Is Nicotine Good for You?

A Healthy Skepticism Case Study

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The claim

Nicotine is being sold as a wellness product. Pouches with names like Zyn, Lucy, and Sesh sit in vending machines at tech companies and in gym bags. A Stanford neuroscientist with a popular podcast says nicotine "sharpens the mind." A well-known investor called it "a really good nootropic that raises your IQ 10 points." The pitch has a simple shape. The problem with cigarettes was the smoke and the tobacco, never the nicotine. Take the nicotine without the smoke and you get the focus without the cancer.

The claim is not invented out of nothing. Nicotine acts on receptors in the brain that are involved in attention and memory. People who smoke get Parkinson's disease at a lower rate than people who do not. A pilot trial found that a nicotine patch improved memory test scores in older adults. A healthy skeptic does not dismiss any of that but asks what each piece of evidence shows. This paper is a case study in the faults Healthy Skepticism describes, the recurring ways a medical claim goes wrong. The six faults are set out at healthy-skepticism.com. A real claim rarely comes with just one fault. "Nicotine is good for you" is really four claims, each resting on a different fault. The paper takes them in turn, names the fault under each, and shows what the evidence says once the fault is removed.

Stat News, 20 February 2026. Bloomberg, 31 January 2024.

Claim 1. The sharpest people use it

The fault: probability reversal. "Successful people use it" is read as "it makes people successful."

Here is how the claim is sold. Traders use it. Engineers at Palantir get it from the office vending machine. Founders keep a tin on the desk. All of that is evidence that high performers use nicotine. It says nothing about whether nicotine makes anyone a high performer. Most high performers drink coffee. So does everyone else.

The way to find out what nicotine does is to give it to ordinary people and measure. Researchers have done that in dozens of placebo-controlled studies. Nicotine is a mild stimulant. Put one person on nicotine and one on a placebo and see who scores higher on a test of attention. A coin flip would pick the nicotine person 50 times in 100. Nicotine picks them 54 to 62 times in 100. The whole benefit is 4 to 12 wins in 100, nothing like a 10-point gain in IQ. And as with any stimulant, the edge lasts about as long as the dose. With regular use the brain adapts, the lift shrinks, and the hours between doses run below where the user started. The studies measured people who were not in withdrawal, so that dip is not in the number.

Stat News, 20 February 2026. Heishman SJ, Kleykamp BA, Singleton EG. Psychopharmacology 2010;210:453–469. Parrott AC. Does cigarette smoking cause stress? American Psychologist 1999;54:817–820.

Claim 2. It protects against Parkinson's

The fault: the causal leap. Two things go together, so one is assumed to cause the other.

People who have ever smoked get Parkinson's disease at about half the rate of people who never have. That finding has held up for decades across many countries. The claim reads it as smoking, or the nicotine in it, protecting the brain.

There is another explanation. Parkinson's begins years before the tremor, and one of its early effects is losing the taste for nicotine. A Danish study of about 1,800 patients found that people who went on to get Parkinson's had taken up smoking less often and, when they had, found quitting unusually easy. The disease was shaping the smoking, not the other way around.

The direct test settles it. A trial gave nicotine patches to 163 people with newly diagnosed Parkinson's for a year, against placebo patches. The disease did not slow. If anything the nicotine group did a little worse.

Ritz B et al. Arch Neurol 2007;64:990–997. Ritz B et al. Neurology 2014;83:1396–1402. Oertel WH et al. NEJM Evidence 2023;2(9):EVIDoa2200311.

Claim 3. It treats memory loss

The fault: the Bernoulli fallacy. One small study that "reached significance" is taken as proof. Aubrey Clayton gives the fault its name in Bernoulli's Fallacy (Columbia University Press, 2021).

This is the evidence the marketing leans on hardest, and it comes from serious researchers. In 2012 a Vanderbilt group ran a six-month pilot in 74 older nonsmokers with early memory trouble. The group on a nicotine patch did better on memory tests, and the result was statistically significant. Their doctors, rating them without seeing the test scores, saw no difference.

A small study with several outcomes will clear the significance bar on one of them fairly often whether or not the drug works. The right response is a bigger trial, and the NIH funded one: 348 people, two years, the same patch. The result, presented in December 2025, was no benefit on memory, thinking, or daily function. The promoters cite the pilot. They do not cite the follow-up. Both trials were in people in their seventies with a diagnosed memory problem, not healthy adults with a tin of pouches.

Newhouse P et al. Neurology 2012;78:91–101. MIND Study topline results, Clinical Trials on Alzheimer's Disease conference, 4 December 2025, MINDstudy.org.

Claim 4. It is safer than smoking

The fault: relative reporting. A comparison stated without saying what it is compared to.

This claim is true, and it does the most work. On 30 June 2026 the FDA authorized Zyn pouches to carry the statement that using them instead of cigarettes lowers the risk of mouth cancer, heart disease, lung cancer, stroke, emphysema, and chronic bronchitis. The same announcement says there is no safe tobacco product, that quitting entirely is best, and that the products are for adults who already smoke.

The comparison is to cigarettes, which the maker of Zyn itself calls the most harmful form of nicotine use. "Safer than smoking" is true of nearly everything. It is not "good for you," and the FDA did not say it was.

For someone who does not use nicotine, the comparison that matters is nicotine against nothing. Start with what nicotine does not do. It has not been shown to cause cancer in people. Swedish men who used snus for decades, nicotine without smoke, showed no rise in mouth or lung cancer. On that point the marketing is close to right.

Now what it does. It is addictive. The Surgeon General concluded in 1988 that nicotine is the drug in tobacco that causes addiction, and the lift that makes it a stimulant is the same effect that makes it hard to stop. It strains the heart. Each dose raises heart rate and blood pressure and stiffens the arteries for a while, and it lowers the threshold for irregular heart rhythms. Users of smokeless tobacco carry far less heart risk than smokers, but their rate of fatal heart attack and stroke runs above that of nonusers, which points to nicotine doing harm when a heart is already in trouble. It harms the developing brain. The Surgeon General has concluded that nicotine exposure before birth has lasting effects on brain development, and that the same is likely in adolescence. And the pouches poison children. Poison centers logged nearly 135,000 nicotine ingestions by children under six between 2010 and 2023. Pouch ingestions rose more than eightfold from 2020 to 2023, and a child who swallowed a pouch was more likely to end up in the hospital than one who swallowed nicotine gum or a lozenge.

So the honest comparison is this. On one side, a small, short-lived edge on attention. On the other, addiction and a heart that works harder with every dose. The trials that looked for protection against Parkinson's and memory loss found none.

US Food and Drug Administration, 30 June 2026. Swedish Match spokesperson quoted in Axios, 13 July 2024. Price LR, Martinez J. F1000Research 2019;8:1586. Report of the Surgeon General, 1988 and 2014. Abid S et al. Front Public Health 2025;13:1632313. Olivas M et al. Pediatrics 2025;156(2):e2024070522.

Why it happens

Cigarette smoking in the United States hit a record low in 2021, and the companies that sold cigarettes need something else to sell. Philip Morris bought the maker of Zyn in 2022 and set a goal of two-thirds of its revenue from smoke-free products by 2030. Venture capital has funded a wave of pouch startups. Several of the loudest promoters have a financial stake. One podcaster launched his own pouch brand. One biohacking author has a commercial relationship with a pouch company.

None of that makes the claims false. It does mean the claims come from people who profit if you believe them. Each of the four claims has a true fact under it, and each fault is the step from that fact to "good for you."

Fortune, 26 January 2024. The Wall Street Journal, 18 September 2024. Stat News, 20 February 2026.

The case in one table

The claim	The fault	What the evidence shows
The sharpest people use it	Probability reversal	Who uses it says nothing about what it does. Measured directly, a mild stimulant: 4 to 12 extra wins in 100 over a coin flip, lasting about as long as the dose.
It protects against Parkinson's	The causal leap	Early Parkinson's takes away the taste for nicotine. The disease shapes the smoking. Given as a patch for a year, nicotine did not slow the disease.
It treats memory loss	The Bernoulli fallacy	A 74-person pilot showed a significant gain on test scores. The 348-person two-year trial found no benefit.
It is safer than smoking	Relative reporting	True, and relative to cigarettes. On its own, nicotine has not been shown to cause cancer, but it is addictive and it strains the heart. Against nothing, there is no benefit to report.

Two of the six faults are absent, and it is worth saying why. Arbitrary categories is drawing a line across a continuous measurement and treating the two sides as different kinds of people. Nothing in the nicotine story turns on a cutoff. The syndrome trap is treating a label as if it were a disease. "Nootropic" is a marketing word, not a diagnosis, and nobody is treating it. A checklist is only useful if you can also say when an item does not apply.

What to ask

1. Who was measured? "Successful people use it" is not "it makes people successful." Ask what happened when ordinary people were given the drug. The fault is probability reversal.
2. Which way does the arrow run? Smokers get less Parkinson's. The trial says nicotine does not protect. Ask what else could explain the correlation. The fault is the causal leap.
3. Did the bigger trial agree with the pilot? If nobody mentions the follow-up, look for it. The fault is the Bernoulli fallacy.
4. Compared to what? Safer than cigarettes is not the same as good for you. The fault is relative reporting.

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This paper is educational and is not medical advice. Decisions about starting, continuing, or stopping any product belong with you and your physician.