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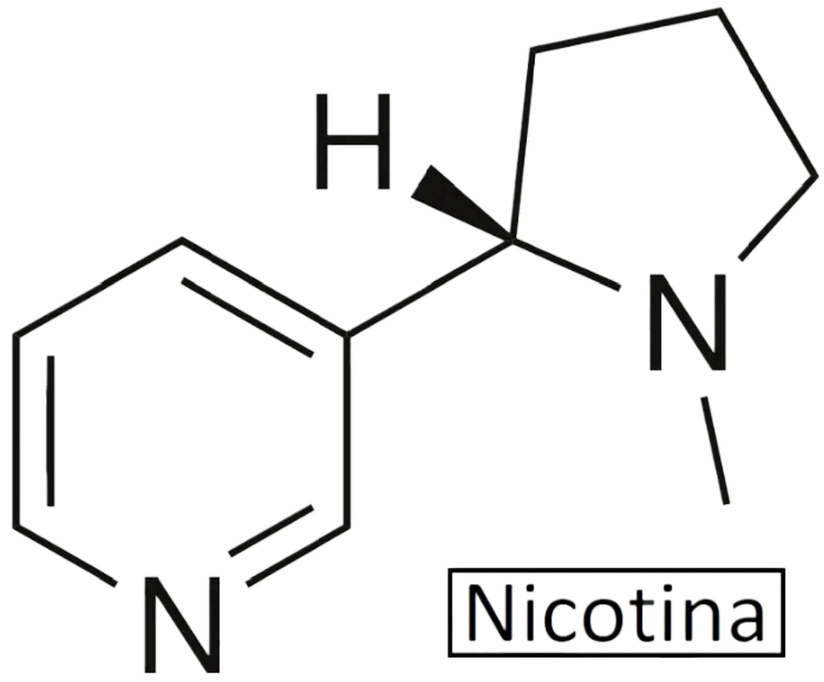
NICOTINE

EXPLORING THE TRUTH

FOUNTAIN: ALEJANDRA MEDINA (nicotinarrd)



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WHAT EXACTLY IS NICOTINE?

Nicotine is a natural alkaloid found primarily in tobacco leaves, although it is also present in small amounts in some foods such as tomatoes.
Tobacco is a plant native to the Americas with more than 45 species. Nicotine has stimulating effects, helping to improve attention, concentration, and memory. It can also reduce stress and irritability and temporarily relieve anxiety.
However, its use temporarily increases heart rate and blood pressure, can impair wound healing, and raise blood sugar levels if used in inappropriate doses. Additionally, some people experience a loss of taste and smell, as well as a loss of appetite.
This is not to say that nicotine is harmless. It is addictive.

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WHAT IS ITS TRUE IMPACT ON THE BODY?

Due to its psychoactive effects, it is classified as a stimulant. It increases central nervous system activity (Farzam & Saadabadi, 2019), acting as if it accelerates messages traveling between the brain and the body. This type of substance can make a person feel more awake, alert, confident, or energetic (Brands, Sproule, & Marshman, 1998).

Nicotine administration induces a series of multifaceted effects that show great interindividual variability. That is, the effects vary greatly from person to person (SCENIHR, 2010). This is reflected in a complex and nonlinear dose-response relationship resulting from the combination of stimulating and inhibitory actions on the central and peripheral nervous systems. For example, effects can vary depending on other variables such as size, weight, and health; on interactions with other substances and doses (Alcohol and Drug Foundation, 2020).

The psychoactive effects of nicotine are dose-dependent; At low doses, it induces stimulation and pleasure, and can even improve cognition (Heishman, Kleykamp, & Singleton, 2010), especially concentration, performance, attention, memory, reaction time, and performance on certain tasks and motor skills (Valentine & Sofouglu, 2018). It can also help reduce stress and irritability, and temporarily relieve anxiety or depression, especially in regular users (DanceSafe, 2007).

Nicotine is a sympathomimetic substance that increases heart rate and contractility, constricts cutaneous and coronary blood vessels, and temporarily increases blood pressure (Benowitz, N. L., 2003), and produces some muscle relaxation effects (Cancer Council Victoria, 2018). Some users also report a decreased sense of taste and smell, as well as a decreased appetite. At high doses, after the initial stimulation, nicotine has a sedative effect by acting as a depressant. This depression results in bradycardia, hypotension, impaired adrenaline release, among others (SCENIHR, 2010).

When nicotine is inhaled, the most common form of administration, it passes through the alveolar membranes of the lung, is then transported to the heart and then directly to the arterial system, reaching the brain in just 10 to 20 seconds after inhalation.

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RECOMMENDATIONS FOR YOUNG PEOPLE

Vaping has become a popular trend among young people, but it's essential not to get caught up in the hype.
Early nicotine use has long-term risks, from learning disabilities to attention problems. It's crucial to stay informed and avoid falling into dangerous habits due to social pressure.

DON'T CREATE A NICOTINE DEPENDENCE BY CONFUSING FASHION WITH NECESSITY

PROBLEMATIC CONSUMPTION CAN START WITH A SIMPLE GESTURE OF SOCIAL BELONGING.

Nicotine delivery devices are reduced-harm tools exclusively for older adults and nicotine-dependent individuals.

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IF YOU CHOOSE A REDUCED DAMAGE TOOL

LET US ALWAYS REMEMBER THAT THE GREATEST ENEMY TO HEALTH IS COMBUSTION (COMBUSTION = ACTION AND EFFECT OF BURNING OR BURNING)

The average nicotine content of products on the market, such as cigarettes, is around 6 to 10 mg. However, it varies greatly and depends on the method of administration. In the case of conventional combustion cigarettes, approximately 1 mg is absorbed from each cigarette smoked as a result of the loss of secondary smoke (Royal College of Physicians of London, 2016).

It should be noted that there is no safe level of nicotine consumption in terms of dose, as all substance use has associated risks and harms. However, there are forms of consumption and administration routes that are significantly less risky compared to others in terms of their health effects.

After smoking a single cigarette, arterial nicotine concentrations differ depending on the type of cigarette and the method smoked. In adults, toxic symptoms can occur at doses between 2 and 5 mg. The lethal dose of nicotine in adults is 5–10 mg/kg 1 or a total dose of 30–60 mg (Cubo, 2010). Symptoms of nicotine poisoning include: central nervous system signs ranging from dizziness, tremors, lethargy, and coma; sympathetic or parasympathetic autonomic signs such as hypertension or hypotension, cardiac arrhythmias, salivation, and diaphoresis; and neuromuscular effects including neuromuscular excitability followed by weakness and even rhabdomyolysis.

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PEOPLE SMOKE FOR THE NICOTINE BUT DIE FROM THE TAR (DR. MICHELL RUSSELL)

One of the main challenges when addressing nicotine use in the absence of e-cigarette regulations is the large amount of misinformation circulating in the media, social media, and even within the industry itself. The lack of consensus among scientists, regulators, and communicators generates contradictory messages, making it difficult to discern who to trust. From alarmist headlines that exaggerate the risks to misleading promotion and a lack of knowledge among counselors, all of this occurs in a public health emergency, where the serious consequences of tobacco use on the population are evident daily. Therefore, any possible alternative or solution should be approached with greater responsibility. From a risk and harm reduction perspective, we seek to contribute to combating misinformation and provide tools so that people can use nicotine, but die from tar. This quote by Dr. Michell Russell is perfectly cited in awareness campaigns to explain what the U.S. Food and Drug Administration (FDA) has called the nicotine myth: "Nicotine is what makes people addicted and uses tobacco products, but it is not what makes tobacco use so deadly" (FDA, 2020, para. 3).

However, nicotine is not risk-free since, like caffeine, it has a certain arousal-activating power, as we explained above. Nicotine is not a direct carcinogen.

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Although nicotine is not a harmless substance, clinical evidence indicates that that at commonly used dose levels, short-term nicotine use does not result in significant clinical harm." Additionally, it is widely accepted that any long-term dangers of nicotine are likely to be of minimal consequence relative to those associated with continued combustible tobacco use" (Quoted from (Royal College of Physicians of London, 2016) in (Knowledge‣ Action-Change, 2020, p. 6)

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TRADITIONAL CIGARETTE SMOKE	ELECTRONIC CIGARETTE VAPOR
CHEMICAL COMPOSITION	
Contains more than 7,000 chemicals, including tar, carbon monoxide, and heavy metals	It mainly contains nicotine (if present), propylene glycol, vegetable glycerin and flavorings.
SUSPENDED PARTICLES	
High concentration of fine (<2.5 micrometers) and ultrafine (<0.1 micrometers) particles that penetrate deep into the lungs and cardiovascular system, contributing to respiratory and cardiovascular diseases.	It generates aerosol particles, but in smaller quantities and sizes than tobacco smoke. It contains ultrafine particles, but in significantly lower concentrations, although the long-term effects are still being investigated.
HEAVY METALS	
Contains significant levels of metals such as lead, cadmium and arsenic.	Some devices may release traces of metals, but at much lower levels than cigarettes.
EFFECTS ON PASSIVE SMOKERS	
Secondhand smoke contains toxic compounds that are harmful to the health of non-smokers.	Current evidence suggests that exhaled vapor has a much smaller impact on air quality (ASH).

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TRADITIONAL CIGARETTE SMOKE	ELECTRONIC CIGARETTE VAPOR
EYE IRRITATION	
Exposure to tobacco smoke can cause eye irritation, redness and dryness due to the toxins present.	E-cigarette vapor can also cause eye irritation and dryness, although to a lesser extent than tobacco smoke.
DRY EYE SYNDROME	
Smoking is associated with an increased risk of developing dry eye syndrome, which affects tear production and quality.	E-cigarette use may contribute to dry eye syndrome, although evidence is limited and more research is needed.
AGE-RELATED MACULAR DEGENERATION (AMD)	
It increases the risk 3-4 times in smokers. It affects central vision and can cause blindness.	There is insufficient evidence linking vaping to AMD, but oxidative stress could be a potential risk factor.
WATERFALLS	
Toxins irritate and inflame the eyes, reducing the quantity and quality of tears.	With no clear evidence that vaping causes cataracts, preliminary research suggests a significantly lower risk than smoking.

IF YOU DON'T SMOKE, DON'T VAPE. REDUCED-HARM DEVICES ARE FOR USE EXCLUSIVELY BY PEOPLE WHO ALREADY HAVE A NICOTINE DEPENDENCE; THEY ARE NOT A FAD PRODUCT.

Freedom of choice is a fundamental right that allows people to make decisions about their own lives, as long as they do not negatively affect others. In the case of tobacco and nicotine use, this principle must be balanced with the right of children and future generations to live in a healthy environment, free from smoke and the risks associated with tobacco.

Children have the inalienable right to grow up in a safe environment that protects their health and well-being. Exposure to tobacco smoke, both indoors and in public areas, puts their development at risk and increases the likelihood of respiratory illnesses, infections, and other long-term health problems. The World Health Organization (WHO) has emphasized that there is no safe level of exposure to tobacco smoke, produced by combustion. Therefore, anyone who chooses to continue consuming nicotine has the right to do so through less risky means.

Therefore, it is crucial that everyone has reliable information about these tools. While adults have the freedom to decide about their personal consumption of tobacco or nicotine products, this choice cannot be imposed on those who have not chosen to participate in it, especially children. Policies such as smoke-free spaces, tobacco product regulation, and awareness campaigns are essential to ensure that the right to freedom of choice does not interfere with the right of the most vulnerable to a healthy life.

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