

It has been shown, for example, that smokers who switch to cigarettes with lower nicotine yields "compensate" by smoking the lower-nicotine cigarette more intensely and that the published FTC nicotine yield is not a good predictor of the amount of nicotine absorbed by smokers.¹⁴¹ One study demonstrated that the actual intake of nicotine by smokers falls within a much narrower range than the published yields would suggest, and that the nicotine yield figures at the "low-yield" end of the spectrum significantly underestimate true rates of nicotine absorption.¹⁴² This study found that while FTC nicotine yields in tested cigarettes ranged from 0.1 to 1.6 mg, actual nicotine intake by smokers ranged from 0.75 to 1.25 mg/cigarette. The study further confirms that U.S. cigarettes actually deliver in the range of 1.0 mg per cigarette.

To summarize, multiple studies show that marketed cigarettes and smokeless tobacco products deliver, on average, about 1 mg of nicotine.¹⁴³ Additionally, studies show that the

¹⁴¹ See:

Benowitz NL, Hall SM, Hering RI, Jacob P III, Jones RT, Osman AL. Smokers of low-yield cigarettes do not consume less nicotine. *N Engl J Med.* 1983;309(3):139-142.

Kozlowski LT, Frecker RC, Khouw V, Pope MA. The misuse of "less-hazardous" cigarettes and its detection: hole-blocking of ventilated filters. *Amer J Public Health.* 1980;70(11):1202-1203.

Hering RI, Jones RT, Benowitz NL, Mines AH. How a cigarette is smoked determines blood nicotine levels. *Clin Pharm Ther.* 1983;33:84-90.

Hering RI, Jones RT, Bachman J, Mines AH. Puff volume increases when low-nicotine cigarettes are smoked. *Br Med J.* 1981;283:187-189.

¹⁴² Gori GB, Lynch CJ. Analytical cigarette yields as predictors of smoke bioavailability. *Regulatory Toxicology and Pharmacology.* 1985;5:314-326.

¹⁴³ See:

Benowitz NL, Jacob P. Daily intake of nicotine during cigarette smoking. *Clin Pharmacol Ther* 1984;35(4):499-504.

Benowitz NL, Jacob P, Yu L. Daily use of smokeless tobacco: systemic effects. *Ann of Int*