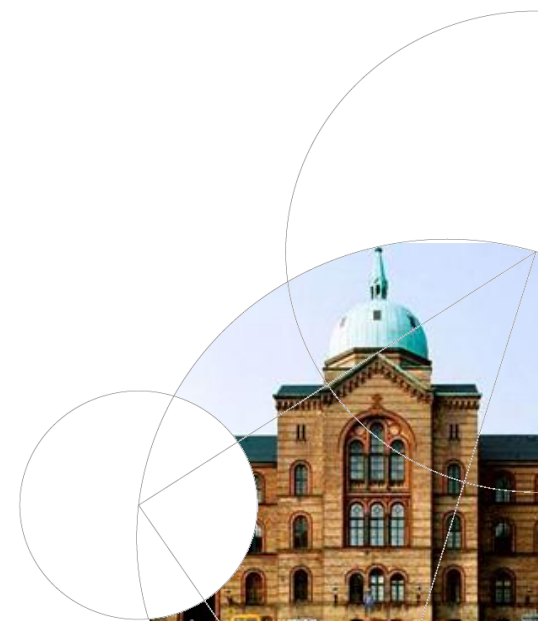


# The impact of smoking on expected lifetime with and without chronic disease among Palestinian men in the West Bank

Henrik Brønnum-Hansen

REVES 2018



# Living under occupation, economic hardship, unemployment, and hopeless future prospects might lead to increasing tobacco addiction



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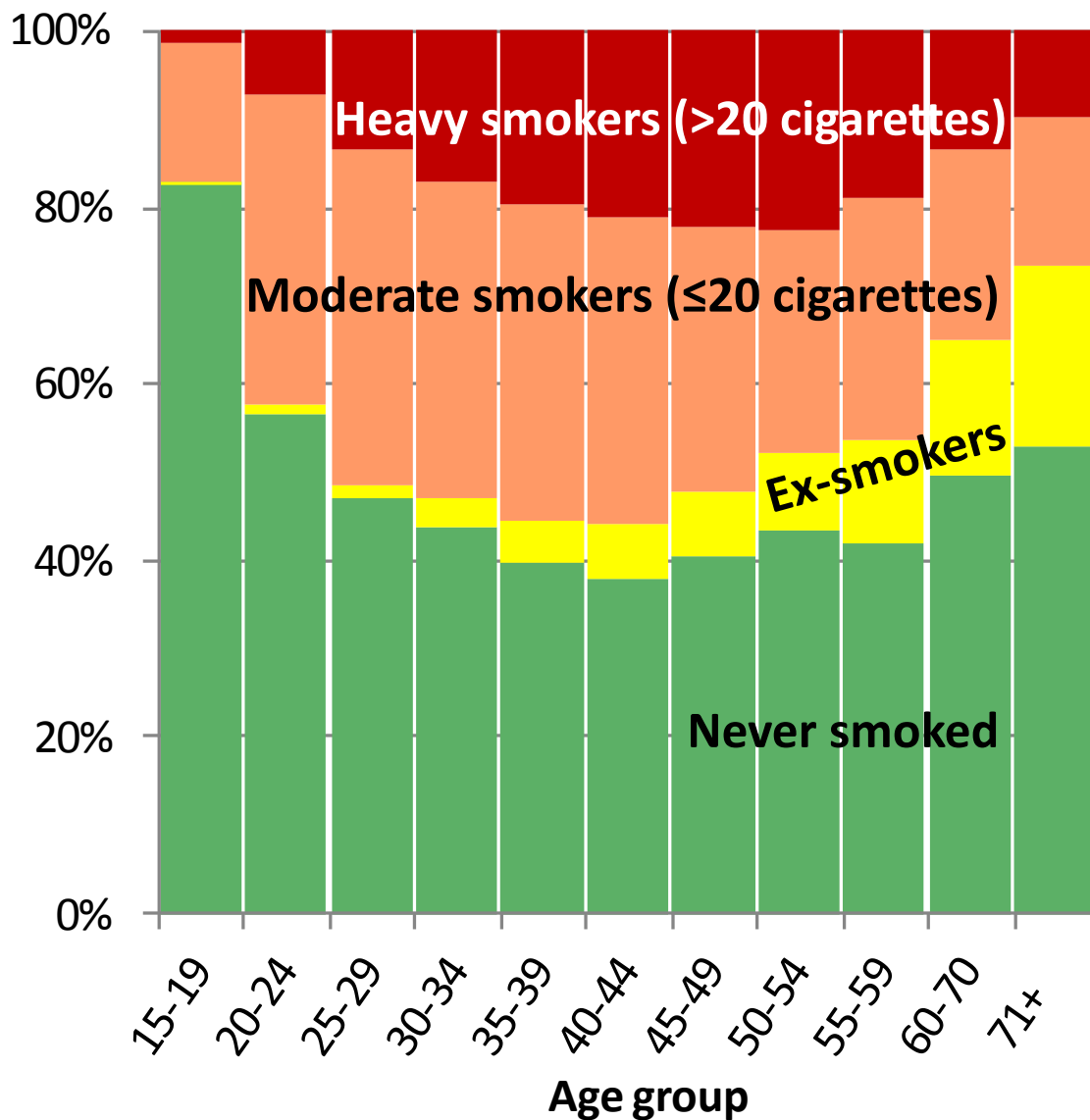


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## The high smoking prevalence of more than 40 % of the West Bank male population is a major challenge for the Palestinian health authorities



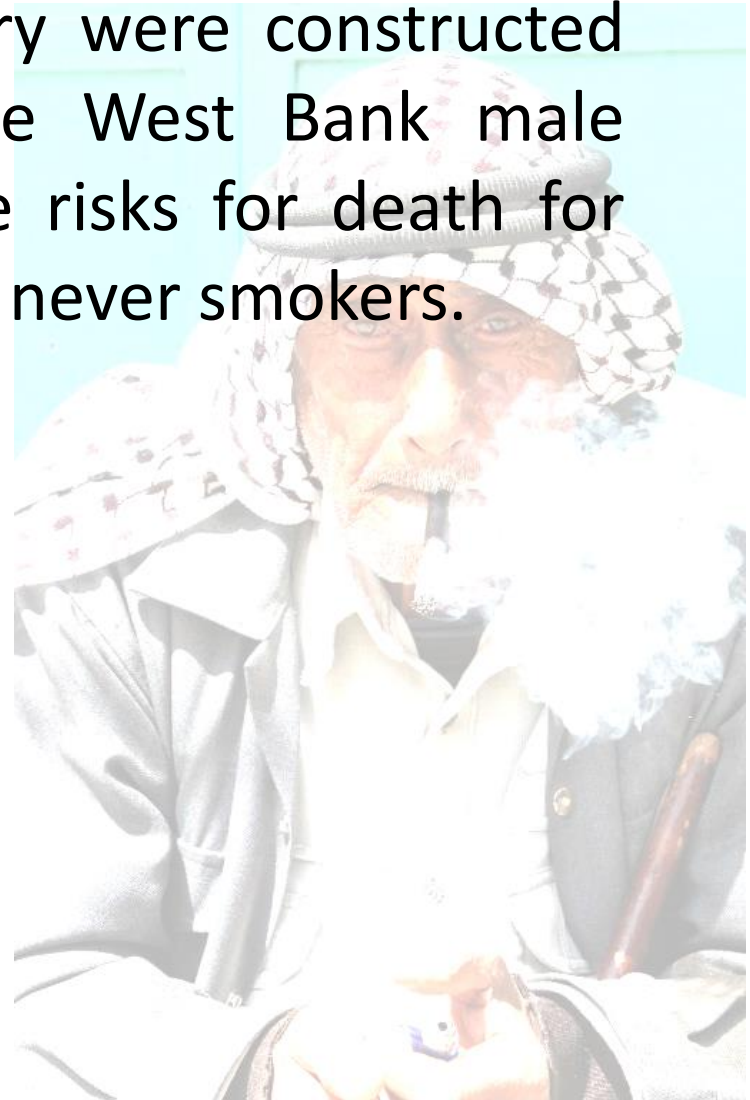
# Purpose

**To estimate life expectancy and average lifetime with and without chronic disease among male never smokers, ex-smokers, and smokers living in the West Bank of the occupied Palestinian territory**



## Methods

- Life tables by smoking category were constructed based on a life table for the West Bank male population and Danish relative risks for death for smokers and ex-smokers versus never smokers.



# Methods

## Construction of life tables by smoking category

$$D = \sum P_i \times RR_i \times D_0$$



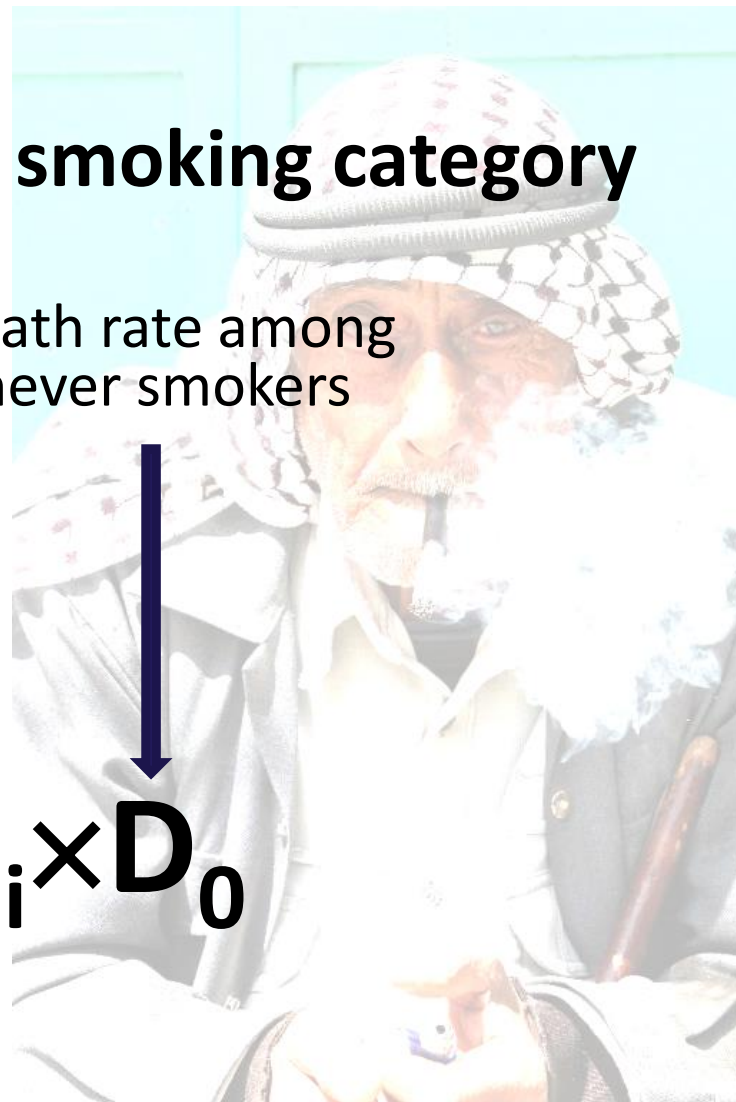


## Methods

### Construction of life tables by smoking category

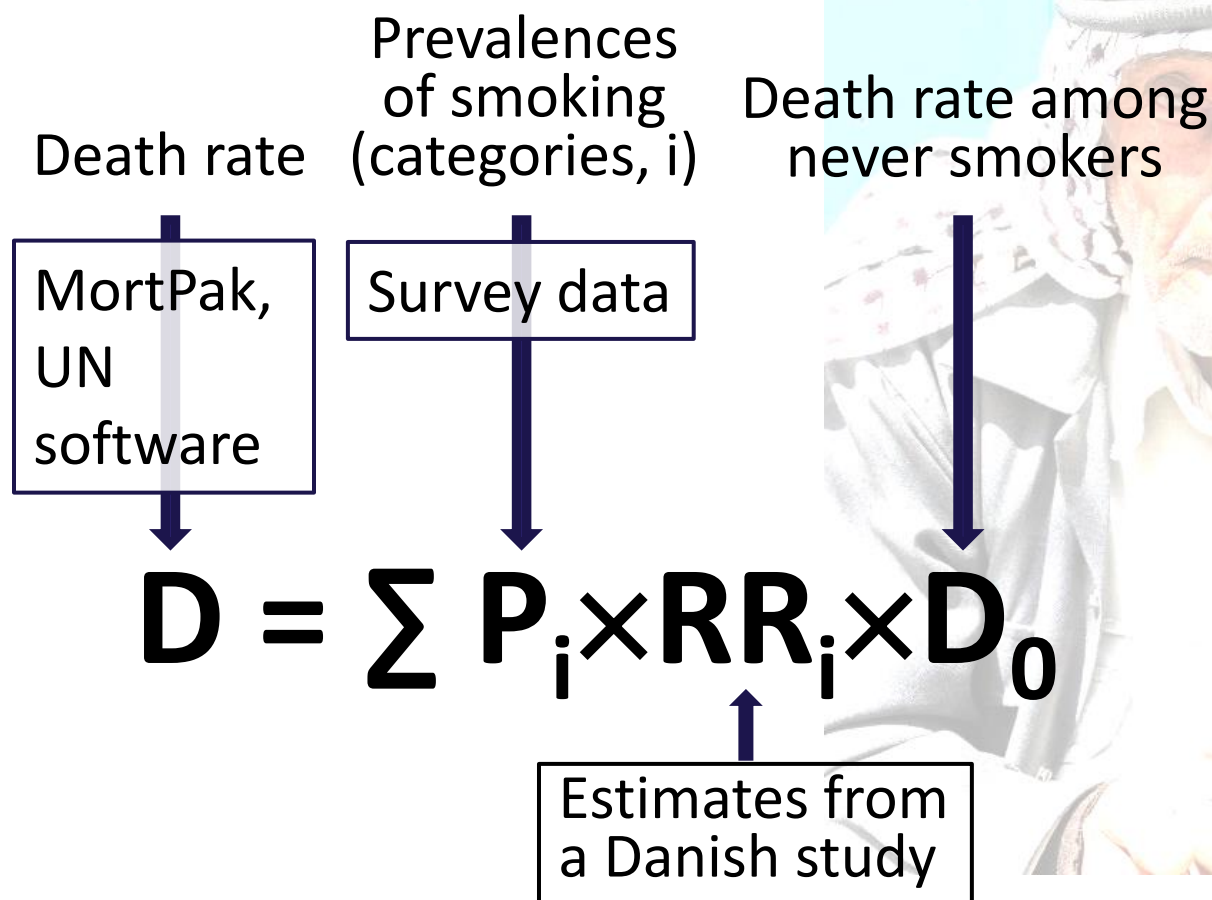
Death rate      Prevalences of smoking (categories, i)      Death rate among never smokers

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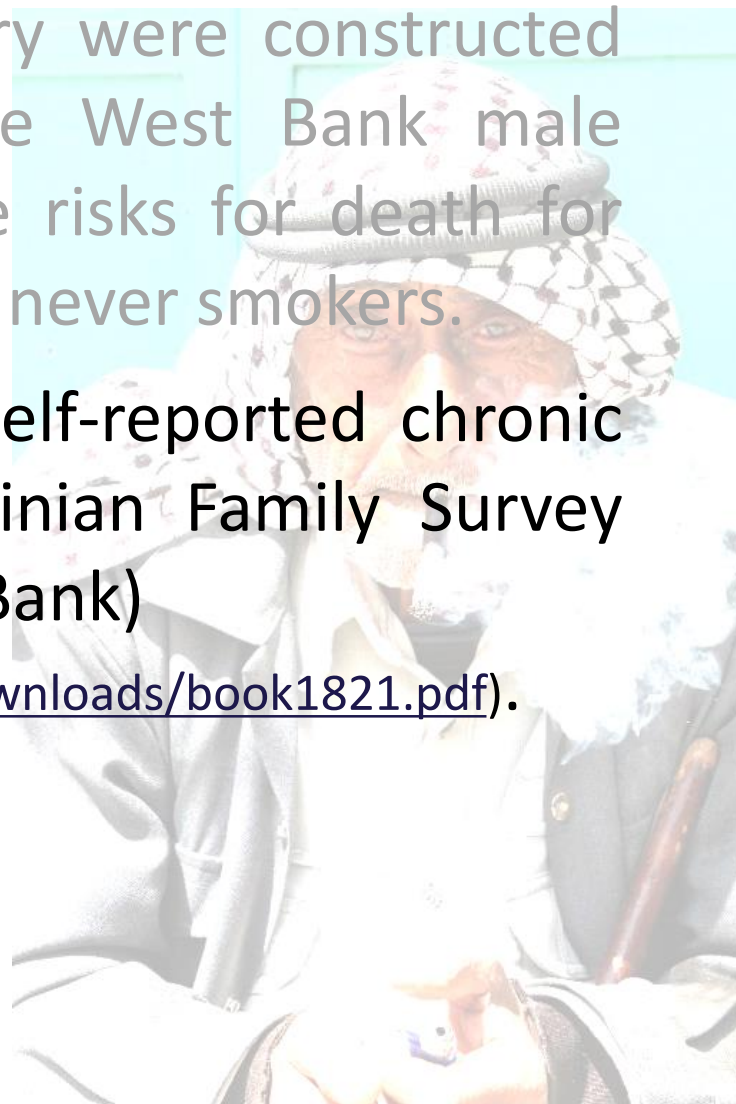
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## Construction of life tables by smoking category



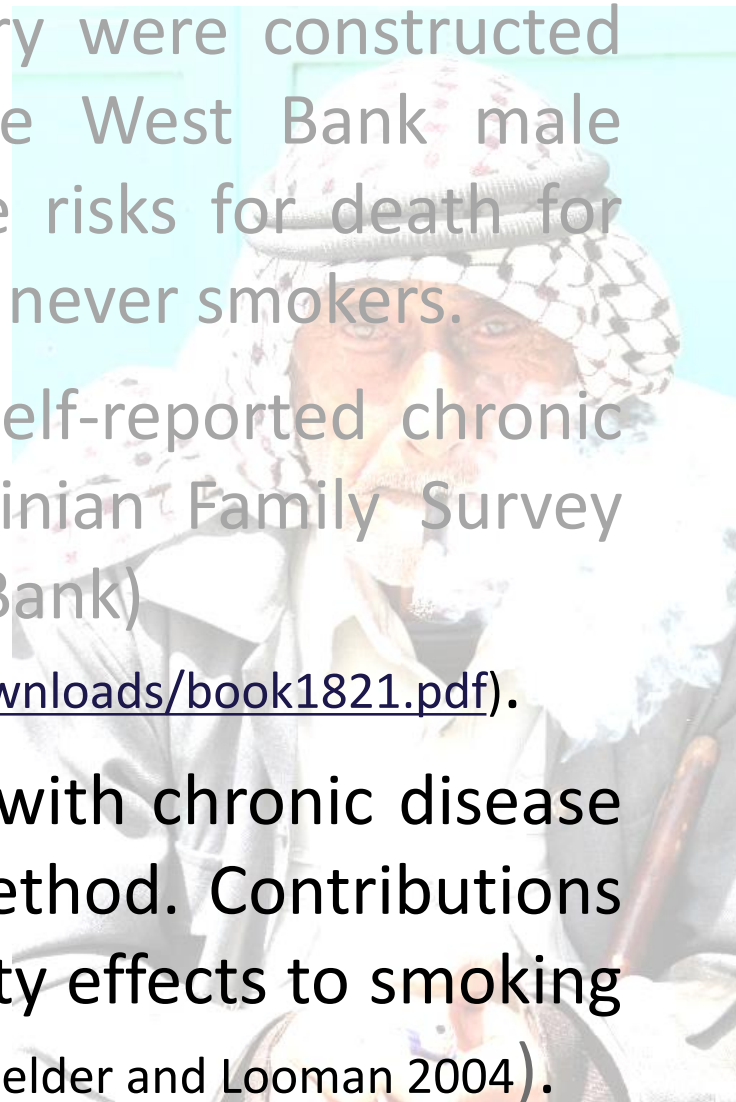
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- Life tables by smoking category were constructed based on a life table for the West Bank male population and Danish relative risks for death for smokers and ex-smokers versus never smokers.
- Data on smoking habits and self-reported chronic disease were from the Palestinian Family Survey 2010 (14,769 men in the West Bank)  
([http://www.pcbs.gov.ps/Portals/\\_PCBS/Downloads/book1821.pdf](http://www.pcbs.gov.ps/Portals/_PCBS/Downloads/book1821.pdf)).



## Methods

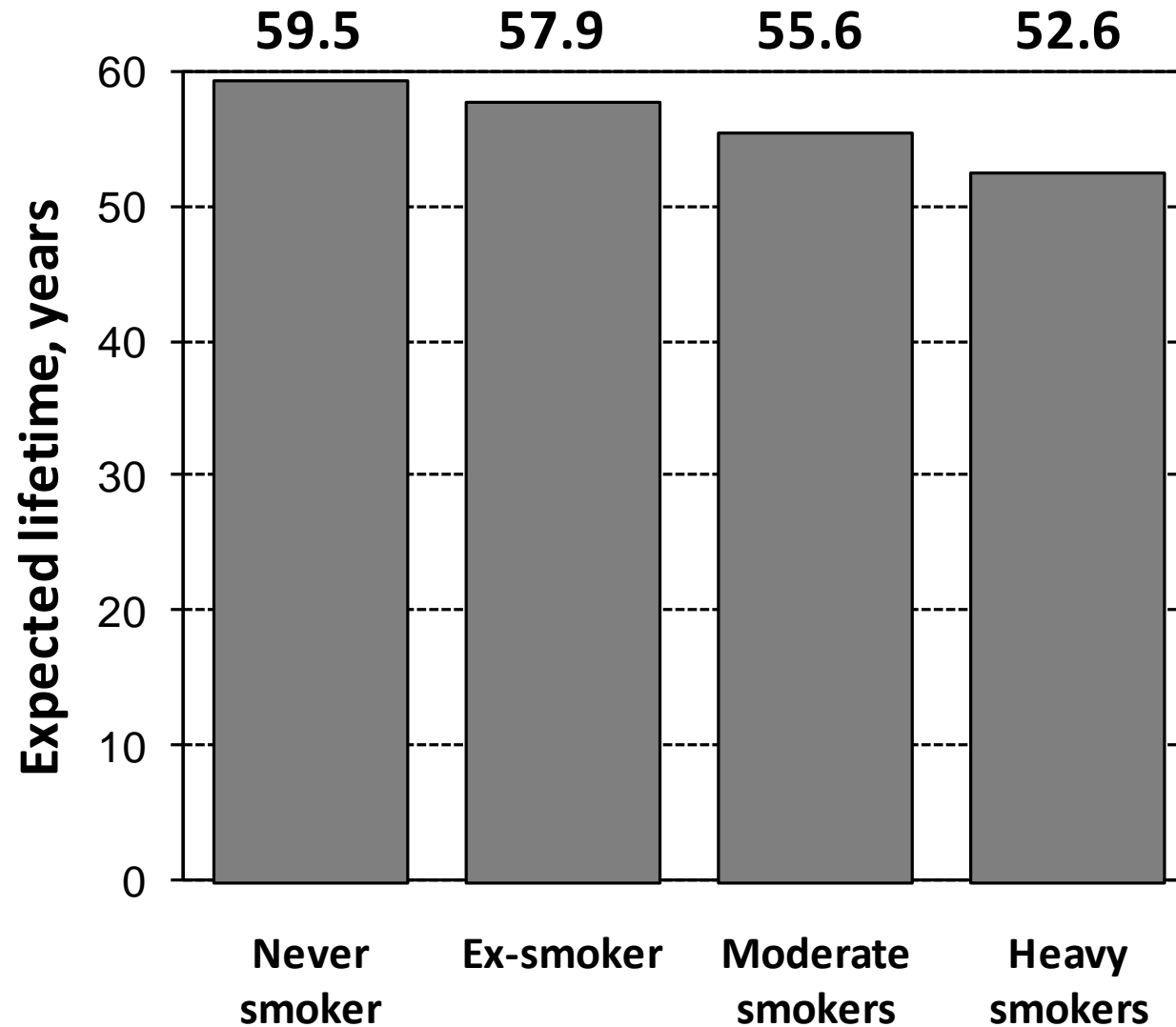
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- Expected lifetime without and with chronic disease was calculated by Sullivan's method. Contributions from the mortality and morbidity effects to smoking assessed by decomposition (Nusselder and Looman 2004).



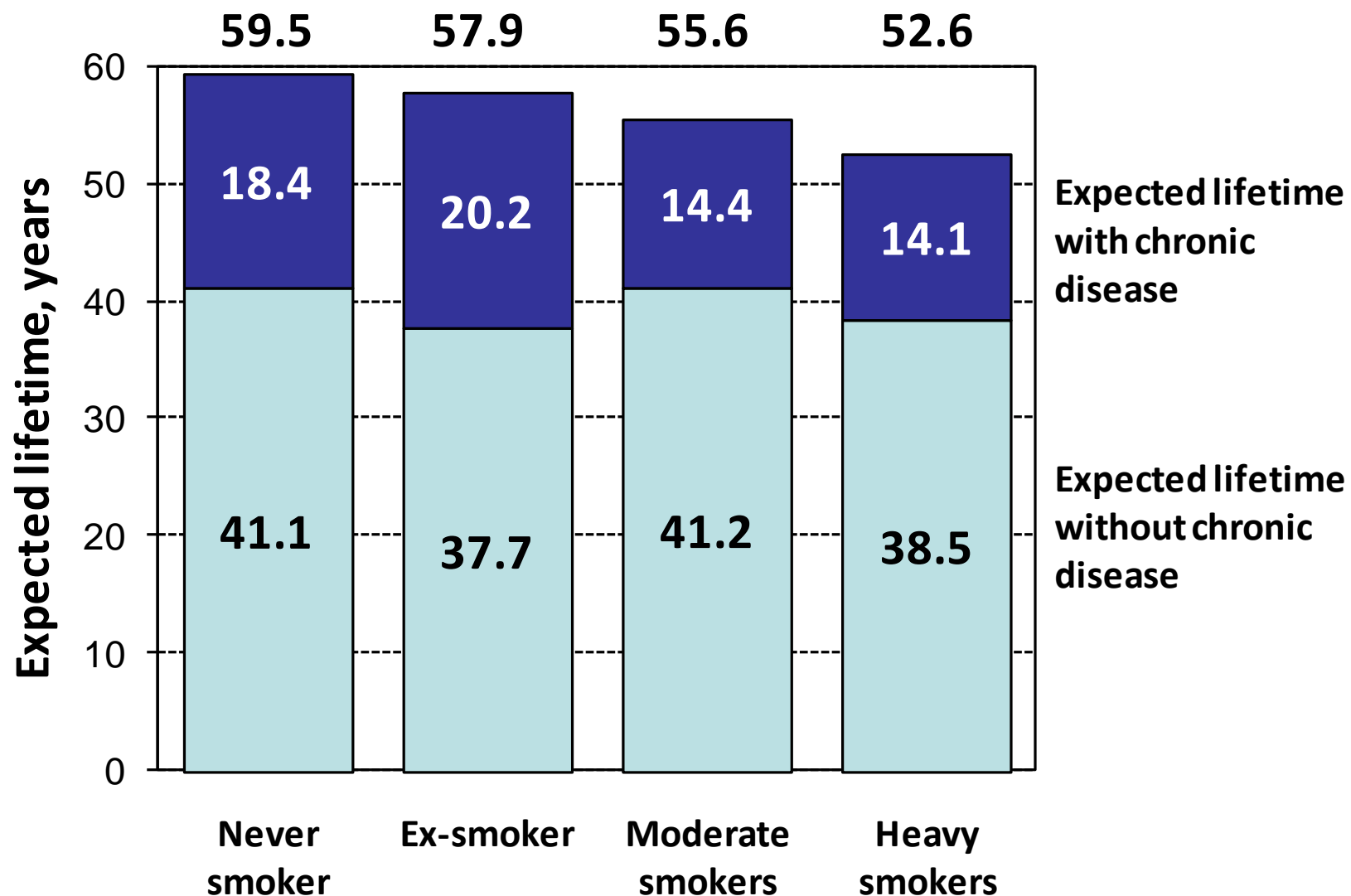
# Results



## Life expectancy at age 15. Men, West Bank, 2010



## Life expectancy and expected lifetime without and with chronic disease at age 15. Men, West Bank, 2010



# Results

## from decomposition





Differences between never smokers, smokers and ex-smokers in expected lifetime with and without chronic disease decomposed into the mortality and morbidity effects. Fifteen-year-old Palestinian men living in the West Bank, 2010

Smoking category	Life expectancy	Expected lifetime	Expected lifetime
	years	without chronic disease	with chronic disease
<b>Never smokers</b>	59.5	41.1	18.4
<b>Heavy smokers</b>	52.6	38.5	14.1
<b>Difference</b>	6.9	2.6	4.3
<b>Mortality effect</b>	6.9	2.5	4.4
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Never smokers	59.5	41.1	18.4
Moderate smokers	55.6	41.2	14.4
Difference	3.9	-0.1	4.0
Mortality effect	3.9	1.6	2.3
Morbidity effect		-1.7	1.7

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<b>Never smokers</b>	59.5	41.1	18.4
<b>Ex-smokers</b>	57.9	37.7	20.2
<b>Difference</b>	1.6	3.4	-1.8
Mortality effect	1.6	0.5	1.1
Morbidity effect		2.9	-2.9



# Conclusion

**Heavy and moderate male smokers lose on average almost 7 and 4 years of life respectively compared with their never smoking counterparts. In addition, the loss of years without chronic disease is substantial among heavy smokers and in particular among ex-smokers, probably because they stopped smoking due to chronic diseases.**



# Limitations and discussion

**The study was based on self-reported smoking habits and chronic disease. Another limitation was the use of Danish relative risk estimates for death due to lack of estimates from a Middle East population.**



# Limitations and discussion

**Supportive smoking cessation programmes to help smokers to quit should be recommended, but considering the age distribution of the population with one third being below 15 years of age, the main goal must be to protect children and adolescents from smoking. In particular, the low smoking prevalence among women should be maintained by make safe that girls abstain from start smoking.**



# Thanks



# Thanks



**Israeli police fire tear gas at Palestinians on West Bank, Friday, July 21, 2017 and severely restricted Muslim access to the rock mosque in Jerusalem's Old City**





## Relative risk of death due to smoking by age and smoking category (Estimates from a Danish study)

Smoking category	Age group			
	15-34	35-64	65-74	75+
Never smoker	1	1	1	1
Ex-smoker	1	1.4	1.2	1.2
Moderate smoker (1- 20 cigarettes per day)	1	2.1	1.6	1.2
Heavy smoker (> 20 cigarettes per day)	1	3.2	2.1	1.3

