What Is Nicotine?

Nicotine is a naturally occurring compound found in the 'nightshade' family of plants which includes tobacco, aubergines, peppers, tomatoes and potatoes. Levels in food are 2 - 7 micrograms per kg.¹

Nicotine is added to some Next Generation Products (NGPs) that do not contain tobacco. The nicotine applied to NGPs is extracted from tobacco leaf as a clear liquid and is of high quality and purity. It is the same as the nicotine used in over-the-counter pharmaceutical and medically licensed products.

Tobacco products contain nicotine as part of tobacco. Nicotine is NOT separately added cigarettes and heated tobacco products.

Levels in the tobacco plant are substantially higher than in foods: 8 - 50 grams per kg depending on type/origin.

What Happens When You Consume Nicotine?

Nicotine can enter the body in various ways depending on the product used. The speed at which nicotine reaches the body's tissues, organs and brain depends on the route of delivery.

- **Lung inhalation** from cigarettes, heated tobacco products and vapes.
- **Skin absorption** from nicotine patches.
- **Oral absorption** from oral products like snus, chewing tobacco and nicotine pouches.
- **Nasal cavity absorption** from nicotine inhalers and snuff.

Effects of Adult Nicotine Consumption

Nicotine is considered a mild stimulant and produces a broad range of physical effects. These effects are transient and not dissimilar to those experienced when drinking coffee or watching a horror movie.

Although it is a stimulant, it can have different effects: Adult nicotine users report small doses can lead to alertness, and larger doses to relaxation.²

How Does Nicotine Work?

Part of nicotine looks very similar to a chemical messenger (acetylcholine) that naturally occurs in our bodies and plays an important role in alertness, attention, learning and memory.

Nicotine binds to the same receptors in our bodies as acetylcholine, mimicking its action. In adult smokers, nicotine has similar effects to acetylcholine.


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Is Nicotine Harmful?

Nicotine is an addictive substance.

Nicotine is not considered to be risk-free. However, public health experts worldwide conclude that the toxicants generated from burning tobacco, not nicotine, are the primary cause of smoking-related diseases.1

According to some studies, the following health endpoints have been associated with nicotine:

- Toxic at high doses which are not reached when used as intended by adult smokers17
- May irritate diabetes due to potential irregularity in glucose metabolism14
- May lead to adverse effects on fetal brain development16
- May increase likelihood of preterm delivery and stillbirth16
- Improvement in symptoms of neurological disorders2,3,4
  - Parkinson’s
  - Alzheimer’s
  - Tourette’s
  - ADHD
- Enhanced performance5-12
  - Concentration / Memory
  - Alertness
- Enhanced mood (reduced depression)11
- Transient increases in heart rate and blood pressure

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