

Do Orexins contribute to impulsivity-driven binge consumption of rewarding stimulus and transition to drug/food dependence?

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Orexins (OX) are neuropeptides synthesized in the lateral hypothalamic region which play a fundamental role in a wide range of physiological and psychological functions including arousal, stress, motivation or eating behaviors. This paper reviews under the addiction cycle framework (Koob, 2010), the role of the OX system as a key modulator in compulsivity-driven consumption of rewarding stimulus including ethanol, palatable food and drugs and their role in impulsivity and binge-like consumption in non dependent organisms as well. We propose here that drug/food binge-like consumption in vulnerable organisms increases OX activity which, in turn, elicits enhanced impulsivity and further impulsivity-driven binge consumption in a positive loop that would promote compulsive-driven binge-consumption and the transition to drug/food disorders over time. ©

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Binge consumption

Compulsivity

Impulsivity

Orexins

The addiction cycle

alcohol

orexin 1 receptor

orexin

addiction cycle

alcohol consumption

binge eating disorder

cataplexy

cerebrospinal fluid

compulsion

conceptual framework

diet restriction

dorsomedial hypothalamic nucleus

drug dependence

food intake

hormone release

human

impulsiveness

lateral hypothalamus

neurobiology

neuroendocrine system

neurotransmission

nonhuman

place preference

priority journal

Review

reward

signal transduction

vulnerable population

animal

drug dependence

physiology

psychology

Animals

Humans

Orexins

Reward

Substance-Related Disorders