

## Press Release

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# Cannot sleep due to stress? Here is the cure

Everyone empirically knows that stressful events certainly affect sound sleep. Scientists in the Japanese sleep institute found that the active component rich in sugarcane and other natural products may ameliorate stress and help having sound sleep.

In today's world ever-changing environment, demanding job works and socio-economic factors enforces sleep deprivation in human population. Sleep deprivation induces tremendous amount of stress, and stress itself is one of the major factors responsible for sleep loss or difficulty in falling into sleep. Currently available sleeping pills does not address stress component and often have severe side effects. Sleep loss is also associated with certain other diseases including obesity, cardiovascular diseases, depression, anxiety, mania deficits etc.

The research group led by Mahesh K. Kaushik and Yoshihiro Urade of the International Institute for Integrative Sleep Medicine (WPI-IIIS), University of Tsukuba, found that octacosanol reduces stress and restores stress-affected sleep back to normal.

Octacosanol is abundantly present in various everyday foods such as sugarcane (thin whitish layer on surface), rice bran, wheat germ oil, bee wax etc. The crude extract is policosanol, where octacosanol is the major constituent. Policosanol and octacosanol have already been used in humans for various other medical conditions.

In the current study, authors made an advancement and investigated the effect of octacosanol on sleep regulation in mildly stressed mice by oral administration. Octacosanol reduced corticosterone level in blood plasma, which is a stress marker. The octacosanol-administered mice also showed normal sleep, which was previously disturbed due to stress. They therefore claim that the octacosanol mitigates stress in mice and restores stress-affected sleep to normal in mice. The sleep induced by octacosanol was similar to natural sleep and

physiological in nature. However, authors also claimed that octacosanol does not affect sleep in normal animals. These results clearly demonstrated that octacosanol is an active compound that has potential to reduce stress and to increase sleep, and it could potentially be useful for the therapy of insomnia caused by stress. Octacosanol can be considered safe for human use as a therapy, because it is a food-based compound and believed to show no side effects.

Octacosanol/policosanol supplements are used by humans for functions such as lipid metabolism, cholesterol lowering or to provide strength. However, well-planned clinical studies need to be carried out to confirm its effect on humans for its stress-mitigation and sleep-inducing potentials. “Future studies include the identification of target brain area of octacosanol, its BBB permeability, and the mechanism via which octacosanol lowers stress,” Kaushik says. ■



A sugarcane field in Okinawa. Whitish layers of sugarcane (left lower panel) abundantly contain octacosanol.

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**Bibliographic information**

Kaushik MK, Aritake K, Takeuchi A, Yanagisawa M, Urade Y. (2017) Octacosanol restores stress-affected sleep in mice by alleviating stress. *Scientific Reports* **7**: 8892  
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