

Calculation of minutes of life lost per cigarette

The 2000 BMJ article estimated the life lost per cigarette as follows:¹

- A man smoking the average number of cigarettes per year (5772 = 15.8 cigarettes per day) from the median starting age of 17 until his death at the age of 71 will consume 311,688 cigarettes in his lifetime.
- If each cigarette makes the same contribution to his death, each cigarette has cost him, on average, 11 minutes of life:
 - The average smoker loses approximately 6.5 years of life
 - 6.5 years is equivalent to 3,418,560 minutes
 - 5,772 cigarettes per year for 54 years of smoking = 311,688 cigarettes
 - 3,418,560 minutes of life lost to smoking / 311,688 cigarettes = **11 minutes per cigarette**

We updated this estimate for men and women using more up-to-date estimates of the years of life lost to smoking^{2,3} and an estimate of mean cigarette consumption among women from 1996 (from the same survey used to estimate consumption among men for the 2000 BMJ estimate):⁴

- The average smoker loses approximately 10 (men) to 11 (women) years of life
- Average cigarette consumption in 1996 was 15.8 per day among men and 13.6 among women

Assuming other things remained equal, we used these figures to update the 2000 BMJ estimate of 11 minutes of life lost per cigarette (providing estimates to the nearest whole minute):

- For men, we adjusted the years of life lost from 6.5 to 10 years:
 $11 \text{ minutes} * 10/6.5 = \mathbf{17 \text{ minutes per cigarette}}$
- For women, we adjusted the years of life lost from 6.5 to 11 years and the number of cigarettes smoked per day from 15.8 to 13.6:
 $(11 \text{ minutes} * 11/6.5) * (15.8/13.6) = \mathbf{22 \text{ minutes per cigarette}}$

To provide an overall estimate for men and women, we calculated the average of these two estimates $(17 + 22)/2 = \mathbf{20 \text{ minutes per cigarette}}$

References

1. Shaw, M., Mitchell, R. & Dorling, D. Time for a smoke? One cigarette reduces your life by 11 minutes. *BMJ* **320**, 53 (2000).
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4. Office for National Statistics. Adult smoking habits in Great Britain: 1974-2014 edition of the dataset.
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