

## **Consumption of drugs and addictive substances deteriorates prognosis of schizophrenia**

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Schizophrenia is a chronic mental disease with a heritability of 80% and is treated, in most cases, with antipsychotic drugs. Schizophrenic patients tend not to take regularly the prescribed antipsychotic drugs and to consume addictive substances such as alcohol and nicotine and even drugs such as cannabis and amphetamines. An important point is to know the effects that these substances and drugs exert on the patients' disease outcome. Are there measures to improve patients' adherence to the pharmacotherapy and to reduce the consumption of addictive substances and drugs? The cellular mechanisms of important risk genes in schizophrenia are pointed out. Besides, the mechanisms of action of current antipsychotic drugs are updated. In this context, it is important to mention the second-generation antipsychotic drug clozapine which is effective for treatment-resistant psychotic disorders. Nicotine can worsen psychotic symptoms, because nicotinic cholinergic neurons activate dopaminergic neurons located in the hippocampus and the extrapyramidal system. Alcohol can cause recurrent psychotic symptoms because it induces dopamine release. In schizophrenic patients, a reduced adherence to the pharmacotherapy was associated with an increased consumption of addictive substances and drugs. Cannabis contains two compounds, tetrahydrocannabinol (THC) which is psychotomimetic and cannabidiol (CBD) which has an antipsychotic effect. Amphetamines induce dopamine hyperactivity, because they block its reuptake. In schizophrenic patients, we suggest several measures to reduce the consumption of addictive substances/drugs and to improve the disease outcome. A behavioral cognitive therapy and psychoeducation can help patients to reduce and stop the consumption of these substances/drugs. The administration of long-acting injectable antipsychotic drugs can ensure the administration of these drugs and can improve the adherence to the pharmacotherapy. The  $\beta$ -nicotinic cholinergic agonist varenicline can be used to facilitate smoking cessation and the cannabis compound cannabidiol can serve to favor cannabis abstinence.

### **Biography**

Felix-Martin Werner studied human medicine at the university of Bonn. He has been working as a medical teacher in the formation of geriatric nurses, occupational therapists and assistants of the medical doctor at the Euro Academy in Pößneck since 1999. He has been doing scientific work at the Institute of Neurosciences of Castilla and León (INCYL) in Salamanca (Spain) since 2002. With Prof. Rafael Coveñas, he assisted at over 30 national and 12 international congresses of neurology and published over 40 reviews about neural networks in neurological and psychiatric diseases. Since 2014, Dr. Werner has belonged to the editorial board of the Journal of Cytology & Histology. In 2019 and 2021, I was the Guest Editor of a special issue in the journal Current Pharmaceutical Design.