

THE FILTER FRAUD: DEBUNKING THE MYTH OF "SAFER" AS A KEY NEW STRATEGY OF TOBACCO CONTROL



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Background

Although efforts have been made to eliminate the use of misleading descriptors such as "low tar," "lights," and "mild" from cigarette marketing, the elimination of the cigarette filter, which is on 99.7% of cigarettes sold in United States, has been largely overlooked as a tobacco control strategy. The 2014 U.S. Surgeon General's Report on the Health Consequences of Smoking and the 2001 U.S. National Cancer Institute Monograph 13 report that the near-universal adoption by smokers of filtered cigarettes since their introduction in the 1930s has not reduced these consumers' risks for cancer and other diseases (1). Moreover, the non-biodegradable filter is the main component of tobacco product waste in the environment.

A Brief History of Filtered Cigarette Advertising

(from the UA Center for the Study of Tobacco and Society)

"THE LANCET" REPORT

Members Peter Jackson (Tobacco Manufacturers) Ltd. have placed on the market an exclusive blend of fine Virginia cigarettes containing this new filter tip. Sir Gerald du Maurier, for whom the first of these cigarettes were specially made, has kindly consented to this brand bearing the name "du Maurier."

Samples of "du Maurier" cigarettes were submitted to "The Lancet" and, after making their own analytical tests, the following report is reprinted in full from the issue dated Saturday, January 24th, 1931:—

DU MAURIER VIRGINIA FILTER-TIPPED CIGARETTES.

(THE LANCET) LONDON, 24.1.31.

As one out of three cigarettes there is attached a filter tip covered with mesh. The filter, which is 1/2 in. long, is composed of three layers of white vegetable fibre containing coarse paper, with alternate layers of fine cellulose, each of them 1/16 in. thick, and a 1/2 in. layer of fine cellulose. The filter is held in place by a layer of tobacco smoke without producing any "drag" (in the author's opinion) or any loss of nicotine. The filter is held in place by a layer of tobacco smoke without producing any "drag" (in the author's opinion) or any loss of nicotine. The filter is held in place by a layer of tobacco smoke without producing any "drag" (in the author's opinion) or any loss of nicotine.

When smoked the following results were obtained on the average:—

Yield of nicotine (mg.) ... 1.2

Yield of tar (mg.) ... 1.2

Yield of nicotine (mg.) ... 1.2

Yield of tar (mg.) ... 1.2



Med J of Australia, 1940s

Peter Jackson Ltd, 1930s

NEW KING-SIZE VICEROY GIVES YOU DOUBLE-BARRELED HEALTH PROTECTION

Double-barreled health protection. King-size filter tip. Double-barreled health protection. King-size filter tip. Double-barreled health protection. King-size filter tip.

TIME Magazine, 1953

Today—as before—Only Kent offers this remarkable combination: **FINEST NATURAL TOBACCO'S FAMOUS MICRONITE FILTER**

Millions of smokers have changed to Kent because of this combination. The finest natural tobacco's famous micronite filter. The finest natural tobacco's famous micronite filter. The finest natural tobacco's famous micronite filter.

MD Magazine, 1960

If you could put **Taney's charcoal filter** on your cigarette, you'd have a better cigarette.

Massachusetts Physician

The Norfolk District Medical Society 11th Annual Dinner. Taney's charcoal filter. Taney's charcoal filter. Taney's charcoal filter.

Massachusetts Physician, 1969

New Improved **Marlboro Filter**

Marked improvement in Marlboro filter does not disturb famous Marlboro flavor. Marlboro filter. Marlboro filter. Marlboro filter.

LIFE Magazine, 1960s

Omni Reduced carcinogens. Premium taste.

Introducing the first (transmission electron microscope) reduced carcinogen, PM1, tar, nicotine, and tar/nicotine, which are the major causes of lung cancer in smokers. Omni. Omni. Omni.

PARADE Magazine, 2001

- In the 1950s, confronted with declining cigarette sales after the publication of research studies linking smoking to lung cancer, tobacco companies increased production of filter brands that were claimed to remove certain components of the smoke, even though manufacturers never acknowledged them to be harmful. Cigarette filters involved the use of charcoal, paper, cellulose acetate, propylene glycol, and other chemicals. Kent "Micronite" filters marketed in the 1950s contained asbestos (3).
- Lower machine-measured tar and nicotine yields were thought by smokers to reduce cancer risks; "light," "low tar," and "mild" became key advertising messages despite growing evidence of increased risks for lung cancer. (These fraudulent terms are now banned from use in the USA) (2).
- Lower machine-measurements of tar and nicotine yields were due to ventilated filters—i.e., holes in the filter that may create deceptive filtration results and that may be occluded by smokers to compensate for less 'flavor' or nicotine dose (2,3).
- Of note throughout the 1970s, the American Cancer Society, the National Cancer Institute, and most major health organizations promoted the concept of a "less hazardous" cigarette in the belief that most people who smoke would not or could not stop.
- All major medical journals (*JAMA*, *NEJM*, *BMJ*, *The Lancet*, and many state medical journals) continued to accept cigarette advertising well into the 1950s.

Filters are a Health Hazard

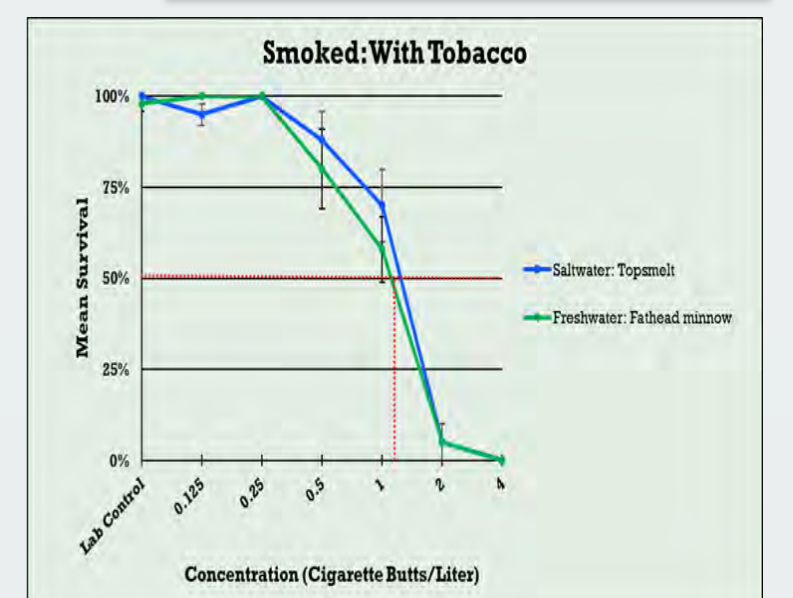
- As with flavorings such as menthol, filters facilitate nicotine addiction by making smoking less harsh and thus easier for youth to start smoking. For existing smokers, the tobacco industry fostered consumer complacency and false security about the implied protection that the filter could confer, diminishing the urgency to quit smoking.
- Lung cancer risks among smokers have doubled for men and increased by almost 10 times for women from 1960-1980; relative risks for and incidence of the more aggressive adenocarcinoma increased from 4.6 to 19.0 among men and from 1.5 to 8.1 among women (6).
- The use of ventilation in cigarette filters has also failed to make them safer and more than likely has made them more harmful (2, 3). Smokers who switched to low-tar cigarettes employed compensatory smoking, whereby they inhale more frequently and more deeply to maintain nicotine dosing. Such compensatory behavior offsets any theoretical benefit of ventilated filters and results in increased inhaled carbon monoxide and increased cardiovascular risk.
- The tobacco industry has known for decades that the filter does not provide protection from the adverse effects of smoking (7).

Toxic Tobacco Product Waste

- Most filters are made of cellulose acetate, a non-biodegradable plastic material. As discarded trash, they are the single most common waste item picked up over the last 30 years on beaches and urban cleanups worldwide (4).
- The leachates produced by soaking butts for 96 hours in fresh or salt water have been found to have a LD50 for test fish of one cigarette butt per liter. According to this U.S. Environmental Protection Agency protocol, cigarette butts should therefore be considered toxic hazardous waste and regulated as such (5).
- 5.6 trillion cigs are smoked globally each year, and up to 2/3s are dumped irresponsibly somewhere into the environment.



Item rank	Item	No. of Debris Items	Percentage of Total Debris Items
1	cigarettes/filters	52,907,756	32%
2	food wrappers/containers	14,766,533	9%
3	caps, lids	13,585,425	8%
4	cups, plates, forks, knives, spoons	10,112,038	6%
5	beverage bottles (plastic)	9,549,156	6%
6	bags (plastic)	7,825,319	5%
7	beverage bottles (glass)	7,062,199	4%
8	beverage cans	6,753,260	4%
9	straws/stirrers	6,263,453	4%
10	rope	3,251,948	2%
Top ten total debris items		132,077,087	80%
Total debris items worldwide		166,144,420	100%



Policy Options to Eliminate the Filter Fraud	Rationale	Jurisdiction	Likely Outcome
Product labeling (8)	Increases smoker awareness of filter risk	National	Modest impact on smoker behavior
Litigation (9)	Cost recovery for environmental damage, nuisance	Local, state, national	De-normalization of tobacco use, internalization of environmental and health costs
Extended producer responsibility (10)	Takeback & waste product stewardship	Local, state, national	Higher cost of distribution
Banning sale of filtered cigarettes (3)	Corrective action on fraudulent product, upstream waste management	Local, state, national	De-normalizes smoking, reduced consumption
Public education & Counter-advertising (11)	Change perceptions through effective direct messaging	National	Increased public awareness of fraud

Conclusions

- There is sufficient evidence that cigarette filters are a fraud, primarily acting as a marketing tool with which the tobacco industry has deceived the public about some "health benefit" from smoking filtered compared with unfiltered cigarettes.
- The cellulose acetate filter comprises the bulk of tobacco waste, which is a toxic hazardous waste product and therefore should be further regulated as such by national, state, or local jurisdictions.
- Banning the sale of filtered cigarettes is likely to reduce cigarette consumption, denormalize smoking, and result in fewer children starting to smoke.
- Policy makers and health providers need to reinforce the fact to smokers that the filter does not confer any health protection.
- Further research is needed on the health and behavioral impact of removing filters from the global cigarette market, but banning the sale of filtered cigarettes should be implemented now without further research.

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