

### KEY MESSAGES

- There is no evidence that use of Swedish snus causes lung cancer. Users of snus who never smoke avoid the greatly increased risk of lung cancer conferred by tobacco use in the form of cigarette smoking.
- Three analytic epidemiology studies have studied this relationship; none found that snus use was associated with increased risk of lung cancer.
- A recent meta-analysis (a study that combines results of several studies that address a similar hypothesis) and public health agency report concluded that the evidence does not indicate a clear relationship between lung cancer and snus use.

### QUESTIONS AND ANSWERS

#### **Why have researchers studied the relationship between snus use and lung cancer?**

Cigarette smoking is known to cause lung cancer. It is logical that researchers would be interested in the relationship between other types of tobacco products and lung cancer.

#### **Is there evidence that snus use is associated with lung cancer?**

There is no scientific evidence to suggest this. Three large cohort studies have collected data on the relationship between use of snus and lung cancer, and none found any evidence that use of snus increases risk of lung cancer.

An early cohort study by Bolinder and colleagues (1994) did not find a significant association between use of snus and increased risk of death due to lung cancer in their study population of more than 84,000 Swedish construction workers. A later analysis of Swedish construction workers with a larger sample size who had never smoked tobacco was conducted by Luo and colleagues (2007). Again, there was no relationship between use of snus and risk of lung cancer.

Boffetta and colleagues (2005) followed more than 10,000 Norwegian men for over 30 years to determine whether those who used *smokeless tobacco* were more likely to develop any of several types of cancer, including lung cancer, than those who did not use *smokeless tobacco*. They found that men who used *smokeless tobacco* were not at significantly increased risk of lung cancer, compared to men who had never used *smokeless tobacco*.

A recent review and meta-analysis of *smokeless tobacco* concluded that the data does not provide any clear indication of a relationship of lung cancer to *smokeless tobacco* (including snus) use (Lee and Hamling 2009).

#### **What conclusions have been reached by public health agencies about the association between snus use and lung cancer?**

## SWEDISH SNUS AND LUNG CANCER

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The European Commission's Scientific Committee on Emerging and Newly Identified Health Risks concluded that there is inadequate evidence that *smokeless tobacco* causes lung cancer (SCENIHR 2008).

### REFERENCES

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