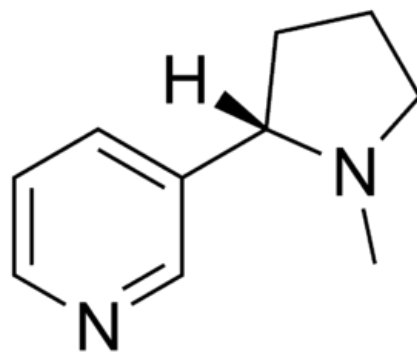


Nicotine

Nicotine is the main alkaloid found in tobacco plants. It is usually taken as a drug in its natural form (tobacco). Nicotine is a potent *poison*, but its lethal dose cannot be achieved by smoking or any other form of conventional use. Despite its toxicity, it does not cause serious health problems (although it causes a strong addiction), these are mainly caused by the carcinogen[s] contained in tobacco smoke. Nicotine addiction is referred to as *nicotinism*.

Chemistry

It is a pyridine alkaloid with the molecular formula $C_{10}H_{14}N_2$. Nicotine is liquid and odorless under normal conditions. Its use in medicine is minimal, for its poisonousness it was used as an insecticide in the past.



Chemical structure of nicotine

Mechanism of action and effects

- When smoking, it is absorbed by the mucous membrane of the oral cavity and respiratory tract. It easily crosses membranes, including blood-brain cephalic.
- It acts as a *central gangliomimetic*, i.e. stimulates both sympathetic and parasympathetic ganglia.
- It binds to nicotinic receptors (a subtype of acetylcholine).
- Acts as a CNS stimulant. When taking the usual dose, the consumer has a feeling of **slight euphoria**, *increased self-confidence*.
- Nicotine also improves memory and concentration in the short term.

Usage

Usually, nicotine is used by smoking in the form of cigarettes or cigars. It is used in synthetic form in *substitution therapy* (in the form of patches, chewing gum or *electronic cigarettes*) of tobacco dependence. It can also be taken nasally as snuff or orally as chewing tobacco.

Acute intoxication

- Mood swings, malaise, sleep disorders or insomnia, sweating, tachycardia, exceptionally vomiting to neurotic manifestations (depersonalization, derealization)
- Usually not life-threatening – smoking cannot achieve a lethal dose of nicotine
- However, convulsions to coma may occur with respiratory arrest

Dependency

- It arises relatively slowly.
- It has a mental and physical component.
- Initially, psychosocial dependence prevails.
- Appropriate help from a specialist (cognitive behavioral psychotherapy).
- When removing *withdrawal symptoms*' (dysphoria, increased appetite, nervousness, anxiety).

Although nicotine preparations and tobacco are perfectly legal and over-the-counter, they **cause severe addiction**. If the consumer is unable to stop using tobacco by smoking, it is advisable to recommend substitution in the form of nicotine patches, chewing gum or e-cigarettes. Although it is not a treatment in the true sense of the word, these forms of use reduce the risk of cancer) and [cardiovascular[cardiovascular]] diseases. Prevention is the most effective way to reduce the number of nicotine users in the population.

Links

Related Articles

- Substance abuse
- Nicotinism

External links

- Nicotine article on English Wikipedia

Bibliography

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