

THE TRUTH

Tobacco



Cigarettes are addictive – the National Institute on Drug Abuse has called them the most addictive drug known [!] There’s no longer a debate about the addictive nature of nicotine – Congressional testimony revealed that tobacco companies tried to suppress the data of their own scientists, but that didn’t work for long, and we now have compelling proof of addiction. Data from animals show that addiction is a biological reaction to nicotine, and you can’t change it by just wishing to change. Studies on both animals and humans have shown that brain biology makes young people much more susceptible to rapidly developing addiction than adults are. Yes, using an addictive drug can feel good in the short term, but the health, social, and dollar costs can be huge. If you haven’t yet started smoking, a couple of things to think about before making that decision [make no mistake, it’s a HUGE decision, often disguised as a casual offer of a smoke from a friend].

The \$250,000 pack of cigarettes. Absurd? – a pack of cigarettes costs only about \$4, doesn’t it? But research indicates that the addiction process in young smokers starts with the very first hit of nicotine – that first cigarette can turn into a lifelong, destructive and very expensive habit more easily than anyone believes, and \$250,000 is about what a lifelong habit will cost [not even adjusted for inflation, and not considering the staggering costs of health care for cigarette-caused illness].

I can’t think about my health when I am 50 – what does smoking mean to me NOW? Read the title – cigarettes stink. Recent research in Virginia shows that the most effective message to get young people to avoid cigarettes is to emphasize how the stench of smoking makes them reek [hair, clothing, and breath] for hours to come. It makes you pretty unattractive to others whom you might be interested in attracting. Don’t believe it? Stand right outside any academic building on a cold winter day and



see how attractive the crowd of smokers at the doorway is. There are reasons why 80% of college students don't smoke, and the stink is high on that list. If you are looking for reasons to smoke, try the following:

TOP 10 REASONS TO SMOKE:

1. I am in an asexual phase right now, and don't want anyone to find me attractive.
2. They have oxygen for emphysema, don't they?
3. Following in a relative's footsteps, may he rest in peace.
4. Wrinkled skin will make me look more mature.
5. Just killing all of my spare time.
6. Had to spend my extra money on something....
7. I am FOR air pollution.
8. I HATE my [fill in the blank: parents, roommates, etc.], and hope the secondhand smoke will get them.
9. I strive for couch potatodom, and won't need lungs or heart.
10. Pardon me, I had a coughing fit, and forgot #10.

If you have already started to smoke, and plan to quit, now is the time. If you think it's a little tough now, just wait until you have smoked for 5 years, or 50 – all addictions get much more difficult to quit with the passage of time. People who quit while young can completely reverse the damage that smoking has done to their lungs. Remember – “I can quit any time I want to” is the mantra of everyone who's never been able to quit, and ‘waiting for a better time’ is a wait that never ends. If you'd like to quit while you can, you can start by visiting <http://shs.gmu.edu/services/smokingcessation/>.

ADDICTION SCIENCE AT MASON

It has long been clear that tobacco is very addictive. It now appears that nicotine consumed during adolescent development has very long-lasting effects on brain growth and development.



Dr. Robert Smith's lab [Psychology] has found that modest doses of nicotine given to adolescent animals permanently changes the brain and behavior to:

- Make continuing addiction more likely
- Change brain growth patterns to exaggerate addictive and compulsive behavior
- Exaggerate negative emotions [more depressive-like and anxiety-like behavior]

The alterations in the brain underlying addictive and emotional changes seem to be permanent, as they continue long after nicotine consumption stops [reference: *Brain Research*, 2007, vol. 1151, pp. 211-218]. The process of addiction may begin with a single dose of nicotine [*Neurotoxicology & Teratology*, 2007, 29(1), 74-80], since that's all it takes for a short-term preference for nicotine to develop in the rat, and that's followed by long-term changes in sensitivity to nicotine – all from one dose. These studies were both done in rats, and show that addictive changes induced by nicotine are not just a habit – it's biology, and your biology is very similar to that of a rat.

Robert F. Smith, Ph.D.
Department of Psychology

