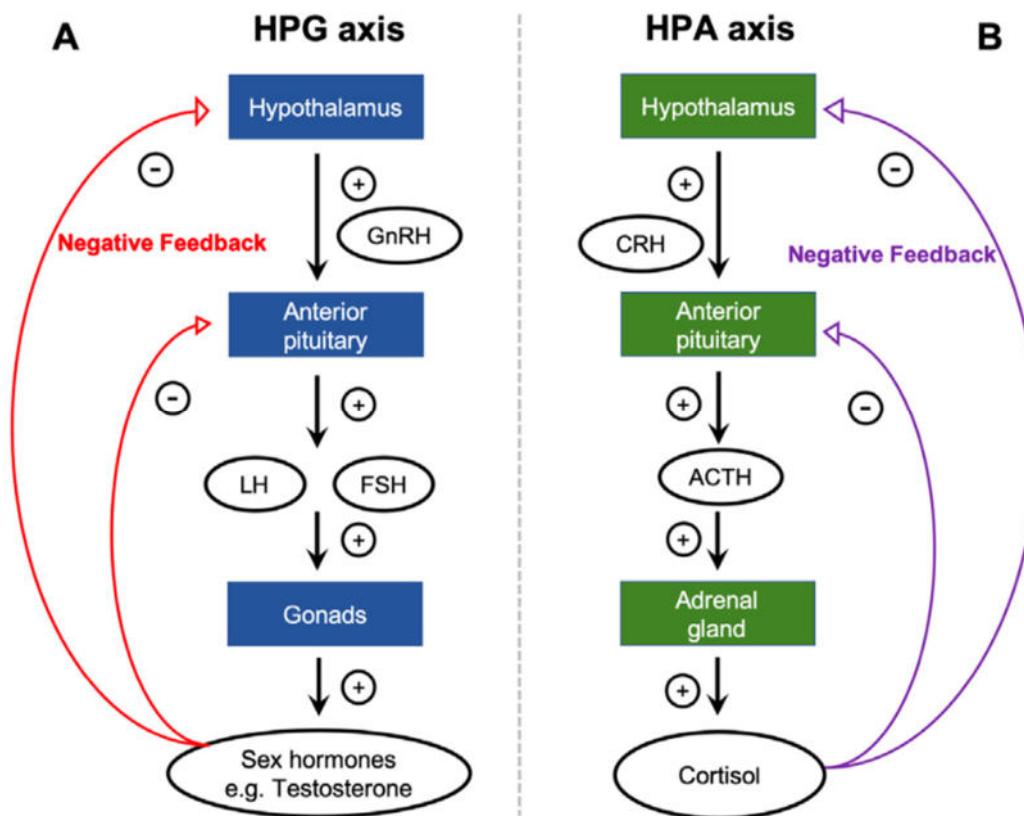
## Impact of co-administration of oxycodone and smoked cannabis on analgesia and abuse liability



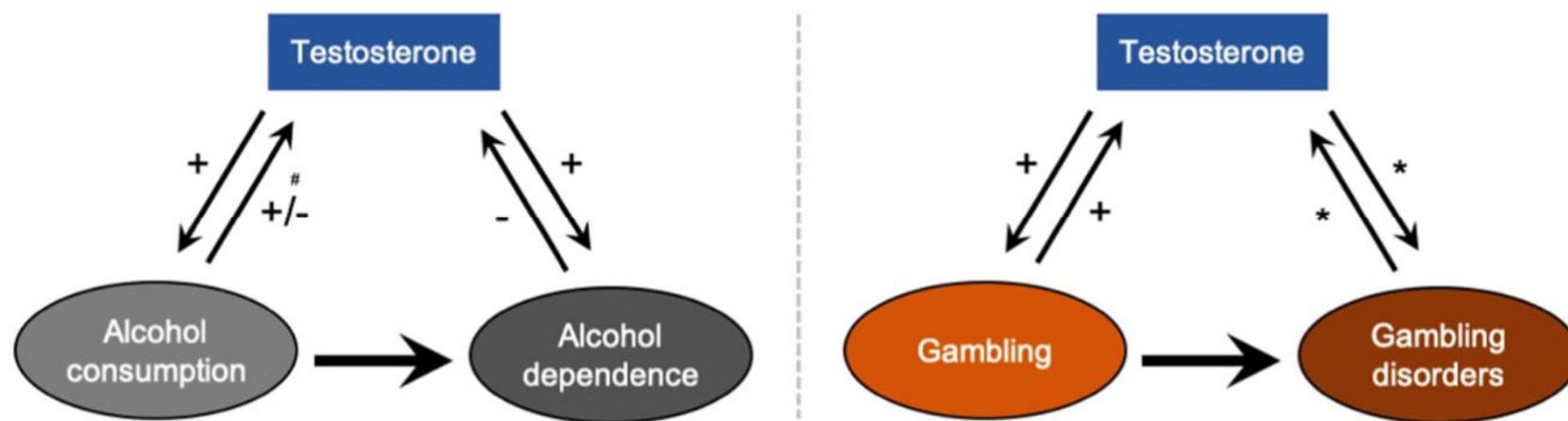
# THE NEUROSCIENCE OF DRUG REWARD AND ADDICTION



## Hormonal responses in gambling versus alcohol abuse: A review of human T studies



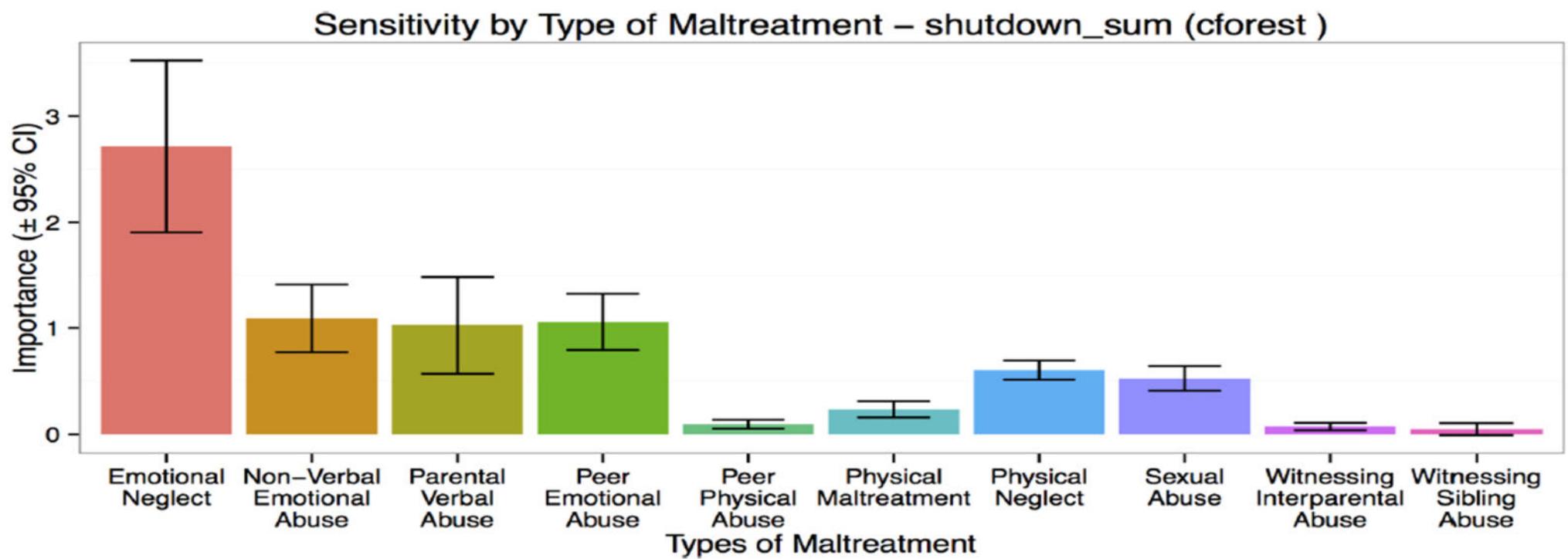
## Hormonal responses in gambling versus alcohol abuse: A review of human T studies



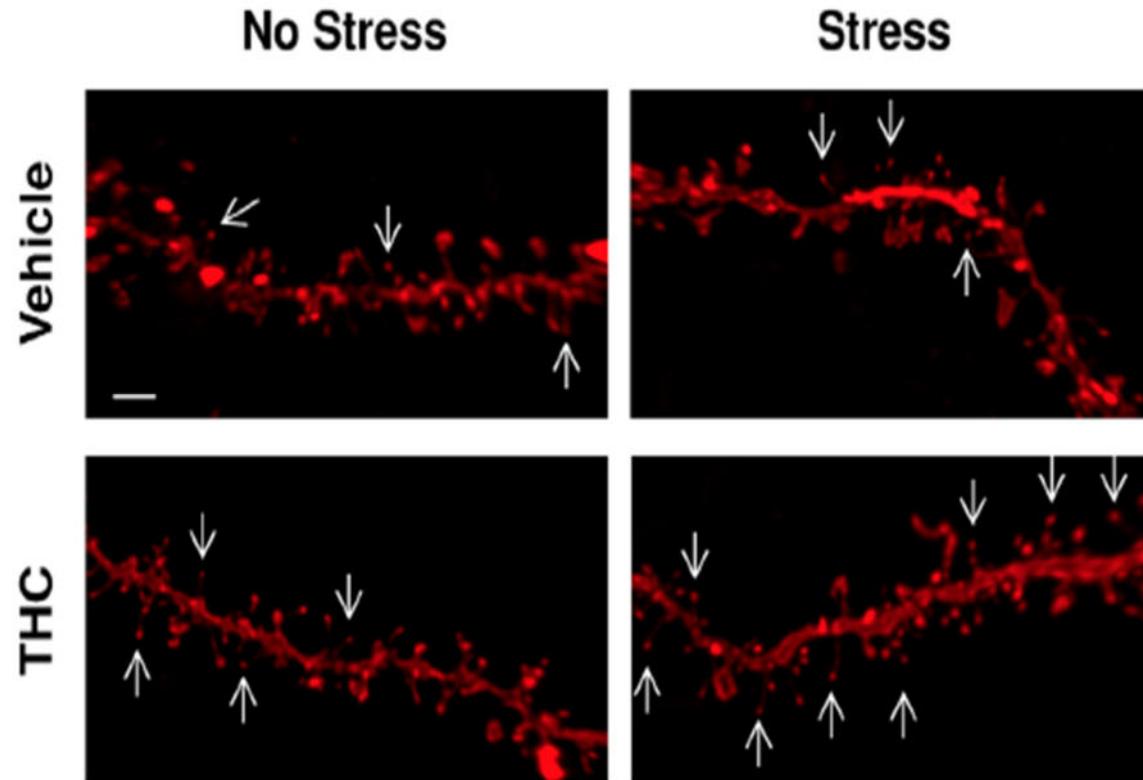
## INTERVENTO PRECOCE



## Type and timing of childhood maltreatment and severity of shutdown dissociation in patients with schizophrenia spectrum

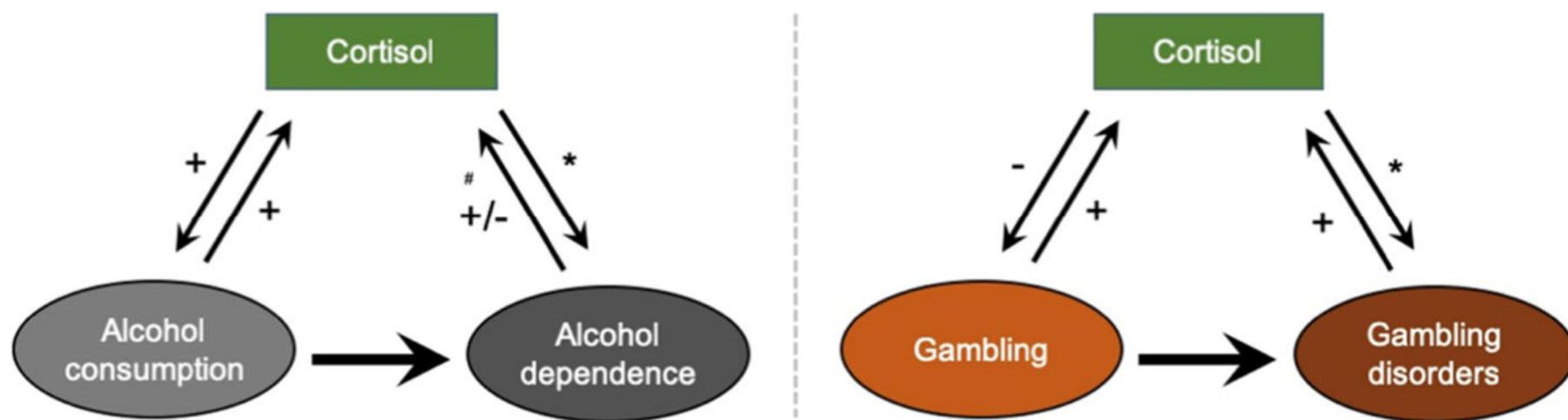


## Concomitant THC and stress adolescent exposure induces impaired fear extinction and related neurobiological changes in adulthood

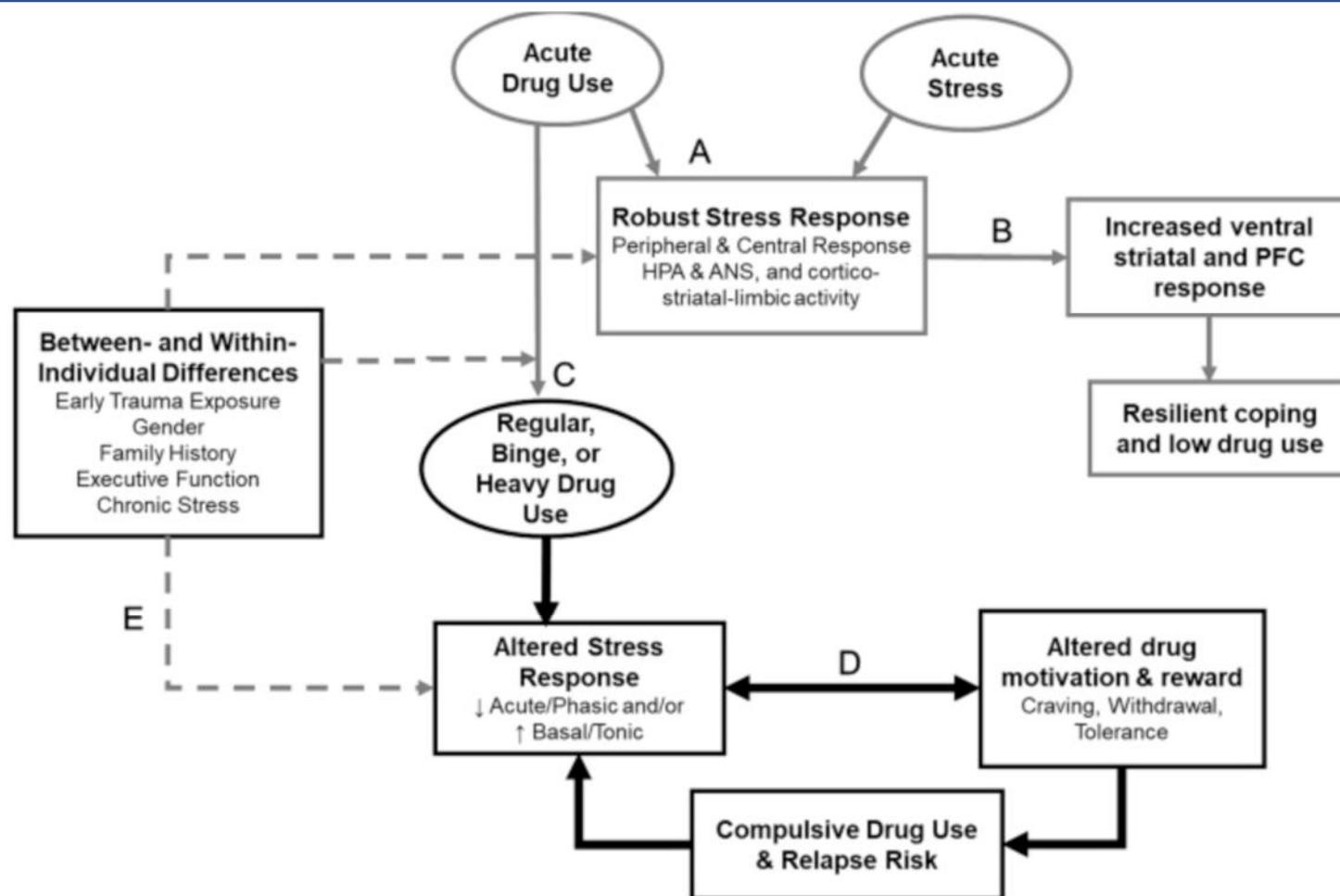


- Gli adolescenti che assumono THC e soggetti a stress presentano attacchi di panico e fobia sociale in età adulta
- Questo è associato ad uno squilibrio dei livelli plasmatici di corticosterone e ad una ridotta attività dell'amigdala
- L'aumento di corticosterone ha indotto una ipertrofia dendritica dei neuroni BLA e conseguente aumento attacchi di panico e fobia sociale in età adulta

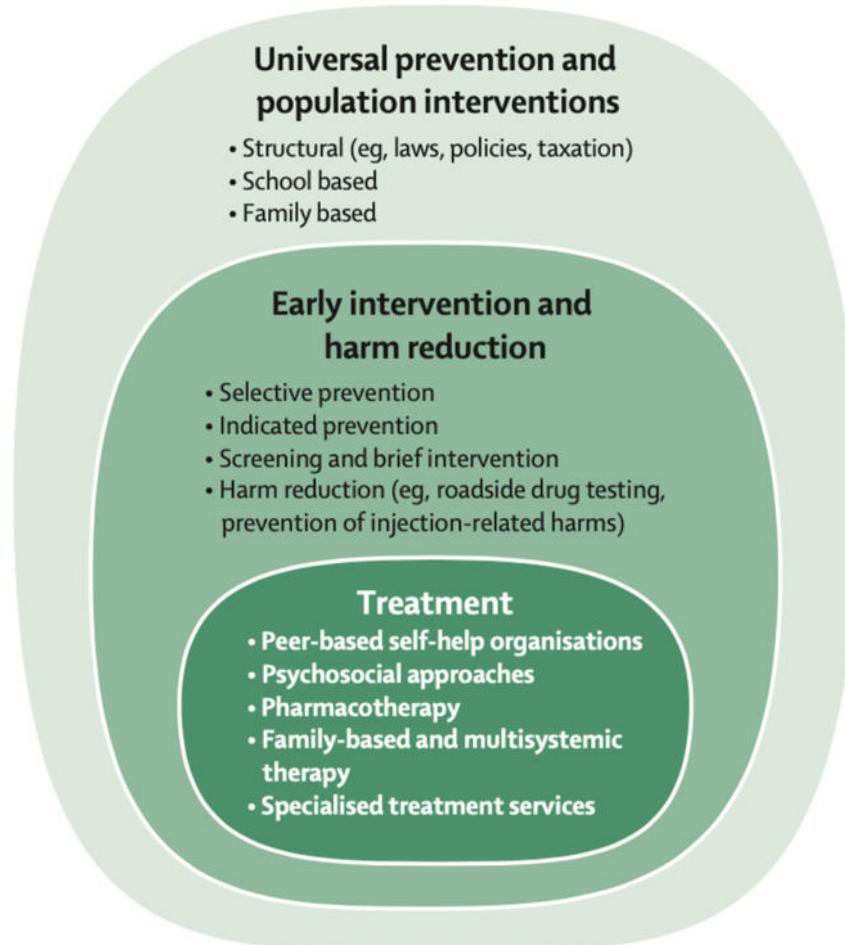
## Hormonal responses in gambling versus alcohol abuse: A review of human T studies



## Drug-induced stress responses and addiction risk and relapse

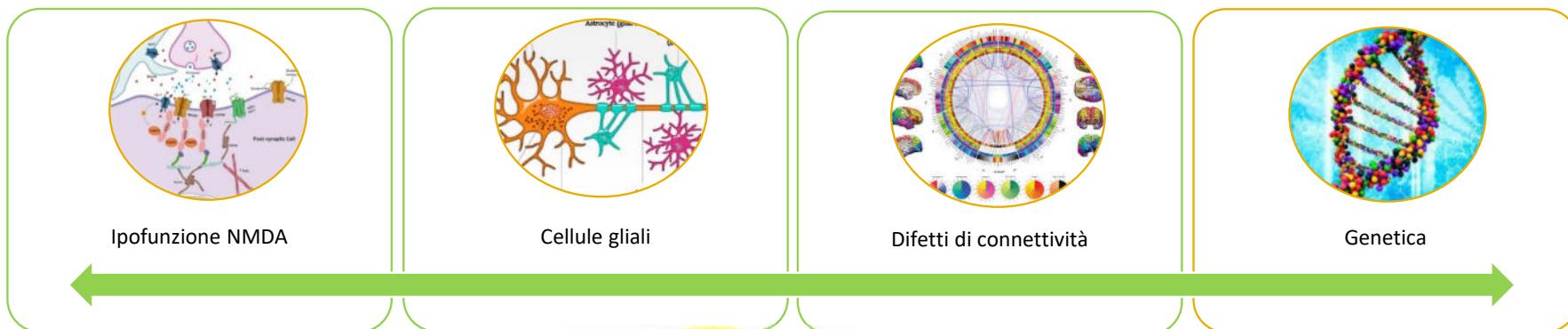


# Prevention, early intervention, harm reduction, and treatment of substance use in young people



*Emily Stockings et al; Lancet Psychiatry 2016*

## Schizofrenia Resistente Al Trattamento



### SCHIZOFRENIA AD ESORDIO PRECOCE (EOS)

Esordio < 12 anni (COS/VeOS) prevalenza 0,04%

Esordio 13-18 anni (AdOS) prevalenza 0,5%

84% sono  
resistenti  
al primo  
episodio

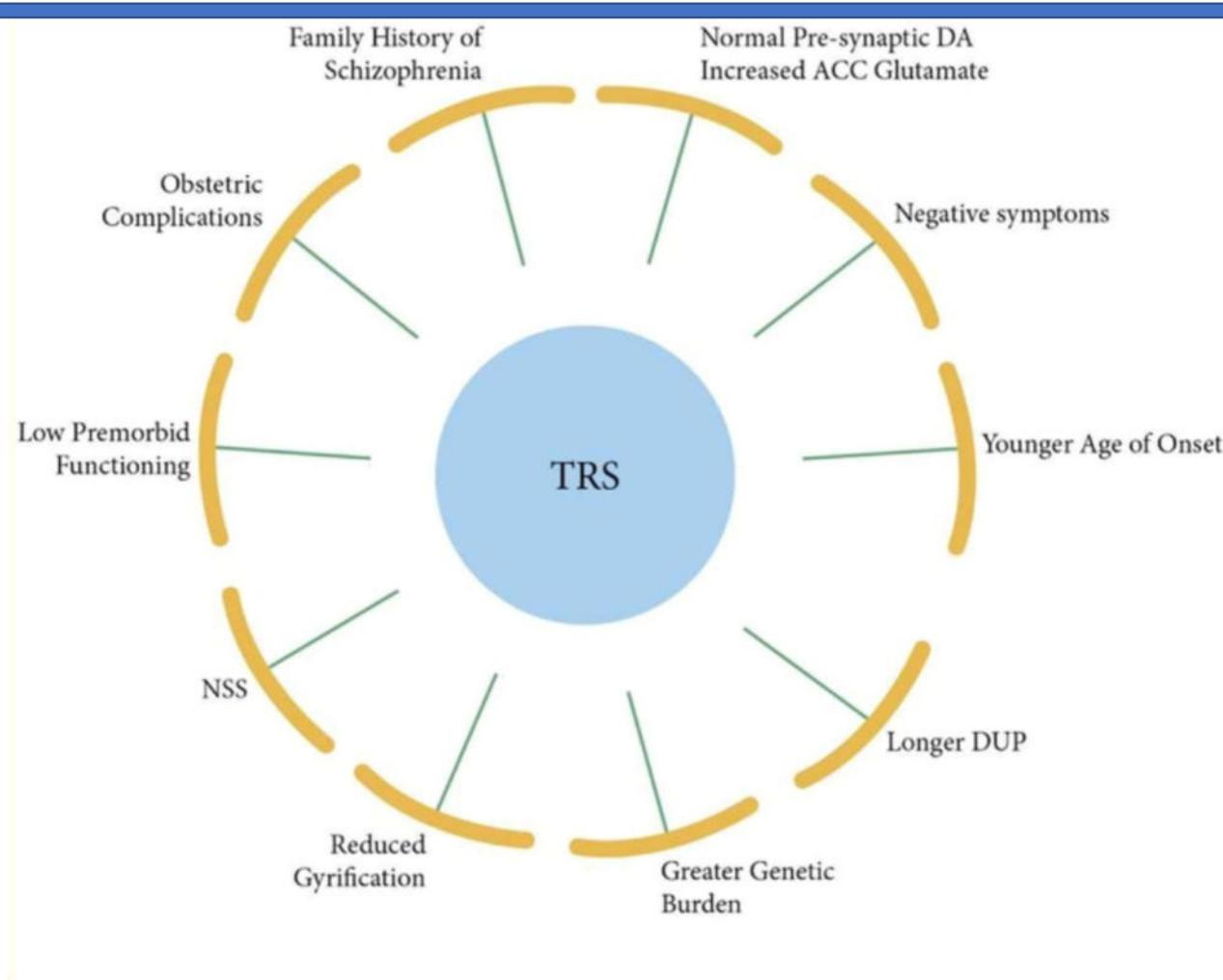
### SCHIZOFRENIA RESISTENTE AL TRATTAMENTO (TRS)

25-30% dei soggetti affetti da schizofrenia

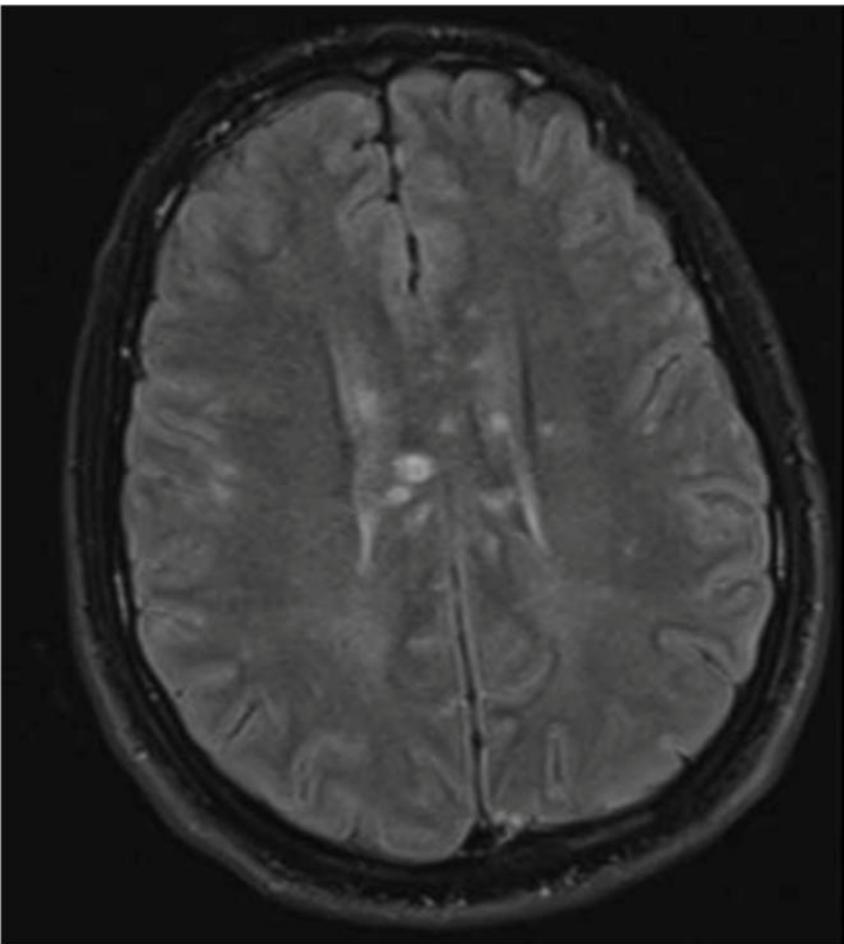
- Sintomi negativi più severi
- Maggiori deficit cognitivi
- Anomalie della morfologia cerebrale
- Alterazione dell'integrità della sostanza bianca
- Non risposta ai trattamenti convenzionali
- Segni Neurologici Sfumati più evidenti

- Peggior adattamento premorboso
- Maggiore durata di sintomi psicotici non trattati
- Abbandono prematuro degli studi
- Esiti a lungo termine peggiori
- Gravi deficit cognitivi
- Più alti tassi di suicidio e aggressività

# Clinical Course, Neurobiology and Therapeutic Approaches to Treatment Resistant Schizophrenia. Toward an Integrated View

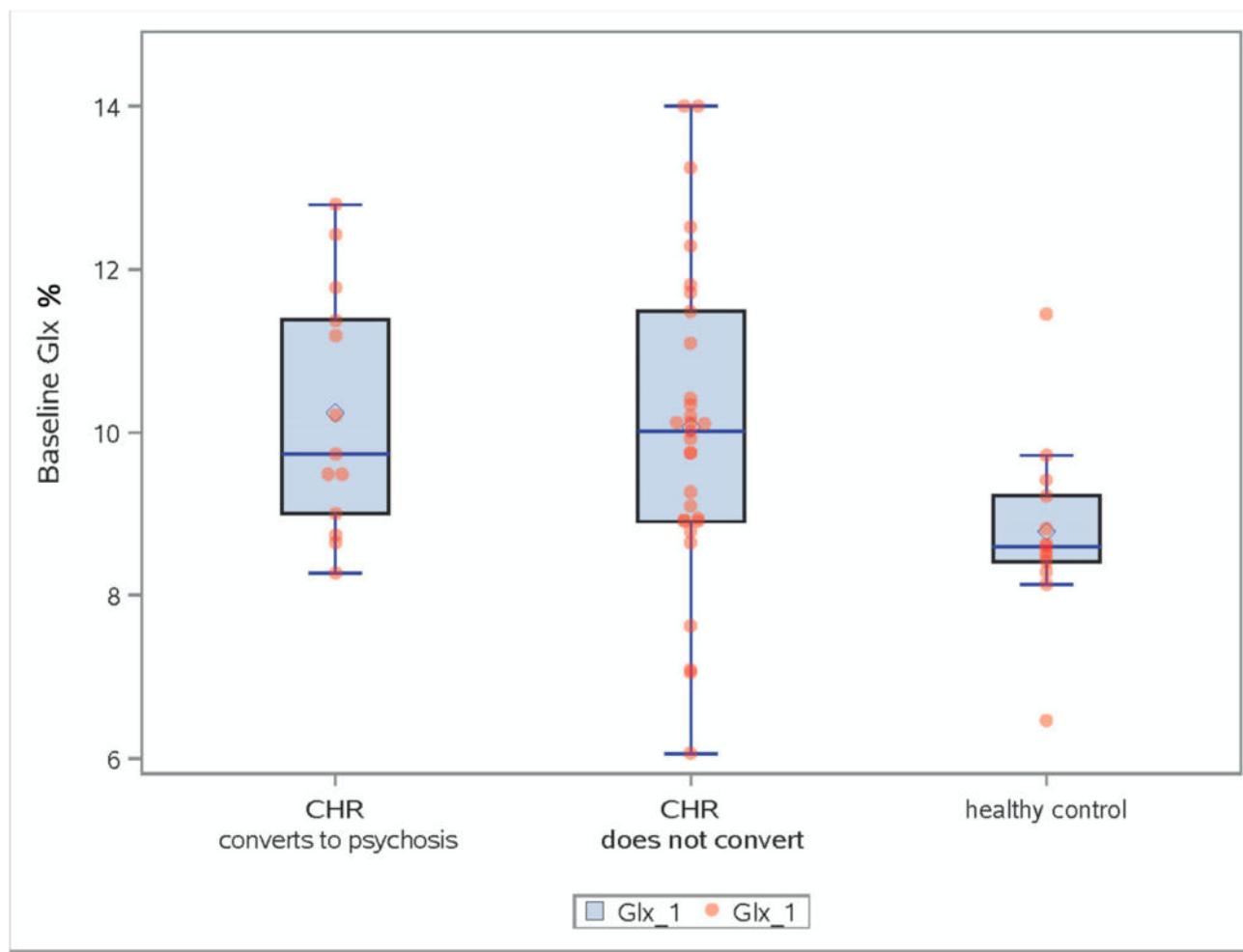


## Autoimmune-Mediated Psychosis: A Case Of Susac Syndrome in a Drug user



- Paziente di 23 anni da 3 anni storia di dipendenza da **cannabis e psicostimolanti**. Familiarità negativa per malattie psichiatriche o autoimmuni. Presenza di Deliri paranoidei, allucinazioni uditive e agitazione psicomotoria
- Lesioni multiple iperintense con coinvolgimento della materia bianca e grigia. La maggior parte delle lesioni sono localizzate nel corpo calloso

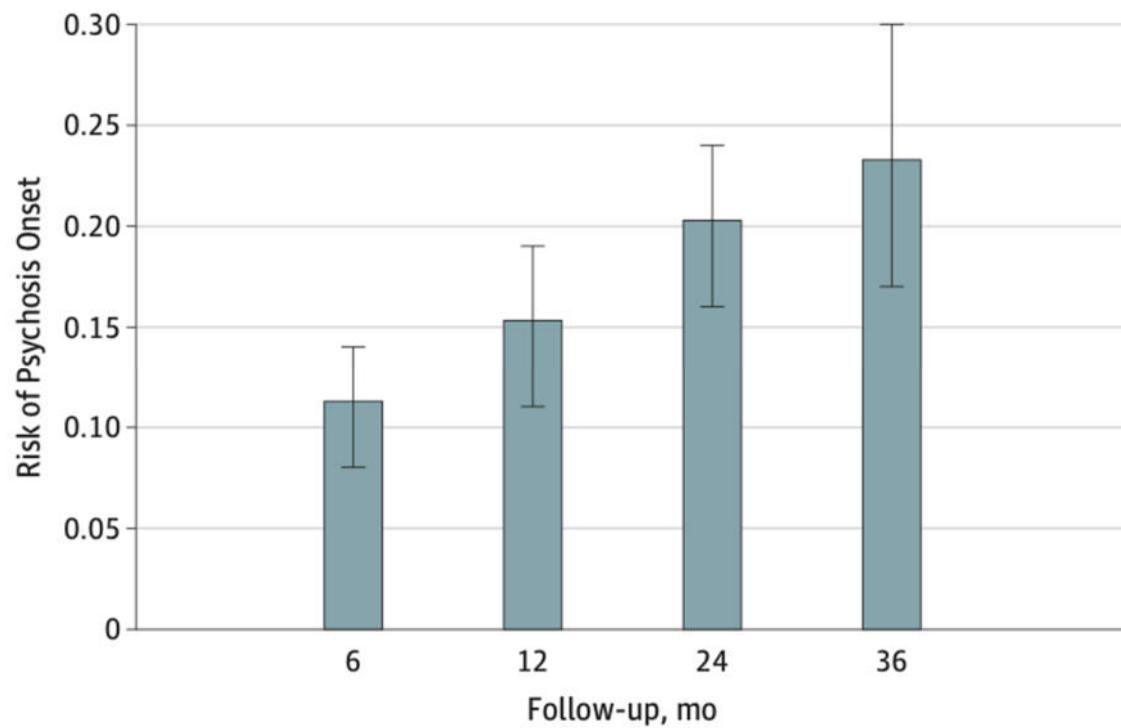
## Hippocampal Pathology in Clinical High-Risk Patients and the Onset of Schizophrenia



# Clinical Validity of DSM-5 Attenuated Psychosis Syndrome

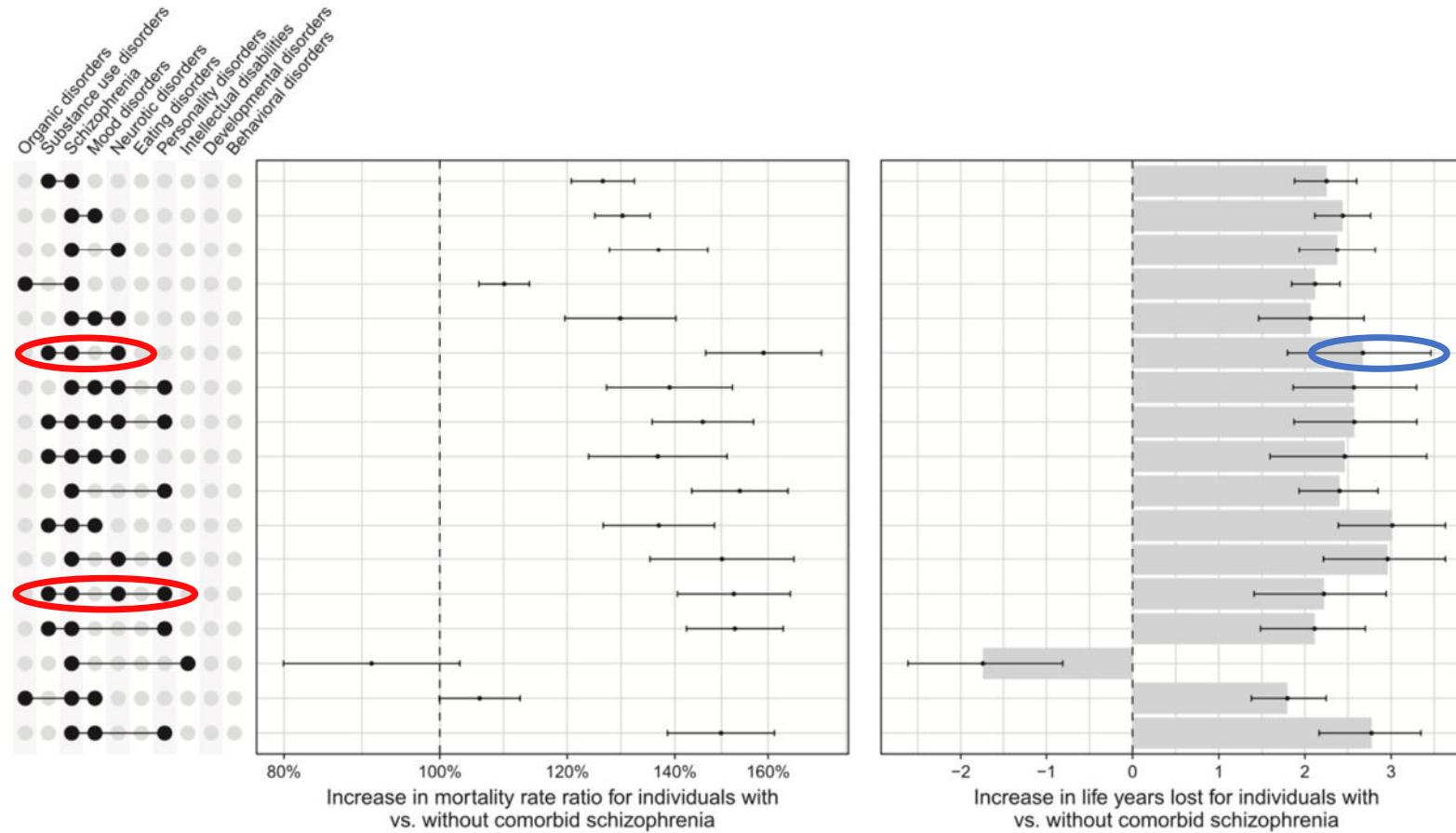
## Advances in Diagnosis, Prognosis, and Treatment

Cumulative Risk of Psychosis Onset Using  
*DSM-5* Attenuated Psychosis Syndrome or Attenuated Positive  
Symptom Syndrome Criteria Defined by the Structured  
Interview for Psychosis-Risk Syndromes



# Nature and prevalence of combinations of mental disorders and their association with excess mortality in a population-based cohort study

We designed a population-based cohort study including all 7,505,576 persons living in Denmark at some point between January 1995 and December 2016.



## Suggested physical and laboratory assessments for patients with schizophrenia

### Assessments related to other specific side effects of treatment

|                       |  |  |
|-----------------------|--|--|
| Diabetes <sup>f</sup> | Screening for diabetes risk factors, <sup>g</sup> fasting blood glucose <sup>h</sup>   | Fasting blood glucose or hemoglobin A1C at 4 months after initiating a new treatment and at least annually thereafter <sup>h</sup>   |
| Hyperlipidemia        | Lipid panel <sup>i</sup>   | Lipid panel <sup>i</sup> at 4 months after initiating a new antipsychotic medication and at least annually thereafter  |
| Metabolic syndrome    | Determine whether metabolic syndrome criteria are met <sup>j</sup>   | Determine whether metabolic syndrome criteria are met <sup>j</sup> at 4 months after initiating a new antipsychotic medication and at least annually thereafter  |
| QTc prolongation      | ECG before treatment with chlorpromazine, droperidol, iloperidone, pimozide, thioridazine, or ziprasidone <sup>k</sup> or in the presence of cardiac risk factors <sup>l</sup> | ECG with significant change in dose of chlorpromazine, droperidol, iloperidone, pimozide, thioridazine, or ziprasidone <sup>k</sup> or with the addition of other medications that can affect QTc interval in patients with cardiac risk factors <sup>l</sup> or elevated baseline QTc intervals |
| Hyperprolactinemia    | Screening for symptoms of hyperprolactinemia <sup>m</sup><br>Prolactin level, if indicated on the basis of clinical history  | Screening for symptoms of hyperprolactinemia at each visit until stable, then yearly if treated with an antipsychotic known to increase prolactin <sup>m</sup><br>Prolactin level, if indicated on the basis of clinical history   |

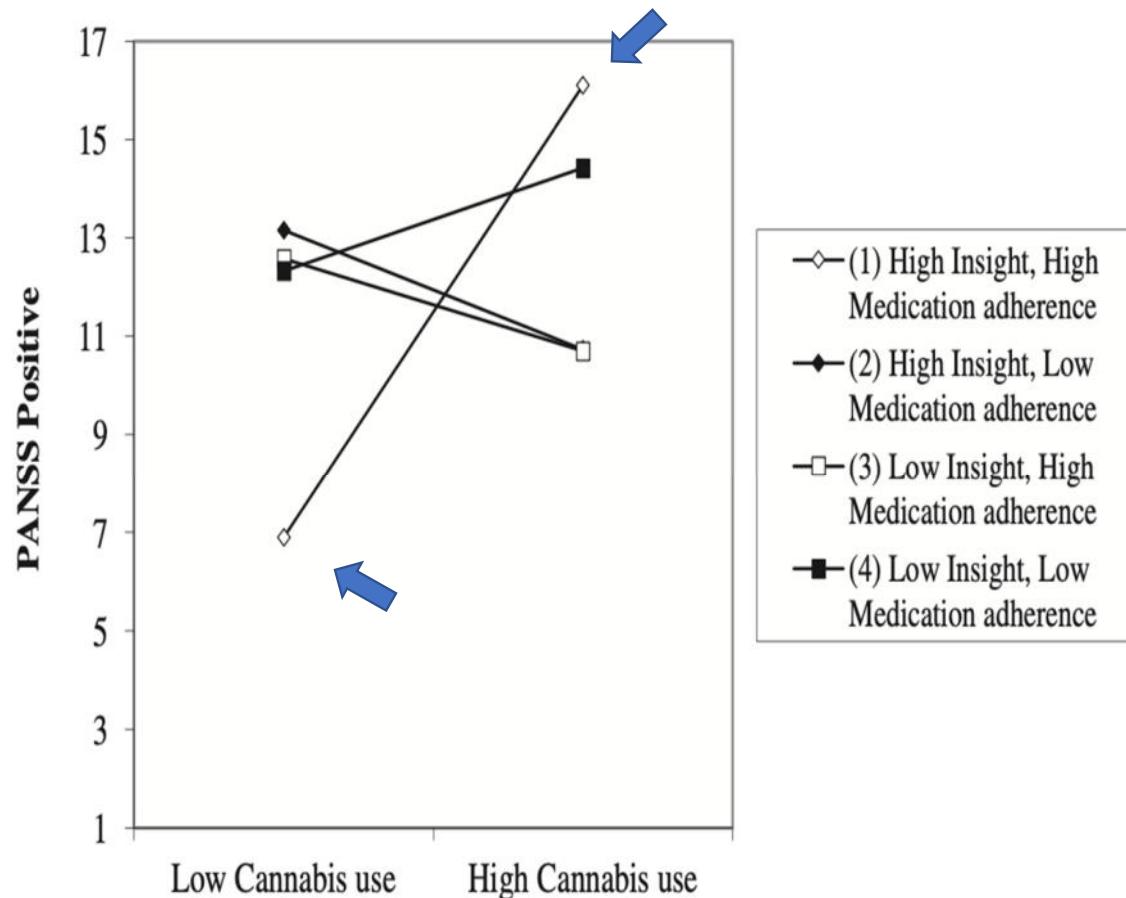
## PERSONALIZZAZIONE DELLE CURE



## PSICOSI SINTETICA

- ❖ E' un paziente diverso dallo psicotico classico
- ❖ Va stabilizzata l'astinenza
- ❖ Rientrato il delirium
- ❖ Ridotta la sintomatologia psicotica
- ❖ Utilizzare, **solo se fortemente necessario**, la contenzione fisica
- ❖ Stabilire una relazione contrattuale con il paziente
- ❖ Contattare il SerD

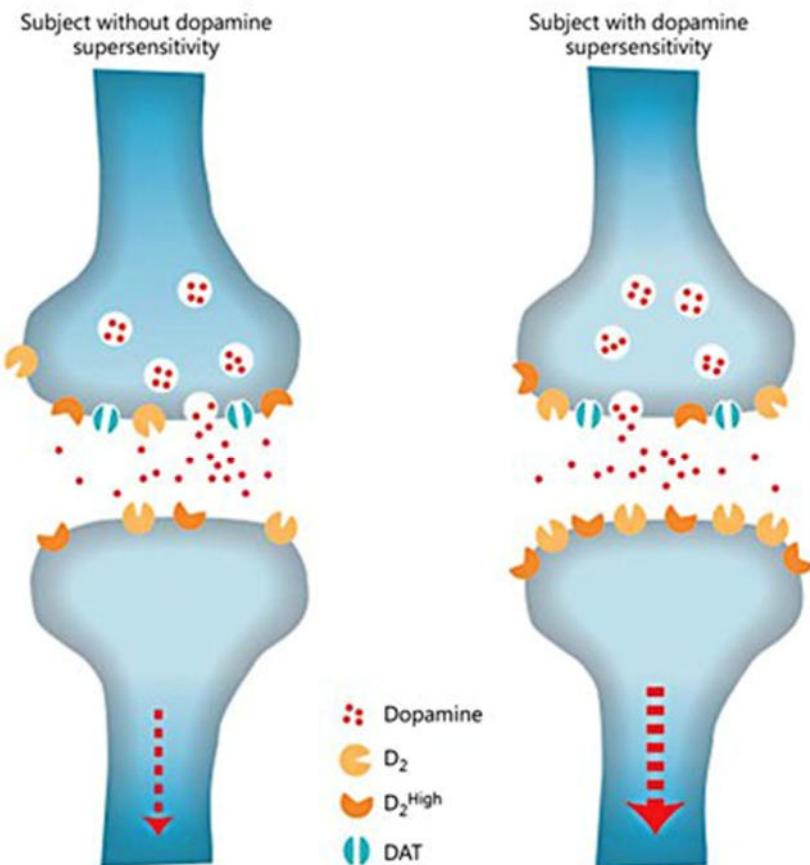
## Moderating role of cannabis use between insight and depression in early psychosis



Pazienti con alto livello di insight ed elevata aderenza ai farmaci, ma con un alto consumo di cannabis tendono ad avere un punteggio della PANSS più alto

La PANSS diminuisce significativamente nei pazienti con un alto livello di insight, un alta aderenza ai farmaci ma con un basso consumo di cannabis

# Antipsychotic-Induced Dopamine Supersensitivity Psychosis: Pharmacology, Criteria, and Therapy

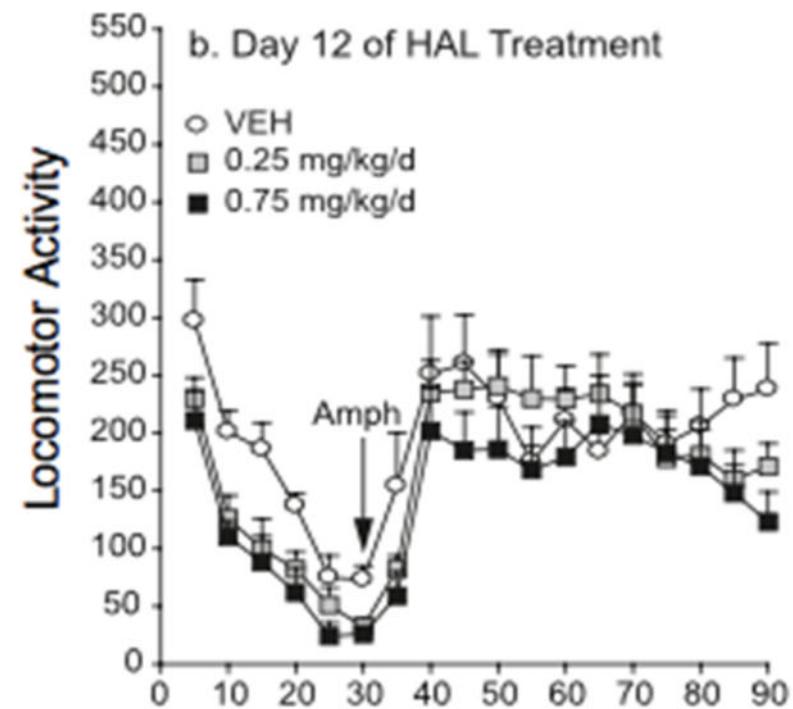
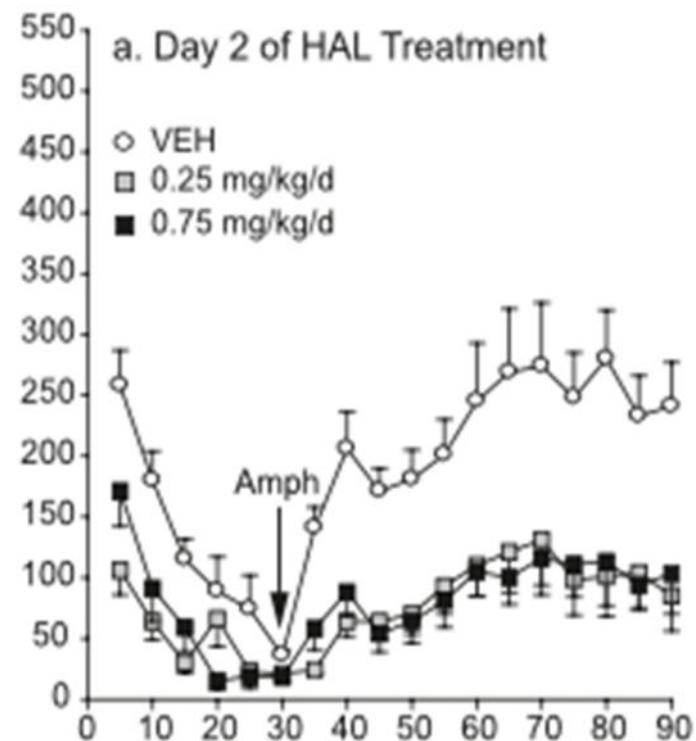


- L'esposizione cronica a farmaci antipsicotici con un forte blocco D<sub>2</sub> aumenta il numero di recettori D<sub>2</sub> più prominentemente **nel caudato-putamen e nel nucleo accumbens** causando una supersensitività.
- I pazienti identificati come affetti da **SP** presentano **psicosi da rimbalzo, tolleranza agli effetti terapeutici degli AP e TD**.

## Response, tolerability and futility thresholds for select antipsychotics

|                                | Response Threshold (ng/ml) | Tolerability Threshold (ng/ml) | Point of Futility (ng/ml) |
|--------------------------------|----------------------------|--------------------------------|---------------------------|
| Haloperidol                    | 3–5                        | 18–20                          | 30                        |
| Fluphenazine                   | 0.8–1.0                    | 2.7–2.8                        | 4.0                       |
| Clozapine                      | 350                        | 800–1000                       | >1000                     |
| Risperidone + 9-OH Risperidone | ??                         | ??                             | 112                       |
| Olanzapine                     | 23.2                       | 176                            | 200                       |

## Dopamine Supersensitivity reakthrough during Ongoing Antipsychotic Treatment Leads to Treatment Failure over Time



**Canadian Network for Mood and Anxiety Treatments (CANMAT) And International Society for Bipolar Disorders (ISBD) 2018  
Guidelines for the management of patients with bipolar disorder**

**TABLE 11** Level of evidence and recommendations for short-term pharmacological management of agitation<sup>a</sup>

| Level of recommendation | Agent                      | Formulation      | Level of evidence | Dose range of studies <sup>b</sup>          |   |
|-------------------------|----------------------------|------------------|-------------------|---|---|
|                         |                            |                  |                   | Single dose                                 | Max/24 h                                  |
| First-line              | Aripiprazole               | IM               | 2                 | 9.75 mg                                     | 15 mg                                     |
|                         | Lorazepam                  | IM               | 2                 | 2 mg IM                                     |   |
|                         | Loxapine                   | Inhaled          | 1                 | 5 mg  | 10 mg                                     |
|                         | Olanzapine                 | IM               | 2                 | 2.5 mg                                      | 10 mg <sup>c</sup>                        |
| Second-line             | Asenapine                  | Sublingual       | 3                 | 10 mg                                       |   |
|                         | Haloperidol                | IM               | 3                 | 5 mg  | 15 mg                                     |
|                         | Haloperidol + midazolam    | IM               | 3                 | 2.5 mg (haloperidol) + 7.5 mg (midazolam)   | 5 mg (haloperidol) + 15mg (midazolam)     |
|                         | Haloperidol + promethazine | IM <sup>e</sup>  | 3                 | 2.5 mg (haloperidol) + 25 mg (promethazine) | 5 mg (haloperidol) + 50 mg (promethazine) |
|                         | Risperidone                | ODT <sup>e</sup> | 3                 | 2 mg  | 4 mg                                      |
| Third-line              | Ziprasidone                | IM <sup>e</sup>  | 3                 | 2 mg  | 20 mg                                     |
|                         | Haloperidol                | PO <sup>d</sup>  | 4                 | 5 mg  | 15 mg                                     |
|                         | Loxapine                   | IM               | 4                 | N/A   |   |
|                         | Quetiapine                 | PO <sup>d</sup>  | 4                 | Mean (SD) = 486.7 (317.2) mg/day            |   |
|                         | Risperidone                | PO <sup>e</sup>  | 4                 | 2 mg  |   |

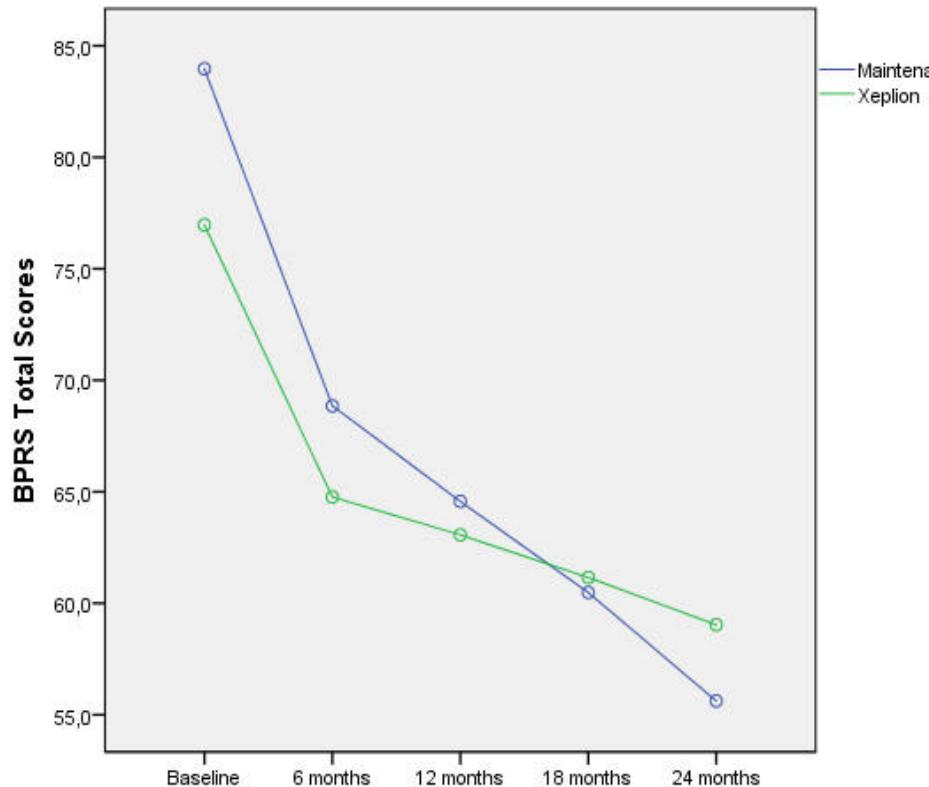
## **INTERVENTO IN ACUTO NEL PAZIENTE CON USO DI SOSTANZE**

- ❖ Somministrare Lorazepam 4 mg fl im, in alternativa Delorazepam 5 mg im
- ❖ Somministrare Aripiprazolo fl i.m, in alternativa Clorpromazina 25 mg fl im
- ❖ Accesso venoso : esami ematici;
- ❖ Soluzione fisiologica con sodio valproato fl in 100 di fisiologica anche 4 volte al dì
- ❖ Clonidina 5 mg cerotto ogni 5 giorni
- ❖ Soluzione fisiologica con Tiapride fl 2 volte al dì
- ❖ Soluzione fisiologica Trazodone fl 2 volte al dì
- ❖ N-Acetilcisteina 2400 mg per 10 giorni poi 1800 mg
- ❖ Parametri vitali;
- ❖ Esame obiettivo fisico;
- ❖ ECG;
- ❖ Idratazione

## Aripiprazole i.m. and p.o. in acute patients with agitation and nonadherence

| Day   | Aripiprazole vial<br>9.75 mg (=1.3 mL)<br>i.m. | Aripiprazole<br>tablet 10 mg<br>p.o. | Aripiprazole<br>monohydrate 400 mg i.m.<br>(LAI) | Morning | Afternoon | Evening |
|-------|--|--------------------------------------|--|---------|-----------|---------|
| 1-6   | ×  |                                      |  | ×       | ×         | ×       |
| 7-10  | ×  | ●                                    |  | ×       | ●         | ×       |
| 11-13 | ×  | ●                                    |  | ×       | ●         | ●       |
| 14    |  | ●                                    | ●  |         | ●         | ●       |
| 15-28 |  | ●                                    |  |         | ●         | ●       |
| 29-43 |  |                                      |  |         |           |         |
| 44    |  |                                      | ●  |         |           |         |

## EFFICACIA DI ARIPIPRAZOLO E PALIPERIDONE SULLA PSICOPATOLOGIA GENERALE



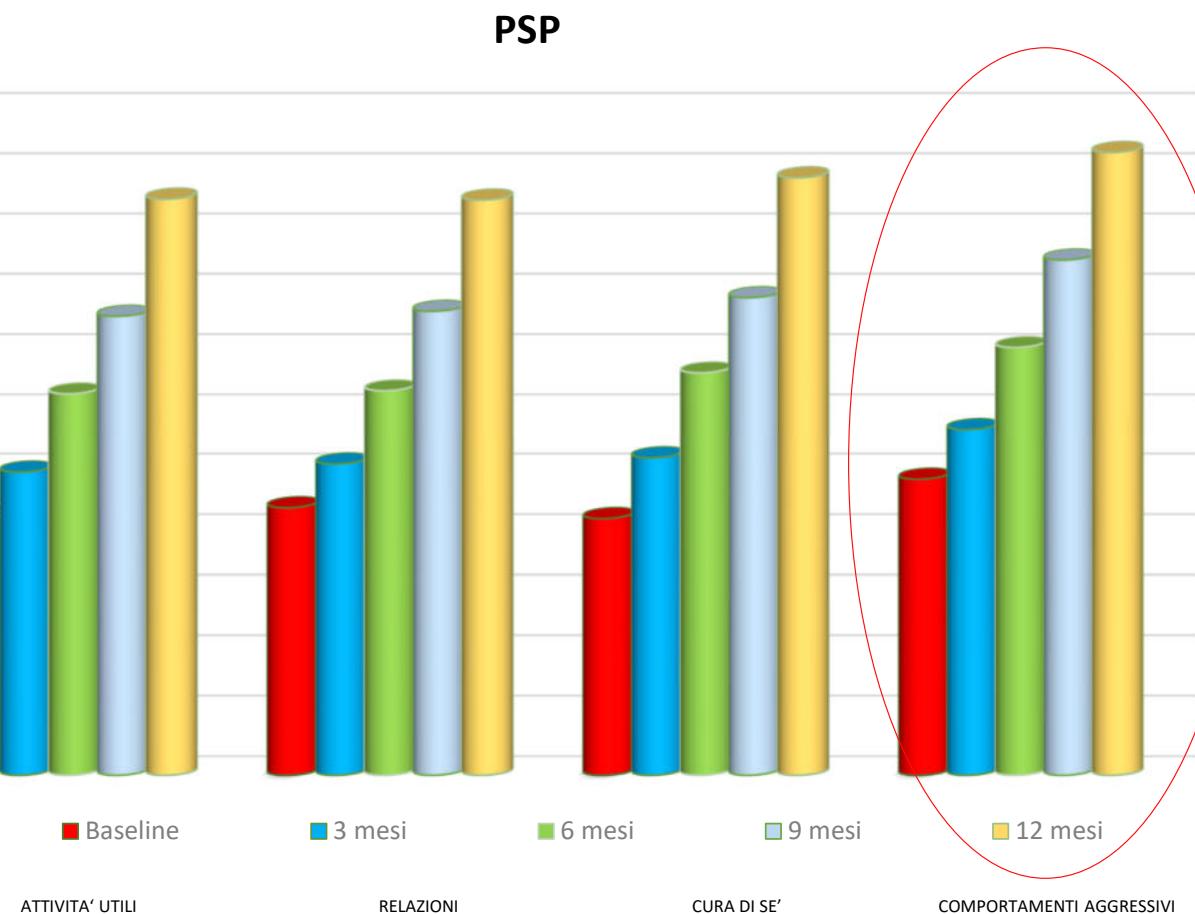
La psicopatologia generale misurata con la BPRS decresce significativamente ( $p>0,001$ ) e in maniera progressiva a 6, 12, 18 e 24 mesi dall'inizio della terapia con Aripiprazolo o Paliperidone

I pazienti trattati con Aripiprazolo riportano una riduzione maggiore della psicopatologia generale ( $p<0,005$ )

## Long-acting injectable antipsychotic medications: pharmacological characteristics

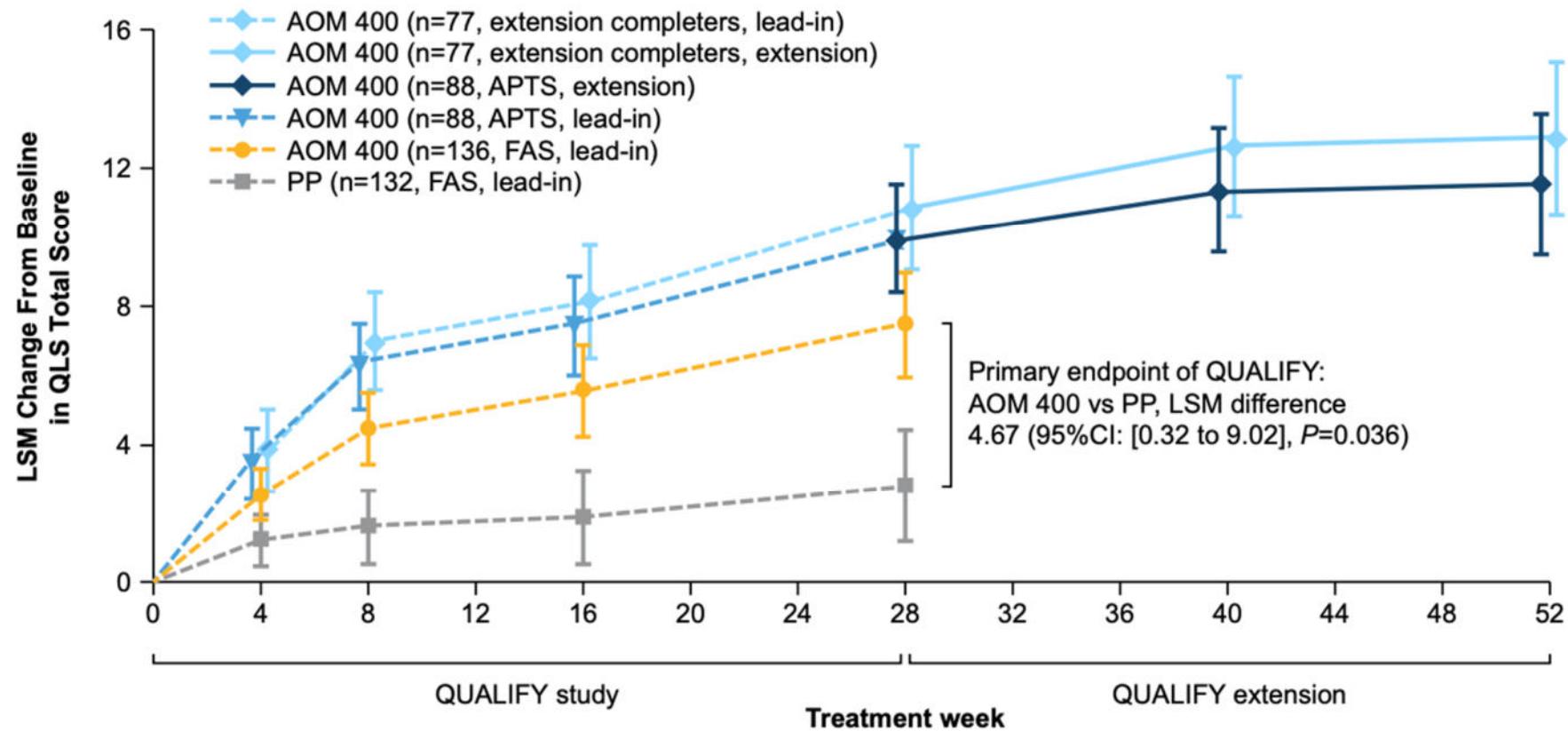
|   | Trade name         | Time to peak plasma level               | Time to steady state | Elimination half-life  | Comments <sup>a</sup>   |
|---|--------------------|---|----------------------|--|---|
| <b>First-generation antipsychotics</b>  |                    |   |                      |  |   |
| Fluphenazine                            | Prolixin Decanoate | 8–10 hours                              | 2 months             | 6–9 days for single injection and<br>14–26 days for multiple doses                                 | Major CYP2D6 substrate  |
| Haloperidol                             | Haldol Decanoate   | 6 days                                  | 3–4 months           | 21 days  | Major CYP2D6 and CYP3A4 substrate   |
| <b>Second-generation antipsychotics</b> |                    |   |                      |  |   |
| Aripiprazole monohydrate                | Abilify Maintena   | 4 days (deltoid);<br>5–7 days (gluteal) | By fourth dose       | 300 mg: 29.9 days<br>400 mg: 46.5 days (400 mg) with gluteal injection                             | Give no sooner than 26 days between injections.<br>Major CYP2D6 and CYP3A4 substrate  |
| Aripiprazole lauroxil                   | Aristada Initio    | 16–35 days (median 27 days)             | Not applicable       | 15–18 days   | Not interchangeable with Aristada because of differing pharmacokinetic profiles<br>CYP2D6 and CYP3A4 substrate  |
| Aripiprazole lauroxil                   | Aristada           | Not available                           | 4 months             | 53.9–57.2 days   | Not interchangeable with Aristada Initio because of differing pharmacokinetic profiles<br>CYP2D6 and CYP3A4 substrate   |
| Olanzapine                              | Zyprexa Relprevv   | 7 days                                  | ~3 months            | 30 days  | Major CYP1A2 substrate  |
| Paliperidone palmitate                  | Invega Sustenna    | 13 days                                 | 2–3 months           | 25–49 days; increased in renal disease   | CrCl 50–79 mL/minute: initiate at 156 mg on day 1, followed by 117 mg 1 week later, both administered in the deltoid muscle. Maintenance dose of 78 mg. Use not recommended in patients with CrCl <50 mL/minute.<br>Substrate of P-glycoprotein/ABCB1 |
| Paliperidone palmitate                  | Invega Trinza      | 30–33 days                              | Not applicable       | 84–95 days with deltoid injection; 118–139 days with gluteal injection; increased in renal disease | Do not use in patients with CrCl <50 mL/minute.<br>Substrate of P-glycoprotein/ABCB1  |

## ARIPIPRAZOLO LAI SUL FUNZIONAMENTO SOCIALE E PERSONALE NEI PAZIENTI CON ESORDIO PSICOTICO

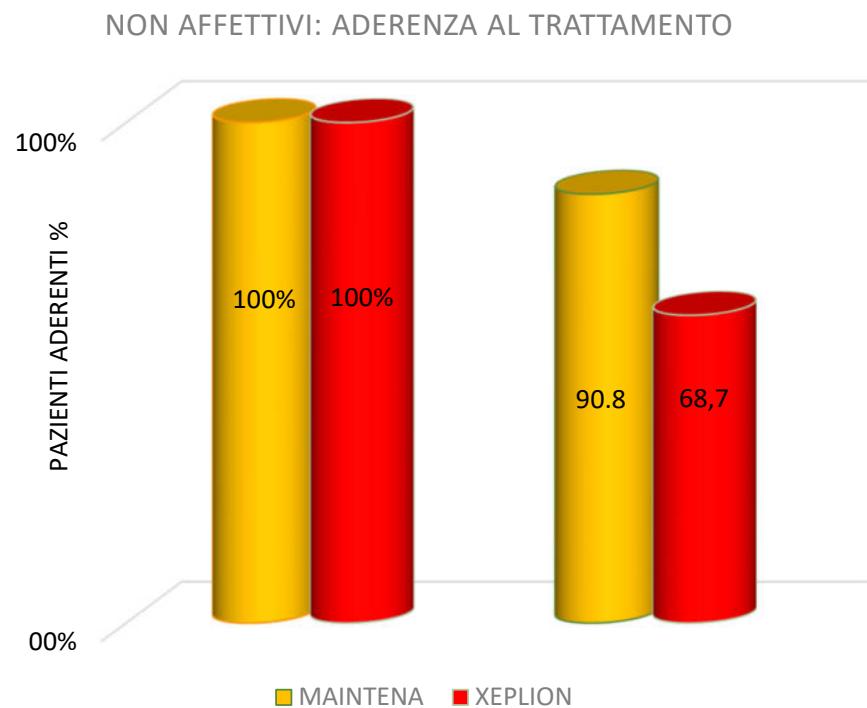
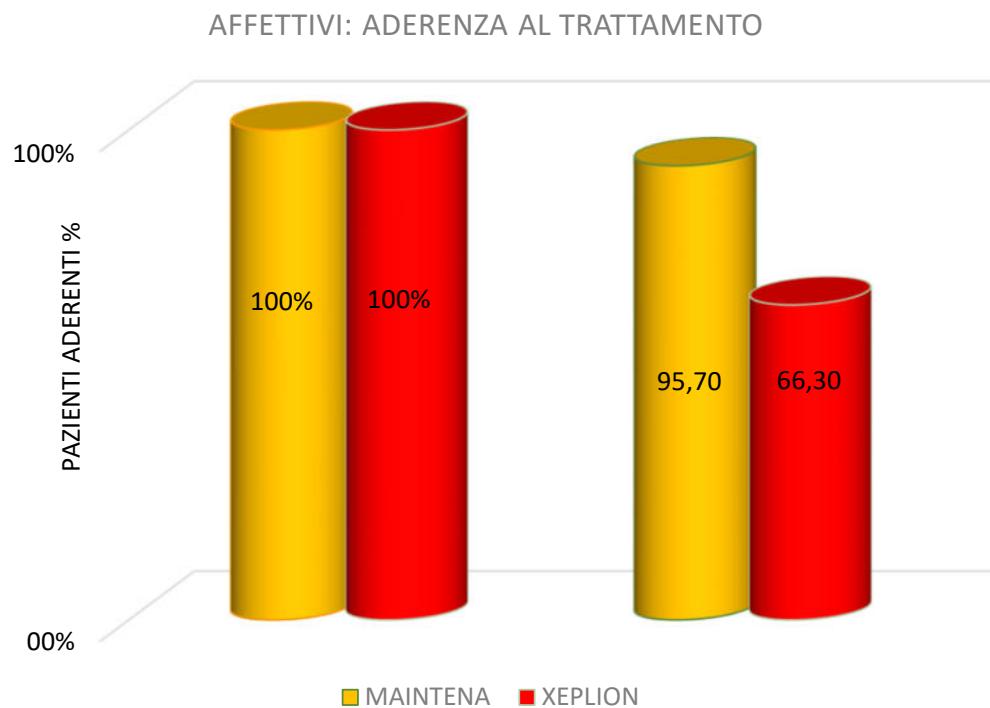


Il funzionamento sociale e personale migliora progressivamente a 3, 6, 9 e 12 mesi dall'inizio della terapia con Aripiprazolo nei pazienti con esordio psicotico

## Long-term effectiveness of aripiprazole once-monthly for schizophrenia is maintained in the QUALIFY extension study



## Aripiprazolo e paliperidone: aderenza al trattamento in pazienti affettivi e non affettivi



## **APA recommends that patients with schizophrenia receive psychoeducation**

### **Obiettivi Primari**

- ❖ Promuovere un'adeguata coscienza di malattia
- ❖ Riconoscere precocemente i sintomi
- ❖ Migliorare l'aderenza al trattamento farmacologico

### **Obiettivi Secondari**

- ❖ Accettazione della malattia
- ❖ Responsabilizzazione del paziente
- ❖ Gestione dello stress
- ❖ Regolarizzazione dello stile di vita
- ❖ Riduzione dello stigma
- ❖ Riduzione del senso di isolamento
- ❖ Aumento del benessere generale