

Geoff Gratwick
Bangor

Testimony of LD 1550 – May 7, 2021

Good morning Senator Claxton, Representative Myer and Honorable members of HHS Committee. I am Geoff Gratwick, live in Bangor, and I believe I know most of you. It's a pleasure to be here. I am speaking in favor of LD 1550 from my medical perspective.

1. The effects of Nicotine

- a.) Plant based alkaloid; rapidly absorbed and takes 7 seconds to get to brain
- b.) Many physiologic effects
 - a. Increases heart rate and blood pressure; constricts peripheral blood vessels; microvascular injury; bronchospasm, and more
 - b. Alters platelet function, increases clotting, insulin resistance, and more
 - c. Promotes tumor growth by decreasing apoptosis (programmed cell death), increasing angiogenesis, neovascularization, and more (cancer cells love these features...)
 - d. Many brain/central nervous system effects:
 - i. Uptake by specific receptors in the brain stem
 - ii. Deleterious effects on brain metabolism, neurotransmitters, and brain development
 - iii. Stimulant, increases alertness; decreases sleep; alters mood, attention, concentration, ability to learn; may enhance alertness
 - iv. Mechanism of action: acts on the reward pathways, the brain circuits that regulate feelings of pleasure, by increasing dopamine similar to other drug addictions
 - e. benefits – may help Parkinson's disease, hyper-estrogen conditions
- c.) Addiction: compulsive drug seeking despite negative consequences
 - a. Increased consumption of the drug; need an increased dose to get same effect
 - b. Persistent desire to smoke/use nicotine products despite efforts to quit
 - c. Continuing to smoke despite health hazards – 85% relapse with a week
 - d. Withdrawal symptoms (anxiety, tension; abdominal or throat tightness, etc.) usually abate in one month

2. Health care costs of smoking in Maine:

- a. \$811 million direct costs
 - i. Maine Care: \$261 million
 - ii. \$1066 cost per Maine household in federal and state taxes

3.) Conclusion: Products that contain nicotine are addictive; early exposure to nicotine can lead to smoking; smoking kills.