



**PHYSICIANS FOR A SMOKE-FREE CANADA  
MÉDECINS POUR UN CANADA SANS FUMÉE**

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## Background

### Light and Mild Cigarettes

#### Are 'light' cigarettes safer than regular-strength cigarettes?

- **No.**

When light cigarettes were first introduced in the 1970s, it was thought that they would deliver less cancer-causing tar to smokers.

Subsequent research has shown:

- Smokers of low-tar cigarettes are as likely to get sick and die of cigarette-caused disease as those who smoke regular cigarettes
- Smokers often inhale as much cancer-causing tar and addictive nicotine from low-yield cigarettes as they do from regular cigarettes

*Source: Lynn Kozlowski et al. American Journal of Preventive Medicine, 1998; 15(1)*

#### Are there any legislative standards for the use of words like 'light' and 'mild' on cigarette packages?

- **No.**

There are no legislative or regulatory restrictions or requirements for the use of words like 'light,' 'extra-light,' 'mild,' 'extra-mild,' or 'ultra-light' on cigarettes.

#### How many Canadians smoke 'light' cigarettes?

- **Over half.**

In Canada, 57% of women and 53% of men smoke low-yield cigarettes

*Source: Survey of Smoking in Canada, 1995. Health Canada.*

## Why do machine tests show lower levels of tar and nicotine for 'light' cigarettes?

- **Because cigarettes were re-designed to cheat smoking machine tests.**

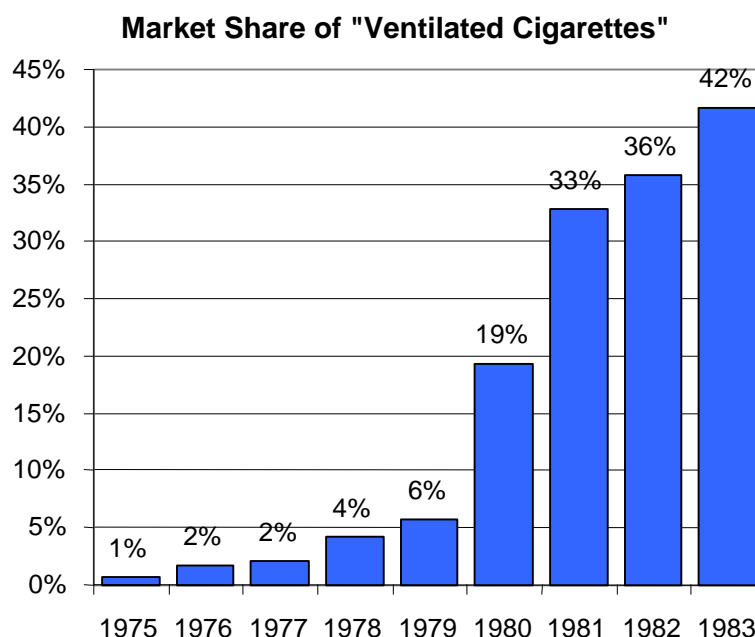
For more than two decades, cigarette companies have used smoking machines to test the levels of tar, nicotine and carbon monoxide. Meanwhile, they have deliberately altered cigarette design to give artificially low readings.

Light cigarettes are made with ventilation holes around the filter which allow extra air to mix with cigarette smoke and give lower tar and nicotine readings on smoking machines. On some cigarettes these holes are visible to the human eye, on others they are almost impossible to see.

*Source: W.S. Rickert, "Smoking Under Realistic Conditions: Development of Minimum and Maximum Values for Toxic Constituents in Tobacco Smoke."*

In 1975, when the machine testing methods had become standards, fewer than 1% of Canada's cigarettes were made with ventilation holes. By 1983, almost half of Canada's cigarettes were ventilated.

*Source: The Canadian Tobacco Market at a Glance, AG-31, document produced during RJR-Macdonald vs. Attorney General of Canada*



## Do smokers get less tar or nicotine from 'light' cigarettes?

- **No.**

Smokers modify how they smoke cigarettes in order to 'satisfy' the level of nicotine to which they have become addicted. They do this by

- Blocking the ventilation holes with their lips and fingers:
- Puffing more frequently
- Inhaling more deeply
- Holding the smoke in their lungs longer
- Smoking more cigarettes

Source: Lynn Kozlowski et al. *American Journal of Preventive Medicine*, 1998; 15(1)

## Is there a machine test which gives more realistic readings for tar and nicotine levels in light cigarettes?

- **Yes.**

Tobacco companies adjusted their cigarettes to give lower readings on the standard test method. Health Canada has adjusted the test method to provide more realistic readings for ventilated cigarettes.

The new Health Canada 'realistic smoking' methodology provides more probable results for light cigarettes. The machine test has been altered to reflect the intense smoking behaviour of those who smoke light cigarettes with:

- More puffs per minute
- Deeper inhalation
- Blocking of ventilation holes by fingers and lips.

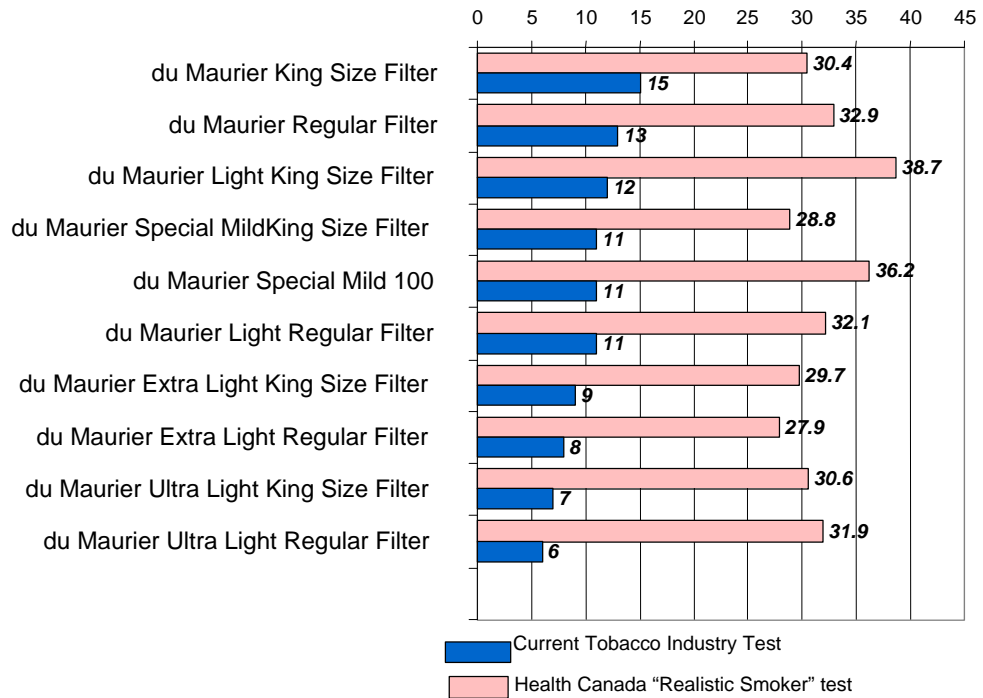
	<b>Standard ISO</b>	<b>'Intense' smoking</b>
Puff volume	35 ml	56 ml
Puff interval	60 seconds	20 seconds
Puff duration	2 seconds	2 seconds
Ventilation holes	Not blocked	blocked

Health Canada's new methods show that, under realistic smoking conditions, light and extra-light cigarettes can produce more tar and nicotine than regular strength cigarettes.

Health Canada tests of the leading 25 brands showed:

- All brands are equally dangerous
- There is virtually no difference in the tar, nicotine or carbon monoxide of the leading brands

**Tar Levels of du Maurier Cigarettes as shown on package labels and as measured by Health Canada “Realistic Smoking” test (mg/cigarette)**



**Do smokers know that low-yield cigarettes are not safer?**

- **No.**

Less than 10% of US smokers knew that one light cigarette could give the same amount of tar as one regular cigarette.

About 2 in three smokers either did not know of the existence of rings of small holes on the filters of some cigarettes, or did not know that blocking increases tar yields.

*Source: Lynn Kozlowski et al. American Journal of Preventive Medicine, 1998; 15(1); Tobacco Control, 1996)*

When Canadian smokers were asked what they thought “light” meant, almost half of smoker (47%) thought it meant less nicotine; one third (33%) thought it meant less tar. Only 9% thought it had to do with ‘milder taste.’

*Source: Health Canada, Survey on Smoking in Canada, 1995*

**Other than ventilation holes, are ‘light’ cigarettes different than regular-strength cigarettes?**

- **No.**

Recently revealed ingredient lists for cigarettes show that light and regular cigarettes of the same brand-family have virtually identical ingredients.

British Columbia is the first jurisdiction to demand that tobacco companies disclose complete ingredient lists. These reports, made public in December 1998, show that light and regular cigarettes are virtually identical.

**Comparative Ingredients:  
du Maurier and du Maurier ‘Light’ cigarettes**

As reported to the government of British Columbia,  
September 15, 1998

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<b>Du Maurier King Size, Filter</b>	<b>Du Maurier Light King Size, Filter</b>
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**A) Additives**

1 Triacetin/Filter Bonding Agent	1 Triacetin/Filter Bonding Agent
2 PVA Adhesive/Cigarette Seam Adhesive	2 PVA Adhesive/Cigarette Seam Adhesive
3 PVA Adhesive/Tipping Adhesive	3 PVA Adhesive/Tipping Adhesive
4 Filter Wrapper Adhesive/Hot Melt	4 Filter Wrapper Adhesive/Hot Melt
5 Die Imprint Ink red+silver Silver	5 Die Imprint Ink red+silver Silver
• Aliphatic Hydrocarbon Solvent	• Aliphatic Hydrocarbon Solvent
• Resin – Gel H/S	• Resin - Gel H/S
• Stearic Acid	• Stearic Acid
• Aluminum	• Aluminum
• Heavy Aliphatic Solvent Naphta	• Heavy Aliphatic Solvent Naphta
• Silicon Dioxide	• Silicon Dioxide
• White Mineral Oil	• White Mineral Oil
Red	Red
• Petroleum Hydrocarbons	• Petroleum Hydrocarbons
• Linseed Alkyd Varnish	• Linseed Alkyd Varnish
• Pigment Orange 13	• Pigment Orange 13
• Pigment Red 57:1	• Pigment Red 57:1
• Manganese Naphtenate	• Manganese Naphtenate
• Solvent Refined Naphtenic distillates	• Solvent Refined Naphtenic distillates

**B) Ingredients (Cigarette)**

1 Tobacco	1 Tobacco
2 Water	2 Water
3 Reconstructed Tobacco	3 Reconstructed Tobacco

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**B) Ingredients (Filter)**

1 Cellulose Diacetate/Filter Material	1 Cellulose Diacetate/Filter Material
2 Titanium Dioxide/Whitening Agent	2 Titanium Dioxide/Whitening Agent
3 Mineral Oil/Process Lubricant	3 Mineral Oil/Process Lubricant
4 Water	4 Water
5 Sorbitan Monolaureate	5 Sorbitan Monolaureate
6 Eloxylated Sorbitan Monolaureate	6 Eloxylated Sorbitan Monolaureate
7 Cellulose (web)	7 Cellulose (web)
8 Calcium Carbonate (filler)	8 Calcium Carbonate (filler)
9 Water	9 Water
10 Cationic Starch (retention)	10 Cationic Starch (retention)
11 Polyvinyl Alcohol (sizing)	11 Polyvinyl Alcohol (sizing)
12 Boric acid (Cross-linking)	12 Boric acid (Cross-linking)
13 Fumeric acid (PH control)	13 Fumeric acid (PH control)
14 Defoamer	14 Defoamer
15 Defoamer mixture	15 Defoamer mixture
16 DeTac	16 DeTac

**B) Ingredients (Tipping Paper)**

17 Cellulose (web)	17 Cellulose (web)
18 Calcium Carbonate (filler)	18 Calcium Carbonate (filler)
18 Water	18 Water
20 Hydroxyethylated Starch (sizing)	20 Hydroxyethylated Starch (sizing)
21 Cationic Starch (retention)	21 Cationic Starch (retention)
22 Defoamer	22 Defoamer
23 Defoamer mixture	23 Defoamer mixture
24 DeTac	24 DeTac

**B) Ingredients (Cigarette Paper)**

1 Cellulose/Paper Base	1 Cellulose/Paper Base
2 Calcium Carbonate/Chalk	2 Calcium Carbonate/Chalk
3 Mono Ammonium Phosphate	3 Mono Ammonium Phosphate
4 Water	4 Water
5 Depolymerized Guar Gum	5 Depolymerized Guar Gum
6 Cationic acrylamide polymer in oil	6 Cationic acrylamide polymer in oil
7 Defoamer	7 Defoamer

**B) Ingredients (Cigarette Seam Adhesive)**

1 Ethylene-vinyl acetate copolymer	1 Ethylene-vinyl acetate copolymer
2 Polyvinyl Alcohol	2 Polyvinyl Alcohol
3 Defoamer	3 Defoamer
4 Preservative	4 Preservative

**B) Ingredients (PVA Tipping Adhesives)**

1 PVA Adhesive/Tipping Adhesive (film former)	1 PVA Adhesive/Tipping Adhesive (film former)
2 Plasticizer	2 Plasticizer
3 Sugar (Humectants)	3 Sugar (Humectants)
4 Propylene Glycol (Humectant)	4 Propylene Glycol (Humectant)
5 Polyvinyl alcohol (film former)	5 Polyvinyl alcohol (film former)

**B) Ingredients (Filter Adhesive/Hot Melt) Wrapper**

1 Vinyl acetate ethylene copolymer (film former)	1 Vinyl acetate ethylene copolymer (film former)
2 Microcystallin (diluent)	2 Microcystallin (diluent)
3 Tackfiller	3 Tackfiller

**B) Ingredients (Tipping Inks)**

1 Cork	1 Cork
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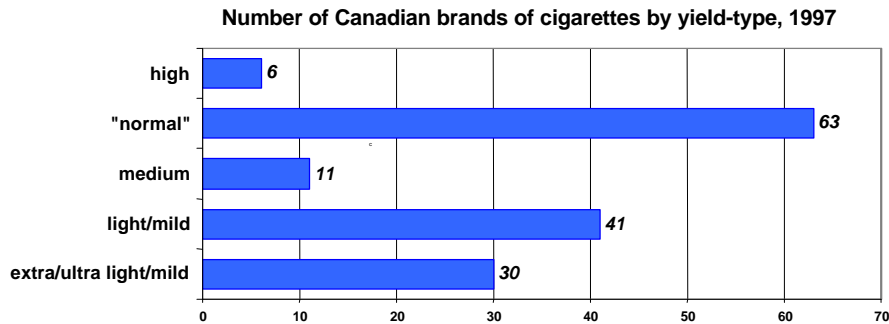
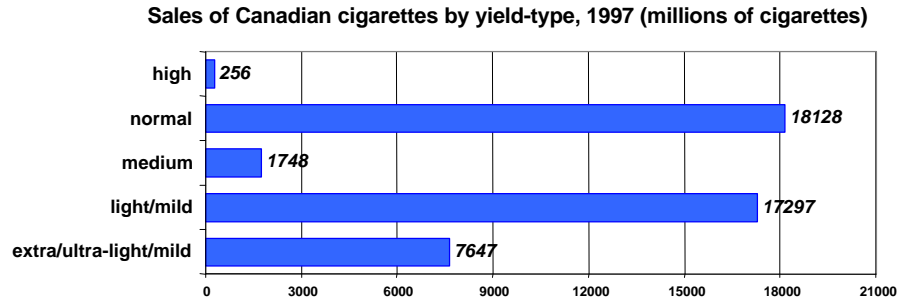
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## How many cigarettes smoked in Canada are “light” cigarettes?

- **More than half**

Of all manufactured cigarettes sold in Canada, 17% of cigarettes are marked in the ‘ultra’ or ‘extra’ light and mild category, and 35.5% are ‘light’ and ‘mild’, and 40% are normal strength.

*sales data reported to Health Canada*



## Does the confusion about low-yield cigarettes lead to higher smoking-caused deaths?

- **Yes.**

Epidemiological studies of smokers and their motivations to quit have concluded that the introduction of light cigarettes in the 1970s harmed public health.

The U.S. National Cancer Institute concluded low-yield cigarettes have “kept many smokers smoking who otherwise might have quit. The net effect of the introduction and mass marketing of these brands, then, may have been and may continue to be an increased number of smoking-attributable deaths.”

*Source: U.S. National Cancer Institute: The FTC Cigarette Test Method for Determining Tar, Nicotine and Carbon Monoxide Yields of US Cigarettes, report of the NCI Expert Committee, August 1996.*