

Gender differences in smoking related diseases

Calisia 10 June 2019

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- The peak prevalence of male smokers has been reached between 1950 and 1980 in most “western” countries and ranged between 40%-80% of current smokers among men.
- Tobacco smoking has started to increase in women a few decades later than in men and continued its rise even while decreases took place in men, leading to a convergence of sex-specific smoking prevalences.
- In most highly developed countries, smoking prevalence has been declining in women as well in recent years

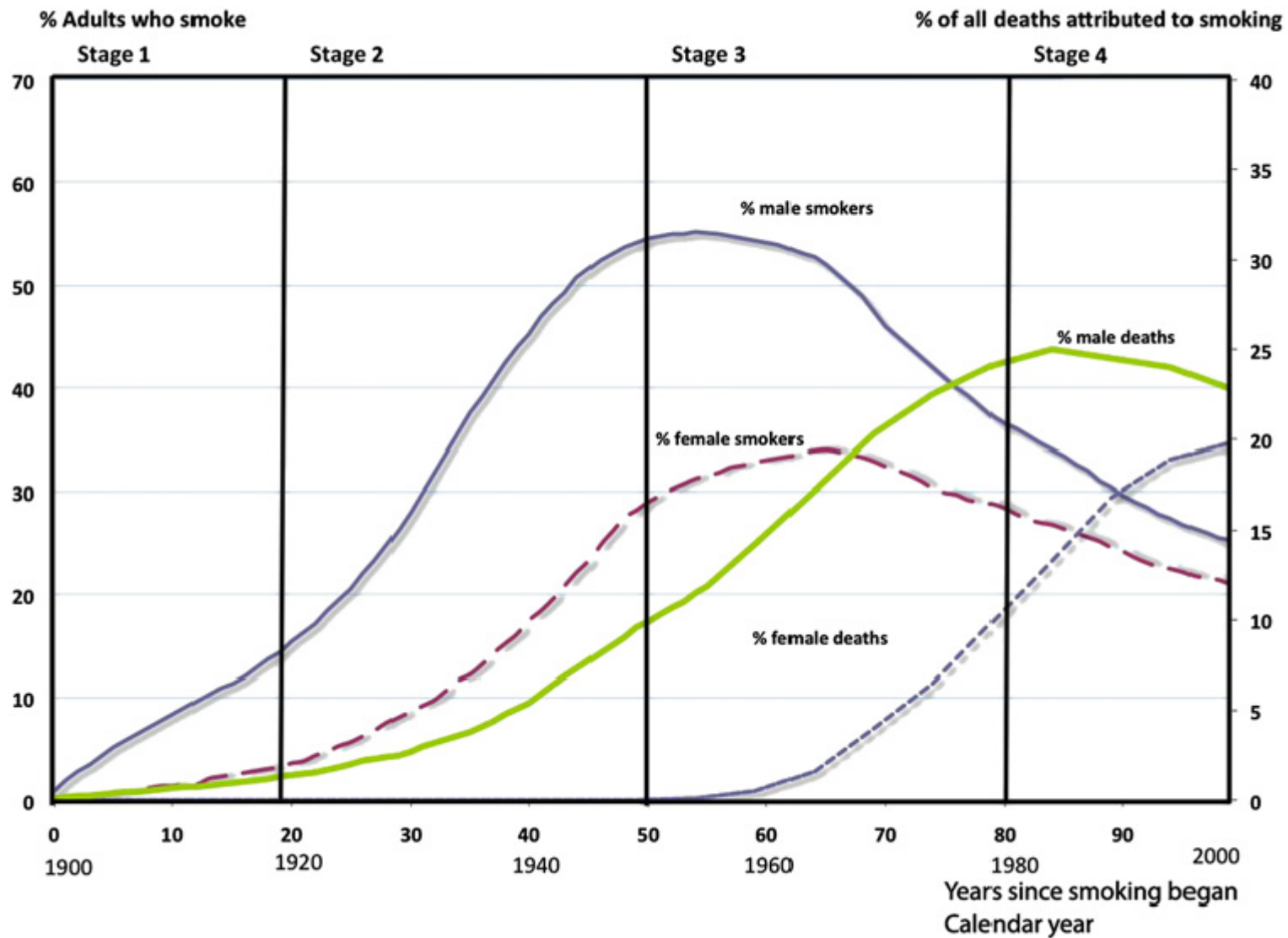
Tobacco Control 1994; 3: 242–247

SPECIAL COMMUNICATIONS

A descriptive model of the cigarette epidemic in
developed countries

Alan D Lopez, Neil E Collishaw, Tapani Piha

Figure 1 Schematic diagram proposed in 1994 for economically developed countries.¹ The criteria used to define the stages of the epidemic are based on the comparative levels of smoking prevalence and smoking-attributed mortality in men and women.



Lopez et al, Tob Control 1994
 ri-proposed by Thun et al, Tob Control 2012

Cite this article as: BMJ, doi:10.1136/bmj.38142.554479.AE (published 22 June 2004)

Papers

Mortality in relation to smoking: 50 years' observations on male British doctors

Richard Doll, Richard Peto, Jillian Boreham, Isabelle Sutherland

Earlier studies on the health consequences of smoking focused on men.

In studies investigating both sexes, the shorter duration of the habit and the lower number of cigarettes consumed by women have sometimes led to the hypothesis that women were somehow less susceptible to the damages of smoking.

Women and Smoking
A Report of the Surgeon General

Executive Summary



Department of Health and Human Services

2001

The 21st century hazards of smoking and benefits of stopping: a prospective study of one million women in the UK

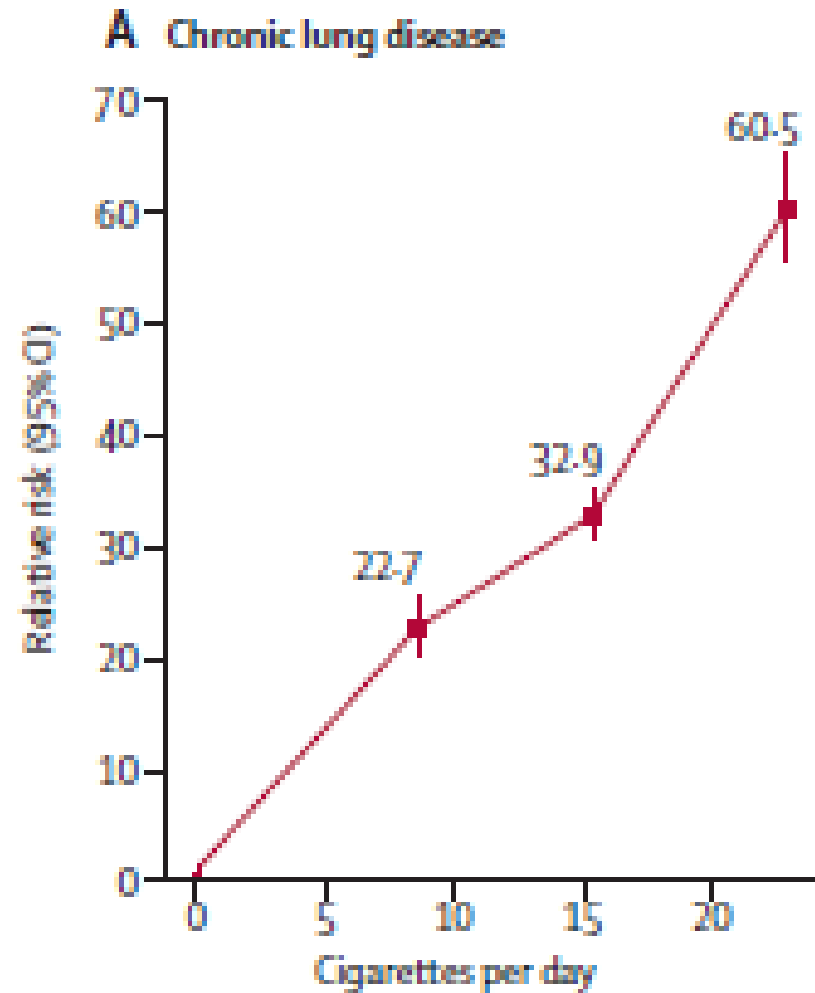
Kirstin Pirie, Richard Peto, Gillian K Reeves, Jane Green, Valerie Beral, for the Million Women Study Collaborators

Lancet 2013; 381: 133-41

The Million Women Study

COPD

Relative risk by cigarettes/day
Reference: Never smokers.

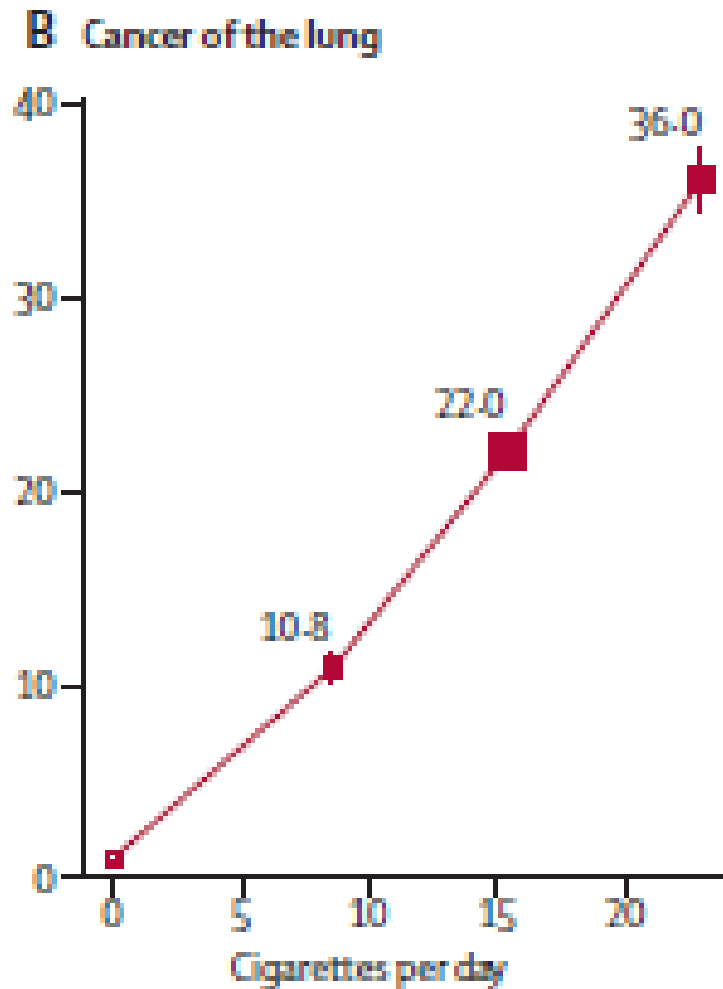


Pirie et al, Lancet 2014;381:133-41

The Million Women Study

Lung Cancer

Relative risk by cigarettes/day
Reference: Never smokers.

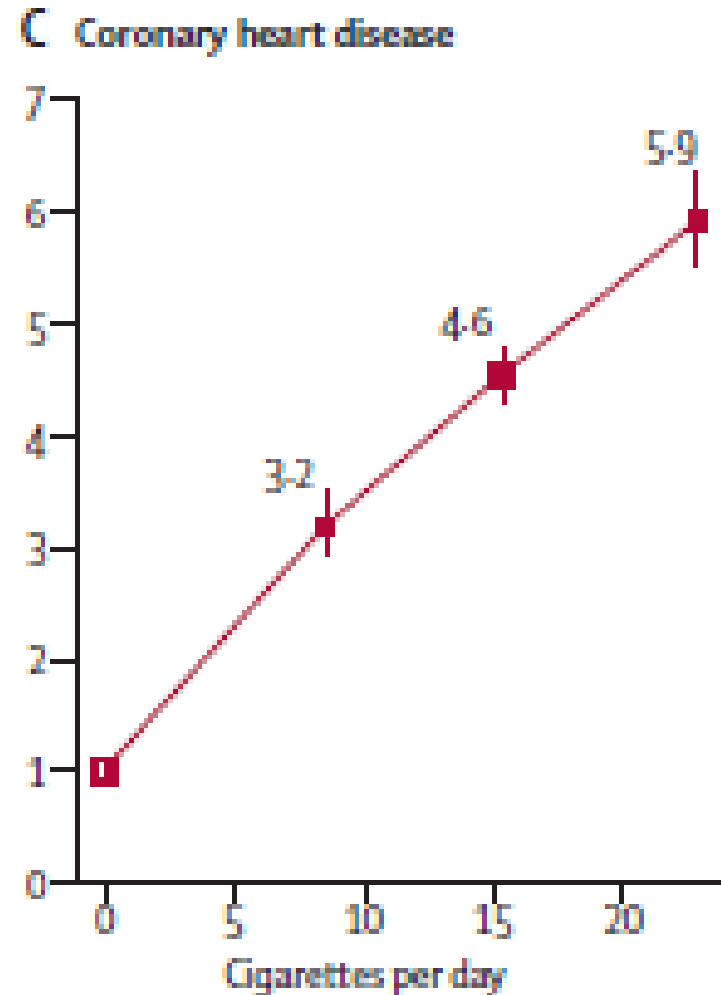


Pirie et al, Lancet 2014;381:133-41

The Million Women Study

Coronary Heart Disease

Relative risk by cigarettes/day
Reference: Never smokers.

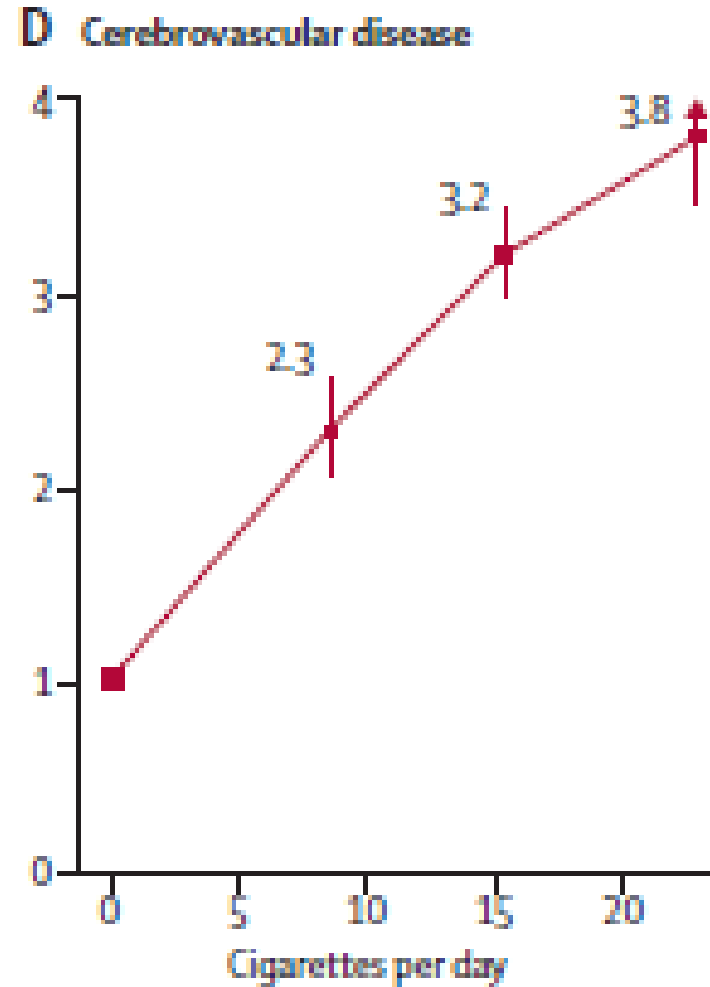


Pirie et al, Lancet 2014;381:133-41

The Million Women Study

Cerebrovascular Diseases

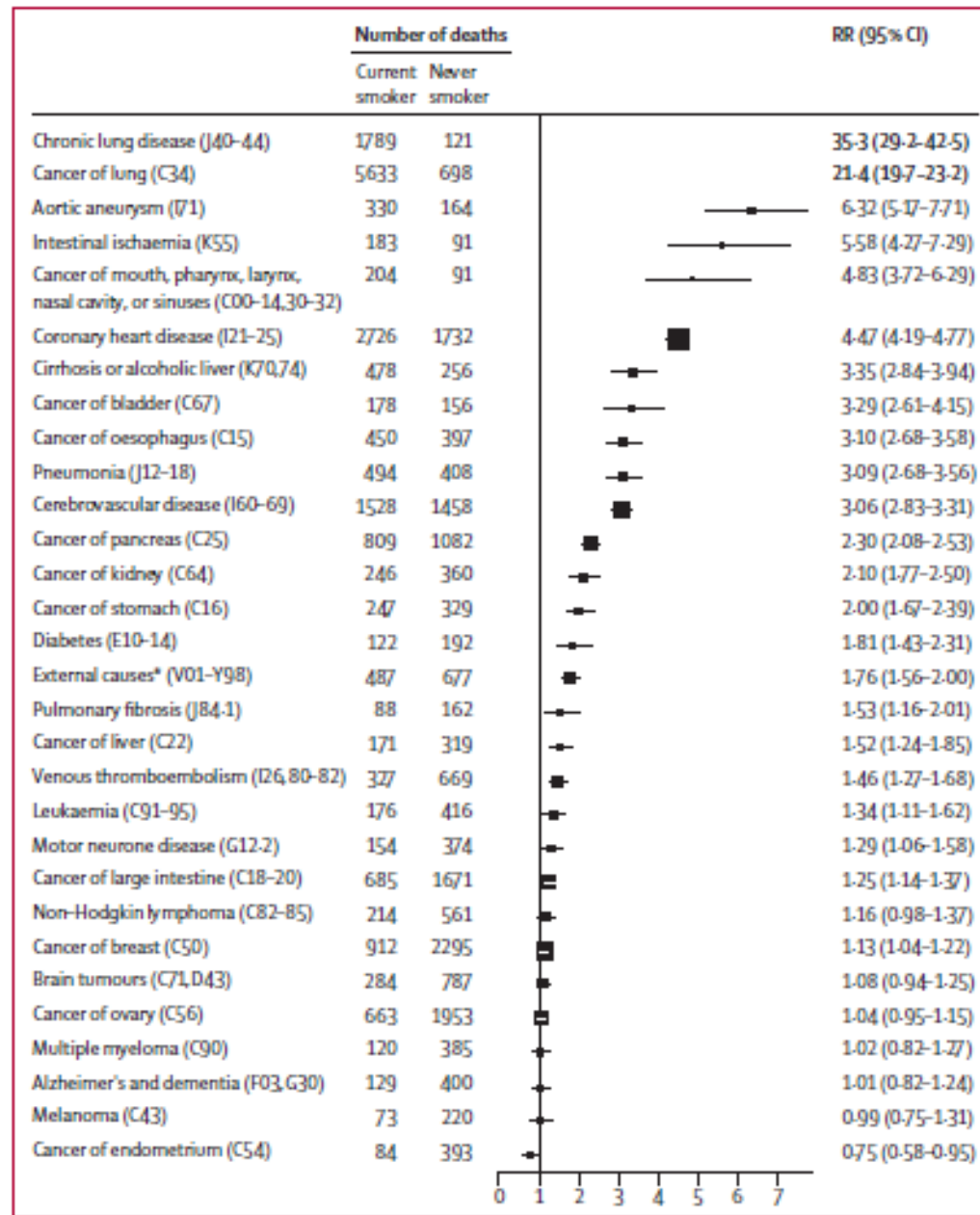
Relative risk by cigarettes/day
Reference: Never smokers.



The Million Women Study

The 30 more common causes of death

Relative risk & CI, current versus never-smoker



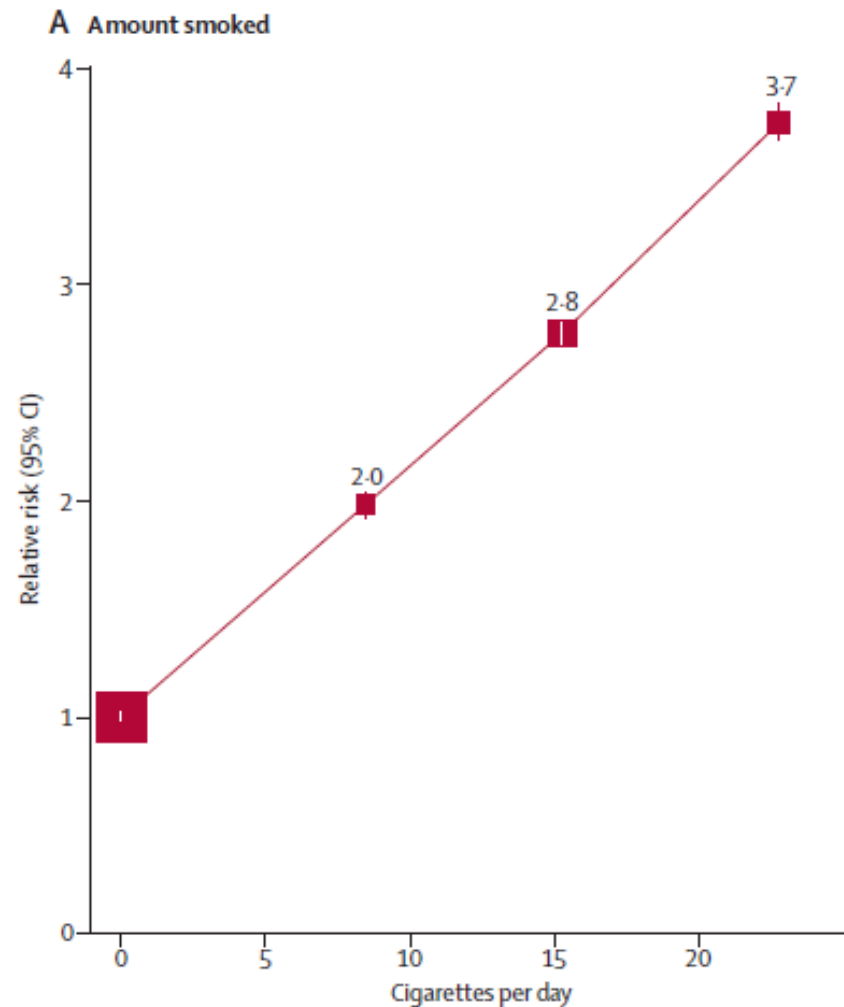
Pirie et al, Lancet 2014;381:133-41

Figure 2: 30 most common specific causes of death (ICD-10): 12-year relative risk, current versus never-smoker

The Million Women Study

Total mortality

Relative risk by cigarettes/day
Reference: Never smokers.



Pirie et al, Lancet 2014;381:133-41

The Million Women Study

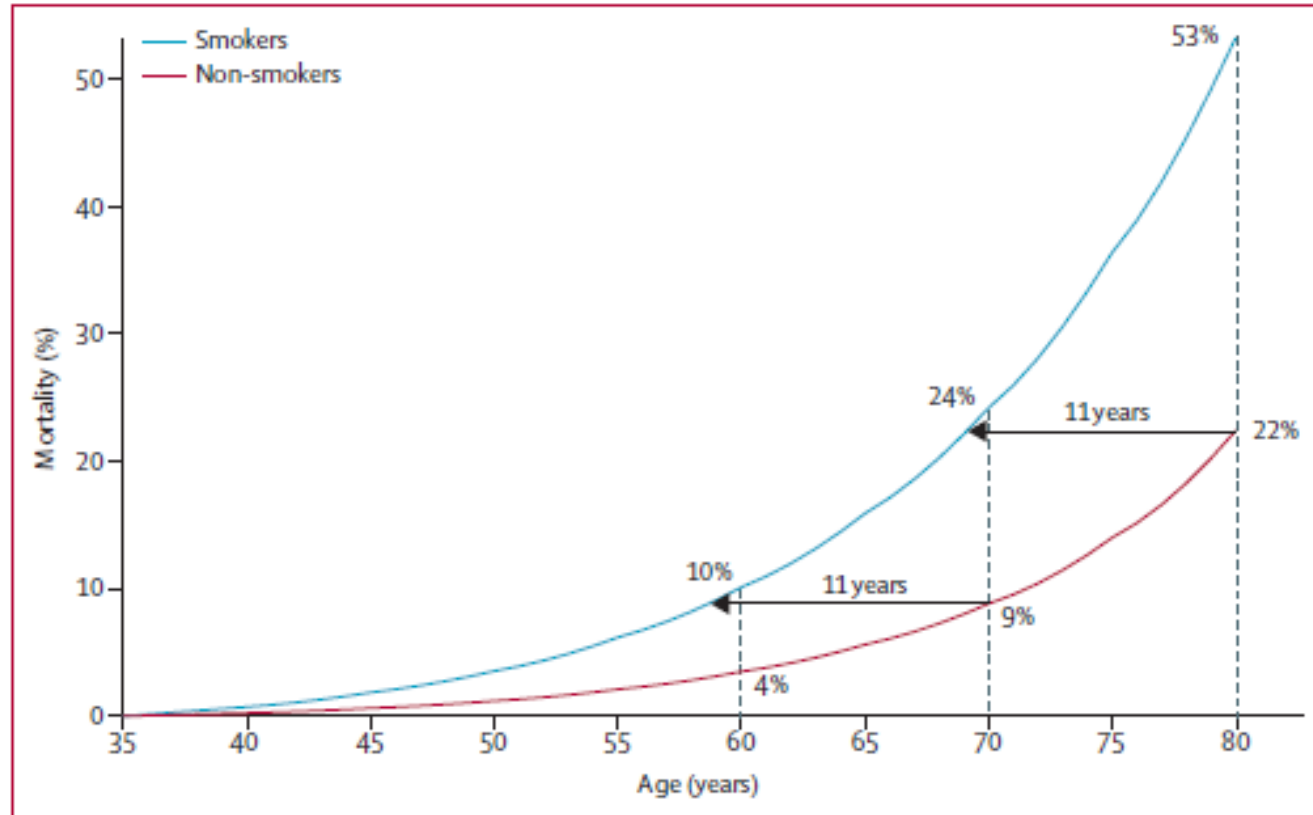


Figure 5: All-cause mortality: Illustration of the effects of a 3-fold difference in annual death rates on mortality from age 35 years to age 80 years



PERGAMON

Social Science & Medicine 53 (2001) 1067–1080

SOCIAL
SCIENCE
&
MEDICINE

www.elsevier.com/locate/socscimed

‘Smoke like a man, die like a man’¹: A review of the
relationship between gender, sex and lung cancer

Sarah Payne*

BMJ 2013;346:f543 doi: 10.1136/bmj.f543 (Published 30 January 2013)

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RESEARCH NEWS

“Women who smoke like men, die like men”

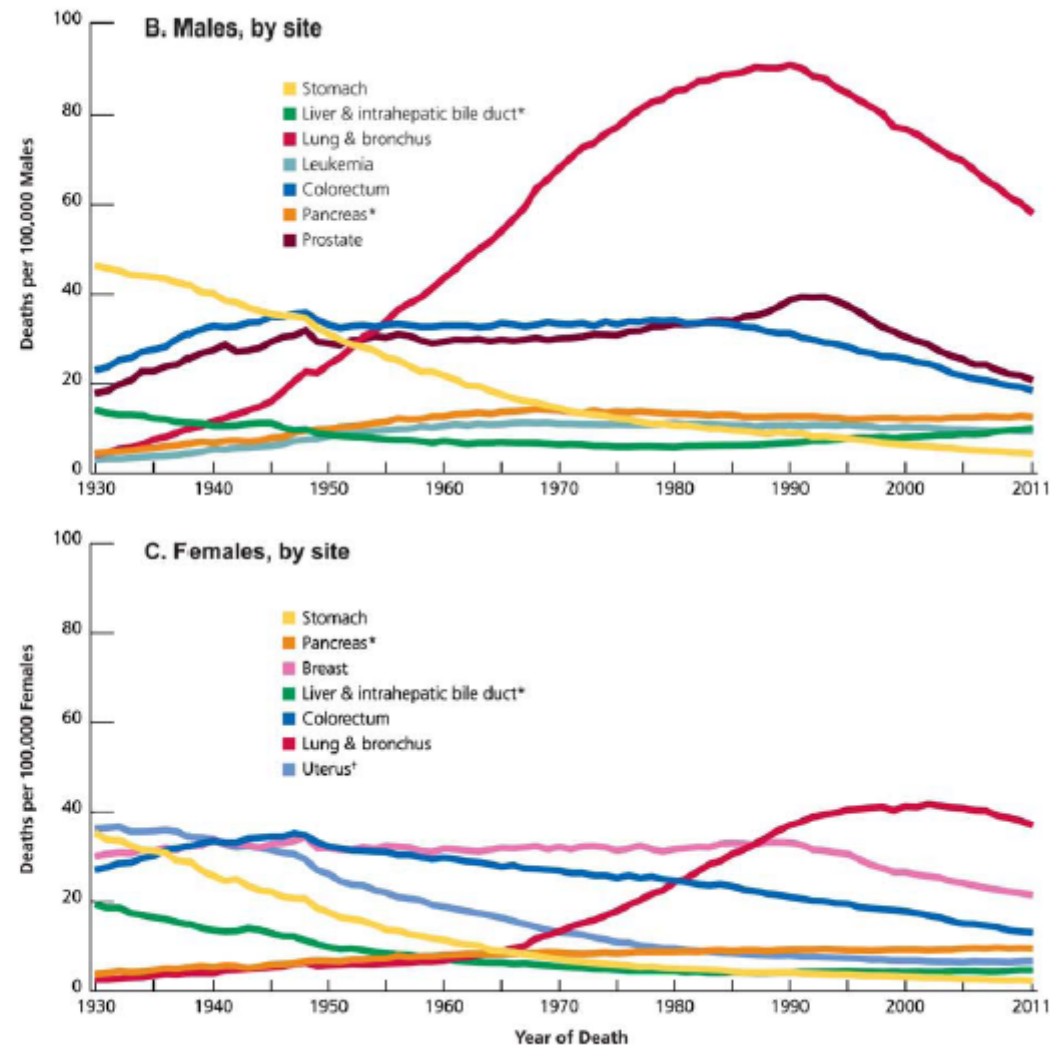


FIGURE 5. Trends in Death Rates Overall and for Selected Sites by Sex, United States, 1930 to 2011.

Siegel et al, Ca Cancer J Clin 2015

Specific effects on women

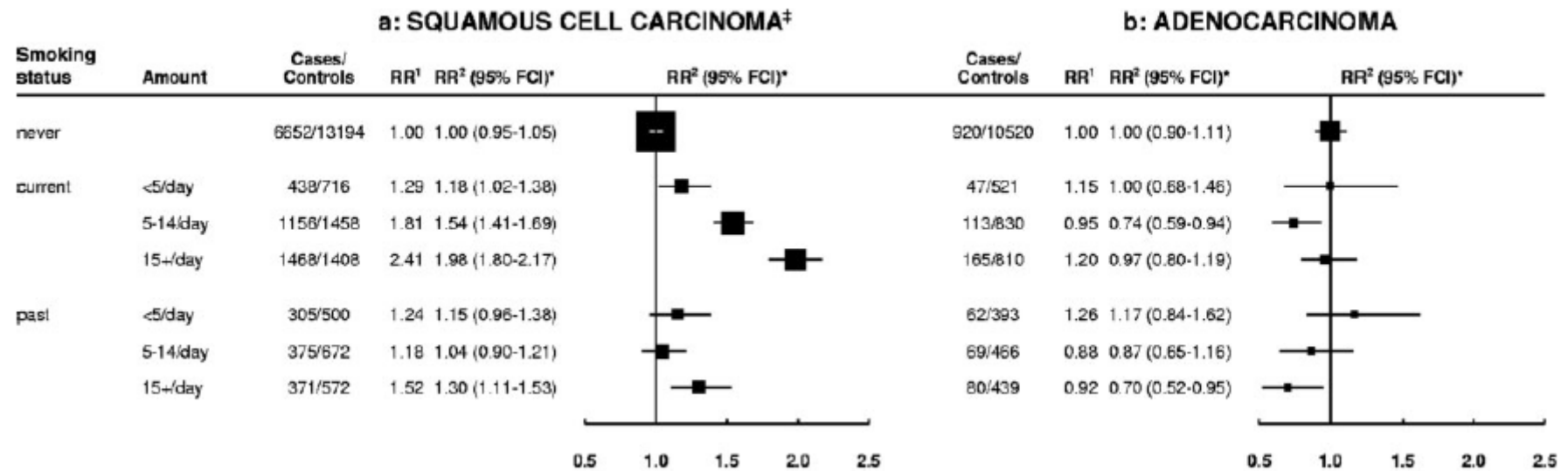
Int. J. Cancer: 118, 1481–1495 (2006)
© 2005 Wiley-Liss, Inc.

Carcinoma of the cervix and tobacco smoking: Collaborative reanalysis of individual data on 13,541 women with carcinoma of the cervix and 23,017 women without carcinoma of the cervix from 23 epidemiological studies

International Collaboration of Epidemiological Studies of Cervical Cancer*

Cervical cancer

Cervical cancer



International Collaboration of Epidemiological Studies of Cervical Cancer; Int J Cancer 2006

Specific effects on women

- Increased risk of cervical and possibly vulvar cancer.
- Possible increased risk of breast and mucinous ovarian cancer
- Inverse association with postmenopausal endometrial cancer.
- Increased risk of conditions associated to low estrogens
- Possible increased risk of dysmenorrhea, secondary amenorrhea and menstrual irregularities
- Lower age at menopause
- Possible reduced risk of uterine fibromas
- Increased risk of osteoporosis and fractures

Effects of cigarette smoking on reproduction

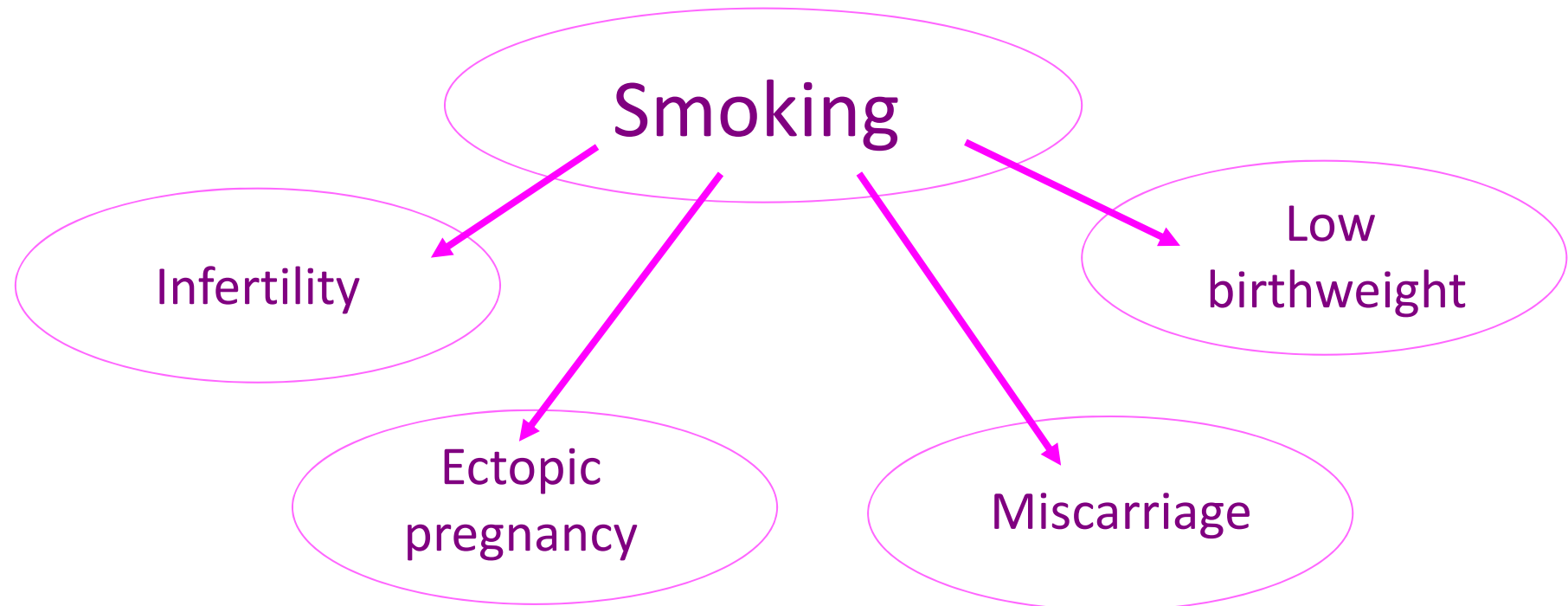
**C. Dechanet^{1,*}, T. Anahory¹, J.C. Mathieu Daude², X. Quantin³,
L. Reyftmann¹, S. Hamamah¹, B. Hedon¹, and H. Dechaud¹**

¹Department of Medicine and Biology of Reproduction, Hôpital Arnaud de Villeneuve, 371 Avenue du Doyen Gaston Giraud, 34 295 Montpellier Cedex 5, France ²Department of Toxicology, Hôpital Lapeyronie, 371 Avenue du Doyen Gaston Giraud, 34 295 Montpellier Cedex 5, France ³Department of Thoracic Oncology, Hôpital Arnaud de Villeneuve, 371 Avenue du Doyen Gaston Giraud, 34 295 Montpellier Cedex 5, France

Human Reproduction Update, Vol.17, No.1 pp. 76–95, 2011

- Exposure to cigarette smoke impairs every stage of the reproductive process and each part of the reproductive system such as folliculogenesis, steroidogenesis, embryonic development and transport, endometrial maturation, implantation and early placentation, uterine vascular velocity and myometrial activity.
- The effects of cigarette smoke are dose-dependent and are influenced by the presence of other toxic substances and hormonal status.

Smoking and pregnancy



Risk of spontaneous abortion by number of cigarettes smoked

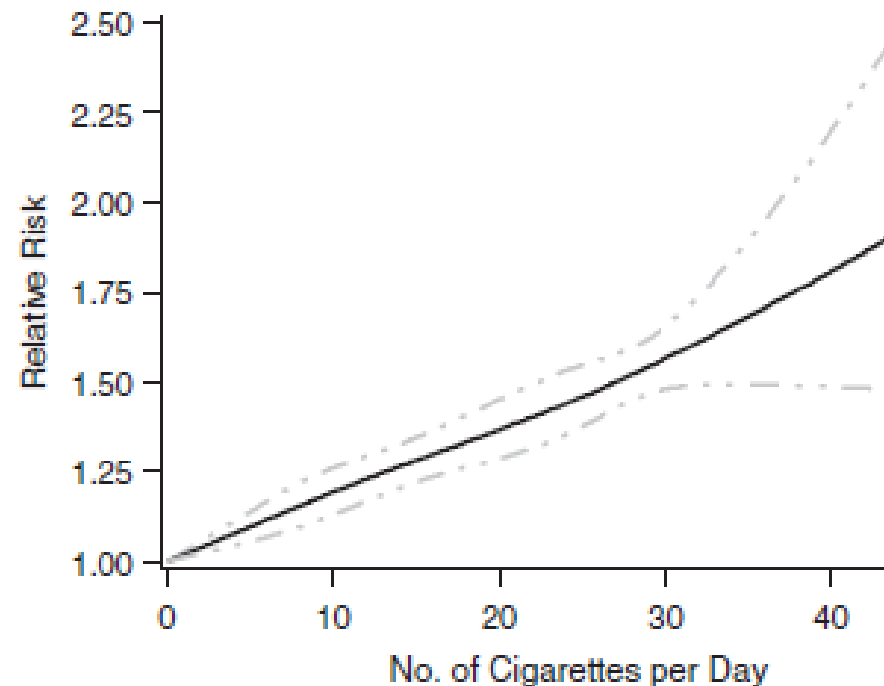


Figure 3. Relative risk of miscarriage versus number of cigarettes smoked per day.

Children exposed to smoking in uterus



- Low birthweight
- Reduced pulmonary function
- Higher risk of perinatal and infant mortality
- No association with malformation

War against tobacco

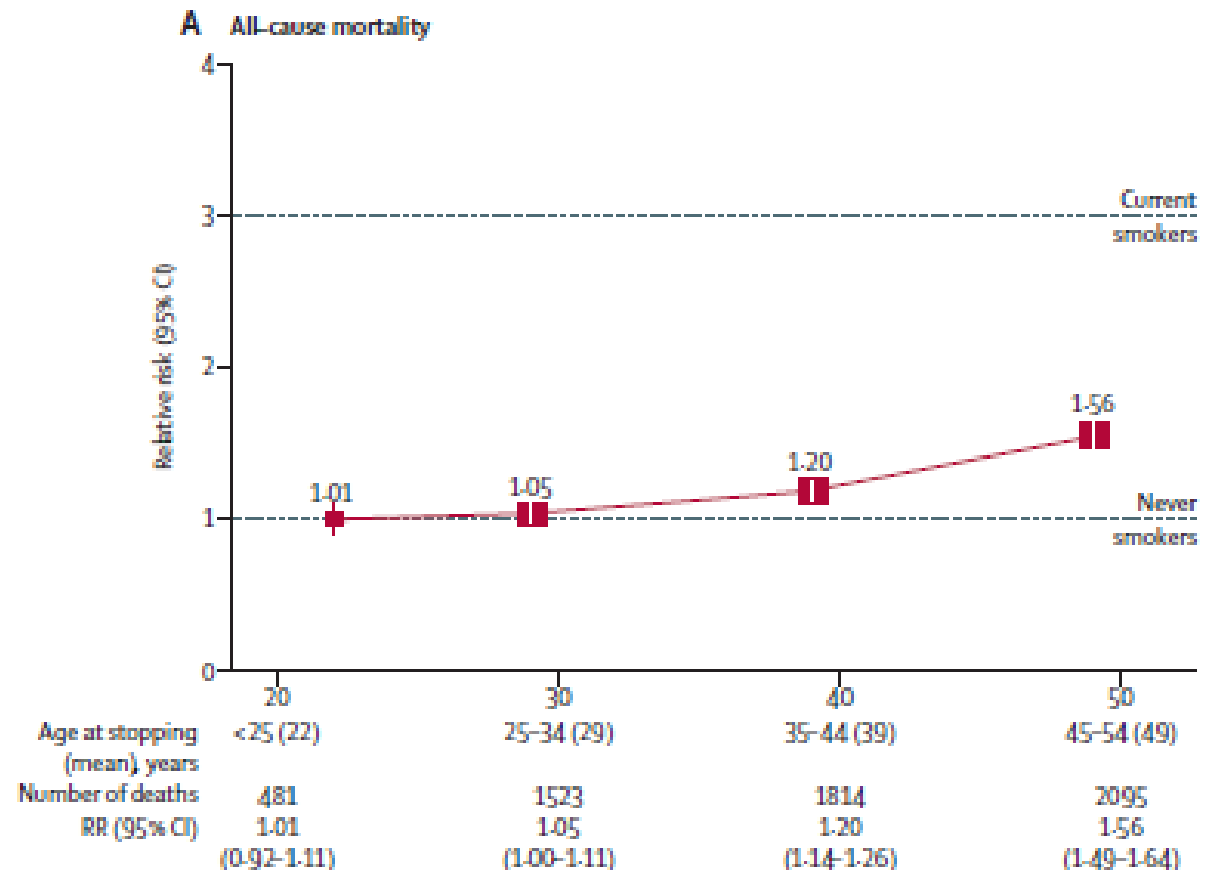
**Stopping smoking
works**

**for men and for
women**

The Million Women Study

Total mortality

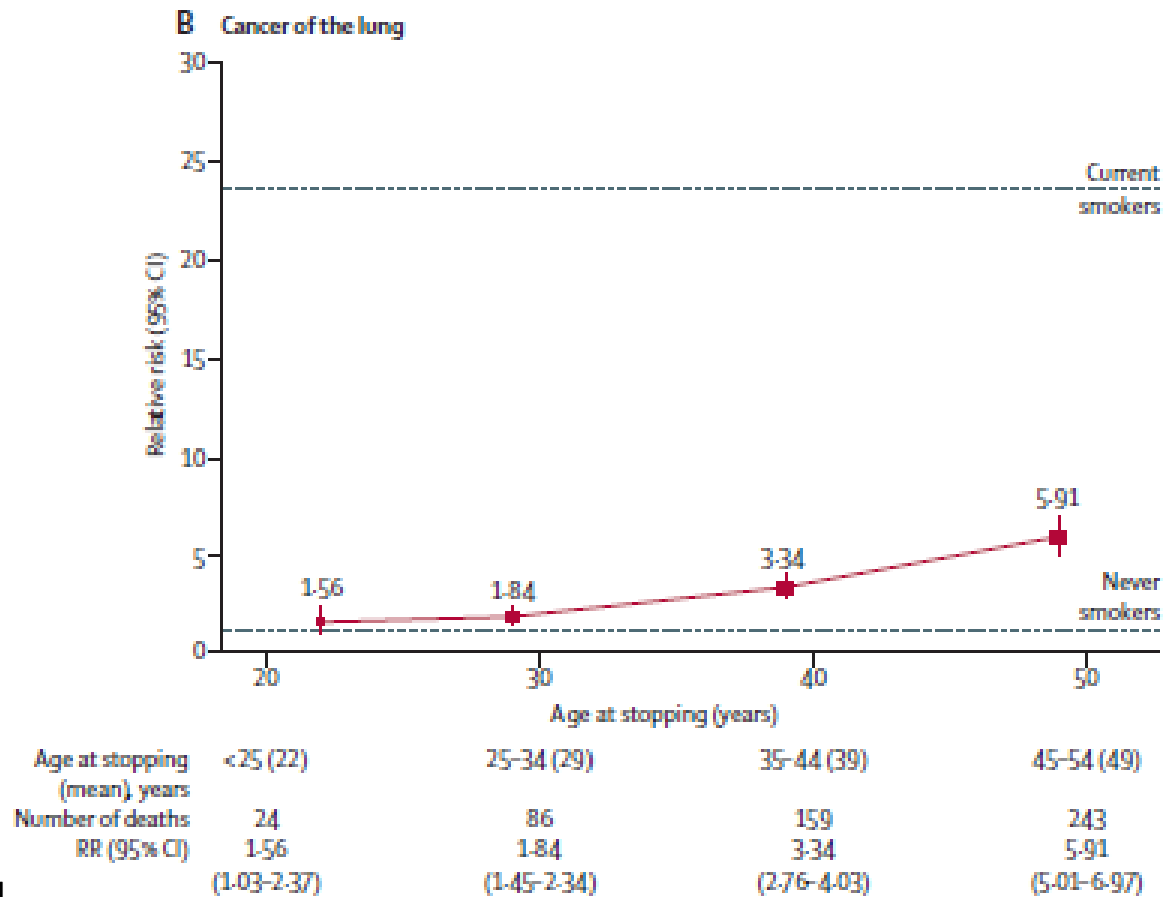
RR of ex-smokers compared to never smokers by age at stopping



The Million Women Study

Lung cancer

RR of ex-smokers compared to never smokers by age at stopping



Pirie et al, Lancet 2014;381:133-41

Smoking Cessation Programs Targeted to Women: A Systematic Review

IRIS TORCHALLA, PhD and CHIZIMUZO T. C. OKOLI, PhD, MPH
British Columbia Centre of Excellence for Women's Health, Vancouver, Canada

JOAN L. BOTTORFF, PhD, RN
*Faculty of Health and Social Development, School of Nursing, University of British
Columbia, Okanagan, Kelowna, Canada*

ANNIE QU, MSc, NANCY POOLE, MA,
and LORRAINE GREAVES, PhD
British Columbia Centre of Excellence for Women's Health, Vancouver, Canada

Women & Health, 52:32–54, 2012

- Women specific tobacco programs help women stop smoking, although they appear to produce similar abstinence rates as non-sex/gender specific programs.

Cochrane Database Syst Rev. ; (3): CD001055. doi:10.1002/14651858.CD001055.pub3.

Interventions for promoting smoking cessation during pregnancy

Judith Lumley², Catherine Chamberlain¹, Therese Dowswell³, Sandy Oliver⁴, Laura Oakley⁵, and Lyndsey Watson²

72 controlled trials involving over 25,000 women nearly all in high-income countries.

Interventions **were effective in helping women to stop smoking during pregnancy** (overall by approximately 6%).

The smoking cessation interventions **reduced the number of babies with low birthweight and preterm births**, confirming that smoking cessation can reduce the adverse effects of smoking on newborn infants.

The tobacco industry and women

- The tobacco industry has developed specific marketing strategies for different population segments, including women.
- Cigarette brands directed specifically to women (e.g. Virginia Slim) have been marketed.
- Tobacco advertising dedicated to women associated cigarette use with independence, modernity, glamour, stress release and weight control

1927

Marlboro

“Mild as May”



1981

Marlboro

“Marlboro Man”

Marlboro underwent a complete sex change in 1954



1977

Virginia Slim

“You’ve come a long way baby”

“Back when the business world was dominated by men, some women carried a lot of weight around the office”

Back when the business world was dominated by men, some women carried a lot of weight around the office.

You've come a long way, baby.

VIRGINIA SLIMS
Slimmer than the fat cigarettes men smoke.

Fashions: Richard Assafly

16 mg "tar," 0.9 mg nicotine av. per cigarette, FTC Report Aug. 77

Warning: The Surgeon General Has Determined That Cigarette Smoking Is Dangerous to Your Health.

1993

Capri

First “super slim” (17 mm)

Launched in 1987

“The sleek elegance of the longest super slim”

EXQUISITE

The
sleek elegance
of the longest
super slim.

new
capri
120's

Lively Length
SUPER SLIMS LIGHTS

Also available in menthol.

Menthol, 12 mg. "tar", 0.9 mg. nicotine; Filter, 13 mg. "tar",
1.0 mg. nicotine av. per cigarette by FTC method. © 1993 B&W T Co.

**SURGEON GENERAL'S WARNING: Smoking
By Pregnant Women May Result in Fetal
Injury, Premature Birth, And Low Birth Weight.**

WARNING

When you smoke it shows.

Cigarettes are addictive and harmful.

You have the will. There is a way.

1-866-366-3667
gosmokefree.gc.ca/quit

Health Canada

SMOKING IS VERY GLAMOROUS

AMERICAN CANCER SOCIETY

31MAY: WORLD NO TOBACCO DAY  World Health Organization

**Chic?
No, throat cancer.**

Protect women from tobacco marketing and smoke.

SMOKING IS UGLY

WWW.WHOUNIT.TOBACCO



Vincent Van Gogh.
Skull with cigarette

Thank you