## **Quitting Works**

#### Presenter: Dennis Lee, Tobacco Dependence Treatment Specialist





Adapted from "Dangers of Smoking," Human Relations Media- www.hrmvideo.com

### Disclosures:

I am a salaried employee of Saint Barnabas Health Care System.

Any and all program fees are used to build the capacity of the program.

I receive no fee from partners I work with from Pfizer, Glaxo-Smith-Kline or Novartis.

I have never accepted, and will never accept, any money from the tobacco industry for any reason.

I am not anti-smoking...

(Annoying, judgmental, busybody, out to tell adults what to do with their own lives) I am anti-tobacco...

(Paranoid conspiracy theorist with an axe to grind and mistrust of most large organizations)

### The Mounting Evidence of the Toll of Tobacco on Life and Health



- leukemiaCataracts
- Cervical cancer
- Kidney cancer
- Pancreatic cancer
- Pneumonia
- Periodontitis
- Stomach cancer

						Bladder cancer	Bladder cancer
					•Stroke	Stroke	•Stroke
				<ul><li>Esophageal cancer</li><li>Oral cancer</li></ul>	•Esophageal cancer •Oral cancer	•Esophageal cancer •Oral cancer	•Esophageal cancer •Oral cancer
			<ul> <li>Laryngeal cancer</li> </ul>	<ul> <li>Laryngeal cancer</li> </ul>	<ul> <li>Laryngeal cancer</li> </ul>	<ul> <li>Laryngeal cancer</li> </ul>	•Laryngeal cancer
		<ul> <li>Coronary heart disease</li> </ul>	•Coronary heart disease				
	<ul> <li>Peptic ulcer disease</li> <li>Lung cancer in women</li> </ul>						
<ul> <li>Lung cancer in men</li> <li>Chronic obstructive pulmonary disease</li> </ul>							
1964	1967	1979	1980	<b>1982</b>	1989	1990	2004

Long term effects like lung cancer may begin years before symptoms are noticed. For example...

### The Life of a Smoker-Part 1

Age 14: Carl smokes his first cigarette. It leaves behind a sticky residue of tar with dozens of cancer causing chemicals.



Age 18: Carl is up to a pack a day. Many of the cilia in his lungs are destroyed. Each cigarette damages more and more lung cells.

Age 25: Carl gets out of breath more easily. He switches to a "light" brand, but soon is smoking two packs a day.

Age 29: Carl gets married. A single lung cell is mutated by cigarette smoke. It is a cancerous cell and begins to divide quickly.

Adapted from "Dangers of Smoking," Human Relations Media- www.hrmvideo.com

## The Life of a Smoker-Part 2



Age 32: The cancer cells are forming a small clump in Carl's left lung. They begin to squeeze out normal lung cells. Carl has no symptoms...

Age 37: Carl now has two children. The cancer is confined to a small part of his lung and he doesn't realize it is there. His only symptom a lingering cough.

Age 45: Carl begins to feel tired and breathless. He gets bronchitis a few times a year. *He* thinks he is working too hard. Cancer cells are spreading to his lymph nodes.

Age 47: An X-ray finds that the cancer has spread to Carl's neck and chest wall. His doctor informs Carl that he has a 15% chance of surviving five years. By now, Carl's sixteen year old daughter is a smoker too.

#### **Results from the Youth Risk Behavior Survey**

"A Centers for Disease Control and Prevention (CDC) study about cigarette smoking, based on data of...the...Youth Risk Behavior (NHIS-YRBS), found proven interconnections between smoking and sexual involvement, violent behavior and other substance...it consistently found current smokers had the highest rate of involvement in risk behaviors and 'never smokers' had the lowest rate."<sup>2</sup>

#### **Results from the Youth Risk Behavior Survey**

Between 2001 and 2005 in New Jersey the Centers for Disease Control recorded statistically significant declines in youth tobacco use including ever trying a cigarette, smoking regularly, and smoking more than ten cigarettes per day.

Between 2005 and 2009 in New Jersey the Centers for Disease Control recorded NO statistically significant declines in youth tobacco use in any category.<sup>1</sup>

### Why The Need for Policy Change?

**Take Away Messages** 

Our knowledge of the health risks of smoking demonstrate that they begin long before symptoms appear
 Early initiation of smoking is a sign that other risk behaviors are taking place
 Current practices are not reducing youth smoking anymore

## What's in a cigarette?



Acetone – found in nail polish remover Acetic Acid – an ingredient in hair dye Ammonia – a common household cleaner Arsenic – used in rat poison Benzene – found in rubber cement Butane – used in lighter fluid Cadmium - active component in battery acid Carbon Monoxide – released in car exhaust fumes Formaldehyde – embalming fluid Hexamine – found in barbecue lighter fluid Lead – used in batteries Napthalene – an ingredient in moth balls Methanol – a main component in rocket fuel Nicotine – used as insecticide Tar – material for paving roads Toluene - used to manufacture paint

And about 4,000 other chemicals...

## What is Nicotine?

Nicotine is an alkaloid found in the nightshade family of plants...It functions as an antiherbivore chemical...therefore nicotine was widely used as an insecticide in the past

In low concentrations the substance acts as a stimulant and is the main factor responsible for the dependence-forming properties of tobacco smoking.

According to the American Heart Association, nicotine addiction has historically been one of the hardest addictions to break

Nicotine content in cigarettes has slowly increased over the years...one study found an average increase of 1.6% per year between the years of 1998 and 2005. This was found for all major market categories of cigarettes

## Why is smoking so addictive?

- In 1998 the Surgeon General stated that nicotine is more addictive than heroin or cocaine.
- Nicotine reaches the brain seven seconds after being inhaled.
- Nicotine levels accumulate in the body and fuel addiction 24/7.
- Most smokers quickly develop tolerance and need greater amounts for the same effect.
- Smokers come to rely on the habits of smoking-they often associate cigarettes with people, places, situations, and their lifestyle.



Nicotine binds predominantly to nicotinic acety/choline (nACh) receptors in the CNS; the primary is the a4B2 nicotinic receptor in the Ventral Tegmental Area (VTA) After nicotine binds to the a4B2 nicotinic erceptor in the VTA, it results in a release of dopamine in the nucleus Accumbuns (nAcc) which is linked to reward

### Addiction and Withdrawal

Tingling in the hands and feet

Sweating

Intestinal disorders (cramps, nausea)

Headache

Cold symptoms (sore throats, coughing, and other signs of colds and respiratory problem)

Feelings of being an infant: temper tantrums, intense needs, feelings of dependency, a state of near paralysis

Insomnia

Mental confusion

Vagueness

Irritability

Anxiety

Depression is common in the short and long term



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### The Benefits of Quitting

Your body will begin to repair itself as soon as you stop smoking – and you' II go on feeling the health benefits for the rest of your life.

**20 minutes** after stopping your blood pressure and pulse rate will return to normal. Circulation improves in hands and feet, making them warmer.

**8 hrs** after stopping nicotine and carbon monoxide levels in the blood will be cut by half and oxygen levels will return to normal. Chances of heart attack start to fall.

**24hrs** after stopping the level of carbon monoxide in your body will be that of a nonsmoker and your lungs will start to clear out mucus and other smoking debris.

**48hrs** after stopping your body is becoming free of nicotine and your sense of taste and smell is improving

**72 hours** after stopping you should be breathing more easily. Airway passages in the lungs begin to relax. Energy levels increase.

### More Benefits of Quitting

#### At 5 years smoke-free:

from 5 to 15 years after quitting tobacco, stroke risk is reduced to that of people who have never smoked.

#### At 10 years smoke-free:

risk of lung cancer drops to as little as one-half that of continuing smokers

risk of cancer of the mouth, throat, esophagus, bladder, kidney, and pancreas decreases

#### risk of ulcers decreases

#### At 15 years smoke-free:

risk of coronary heart disease is now similar to that of people who have never smoked

risk of death returns to nearly the level of people who have never smoked

## Benefits of Quitting after a Diagnosis of Cancer

Overall, continuing to smoke after a diagnosis of lung cancer increased the risk of death by nearly two to three times. It also substantially increased the risk of recurrence of the initial cancer.- BMJ

For those having surgery, chemotherapy, or other treatments, quitting smoking helps improve the body's ability to heal and respond to therapy. It also lowers the risk of pneumonia and respiratory failure. Moreover, quitting smoking may lower the risk of the cancer returning or a second cancer developing. -NCI

Persistent tobacco-use post-diagnosis also is associated with poorer outcomes, including increased complications of treatment, progressive disease, second primaries and increased comorbidity. Thus, while smoking cessation plays a substantial role in prevention and primary care, it is perhaps even more critical for cancer survivors to quit smoking. –ACS, et.al.

## Science of Quitting



#### Combinations: Me Counseling

Effectiveness of and estimated the combination of counseling a versus medication alone (n = 18

Treatment	Number of arms	E: 00 (9	
Medication alone	8	(1	
Medication and counseling	39		

Public Health Service MGUIDENS are clear- getting help improves your chances effortive subceressiful quite how! Guideline Panel:

- Bupropion SR
- Nicotine Gum
- Nicotine Inhaler
- Nicotine Lozenge
- Nicotine Nasal Spray
- Nicotine Patch
- Varenicline











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We don't want to know what went on last night, and chances are neither do you. But when it's gonna be a morning in, you might as well stay in, in comfort.



#### Melitta<sup>®</sup> Dual Thermal Mug Coffeemaker

Coffee to go? No problem. Ingenious design allows fresh brewed coffee to go right into two portable mugs. Mugs are stainless steel with rubber grips, made to fit standard car cup holders. Dishwasher-safe with removable spouts for easy cleaning.



Look good even when it's hot! This pocket T-shirt with 100% preshrunk heavyweight cotton blends style and comfort. Generously cut, double-needle stitching throughout. Unisex sizes M/L-XXL.





SURGEON GENERAL'S WARNING: Quitting Smoking Now Greatly Reduces Serious Risks to Your Health.

## Current life expectancy figures estimate that every cigarette takes 11 seconds from your life...

#### **Dyed Pocket T-shirt**

Look good even when it's hot! This pocket T-shirt with 100% preshrunk heavyweight cotton blends style and comfort. Generously cut, double-needle stitching throughout. Unisex sizes M/L-XXL. **30 UPCs**  30 UPC=30 packs=600 cigarettes

600 x 11 seconds = 6600 seconds

6600 seconds = 110 hours

110 hours = 4  $\frac{1}{2}$  days off of your life for a free t-shirt







let the goody two shoes

NEV

get you down.

### VIRGINIA SLIMS Find Your Voice



SURGEON GENERAL'S WARNING: Duitting Smoking Now Greatly Reduces Serious Risks to Your Health.

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damaged heart muscle - result of

#### WARNING **CIGARETTES ARE A** HEARTBREAKER

Tobacco use can result in the clogging of arteries in your heart. Clogged arteries cause heart attacks and can cause death.

clogged artery

Natinée EXTRA MILD 25 CIGARETTES

**Health Canada** 

Toxic emissions / unit: "Tar" 10 - 29 mg, Nicotine 1.0 - 2.2 m Carbon monoxide 11 - 27 mg, Formaldehyde 0.041 - 0.012 m Hydrogen cyanide 0.087 - 0.25 mg, Benzene 0.039 - 0.085 m Émissions toxiques / unité : « Goudron » 10 - 29 mg, Nicotine 1.0 - 1.0 Monoxyde de carbone 11 - 27 mg, Formaldéhyde 0.041 - 0.012 Acide cyanhydrique 0.087 - 0.25 mg, Benzéne 0.039 - 0.085 m mg, mg,



#### WARNING CIGARETTES LEAVE YOU BREATHLESS

Tobacco use causes crippling, often fatal lung diseases such as emphysema.

**Health Canada** 

Peter Jackson

### Light

#### WARNING **CIGARETTES** CAUSE MOUTH DISEASES

Cigarette smoke causes oral cancer, gum diseases and tooth loss. **Health Canada** 

### Peter Jackson

### Light

#### **25 CIGARETTES**

Toxic emissions / unit: "Tar" 10 - 29 mg, Nicoline 1.0 - 2.2 mg, Carbon monoxide 11 - 27 mg, Formaldehyde 0.041 - 0.012 mg, Hydrogen cyanide 0.087 - 0.25 mg, Benzene 0.039 - 0.085 mg nissions toxiques / unité : « Goudron » 10 - 29 mg, Nicoline 1.0 - 2,2 n Monoxyde de carbone 11 - 27 mg, Formaldéhyde 0.041 - 0.012 mg, Acide cyanhydrique 0,087 - 0,25 mg, Benzène 0,039 - 0,085 mg

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EXTRA

25 CIGARETTES

#### WARNING **CIGARETTES CAUSE LUNG CANCER**

85% of lung cancers are caused by smoking. 80% of lung cancer victims die within 3 years.

**Health Canada** 

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### Tobacco Lethality

2004 marked the fortieth anniversary of the landmark Surgeon General's report linking smoking and lung cancer

The Surgeon General's latest findings will in all likelihood push the annual toll for cigarette smoking beyond a half a million Americans.

Cigarette smoking kills more people than murder, suicide, accidental overdoses, auto accidents, AIDs and domestic accidents- combined

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# Questions?

## For More Information About our Program...

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