



## THYROID CANCER

### Smoking and alcohol consumption in relation to risk of thyroid cancer in post-menopausal women

#### BACKGROUND

Thyroid cancer is the 8th most common cancer in women and its incidence is increasing. No risk factors other than ionizing radiation have been identified for thyroid cancer. The relationship between lifestyle factors, such as smoking and drinking, and the risk of thyroid cancer, is not well understood. Cigarette smoke contains substances that can affect thyroid function in large doses. Studies of the relationship between thyroid cancer and cigarette smoking have been contradictory. Most studies of alcohol consumption have found no association with thyroid cancer. The authors of this study examined the relationship between smoking and drinking and the risk of being diagnosed with thyroid cancer in a large national study following women after menopause (Women's Health Initiative Study).

#### THE FULL ARTICLE TITLE

Kabat GC et al. Smoking and alcohol consumption in relation to risk of thyroid cancer in postmenopausal women. *Cancer Epidemiology* 2012;36:335-340.

#### SUMMARY OF THE STUDY

In this study, 159,340 post-menopausal women were followed in multiple clinical centers. The women in the study filled out questionnaires at baseline, which included information on smoking habits, as well as personal and medical history. The follow-up status of the women was checked one to two times a year after enrollment in the study and any new diagnosis of cancer reported by the women was checked by review of medical records. Most of the women in this study were of white race (88%). At

the end of the 12.7 years of follow-up, there were 331 new cases of thyroid cancer reported in the women (1 out of every 481 women). Out of the 331 cases of thyroid cancer, the types of thyroid cancer included: 276 papillary, 36 follicular, 6 anaplastic, 10 medullary and 3 others. Surprisingly, current smokers were found to have a significantly reduced risk of developing thyroid cancer as compared to women who were former smokers or non-smokers. There was no significant relationship between the amount or years smoked with developing thyroid cancer. Alcohol intake was not significantly related to thyroid cancer risk in this study.

#### WHAT ARE THE IMPLICATIONS OF THIS STUDY?

Surprisingly, this study suggests that the risk of developing thyroid cancer may be lower in women after menopause who are current smokers, compared to those who are not. The cause for this "protective" effect is unknown. However, there were only 11 women with thyroid cancer in this study who were current smokers which limits the analysis. The risk of developing thyroid cancer should be considered in the context of the greater risk of smoking to health, in general. Thus, the findings of this study should not deter general population health efforts to promote stopping smoking, as stopping smoking is far more likely to have greater overall health benefits for Americans.

— Anna Sawka, DO

#### ATA THYROID BROCHURE LINKS

Thyroid cancer: <http://www.thyroid.org/cancer-of-the-thyroid-gland>

#### ABBREVIATIONS & DEFINITIONS

**Papillary thyroid cancer:** the most common type of thyroid cancer.

**Follicular thyroid cancer:** the second most common type of thyroid cancer.

**Medullary thyroid cancer:** a relatively rare type of thyroid cancer that often runs in families. Medullary cancer arises from the C-cells in the thyroid.

**Anaplastic thyroid cancer:** a very rare but very aggressive type of thyroid cancer. In contrast to all other types of thyroid cancer, most patients with anaplastic thyroid cancer die of their cancer and do so within a few years.