AMERICAN THYROID ASSOCIATION
ATA | Founded 1923

Clinical Thyroidology® for the Public

VOLUME 12 | ISSUE 8 | AUGUST 2019

THYROID CANCER

Is obesity a risk factor for thyroid cancer?

BACKGROUND

Thyroid cancer has been the fastest rising cancer in women over the past few decades, although this more recently has reach a steady level. A major cause of this increase is likely due to increased detection of small, low-risk thyroid cancers due to more frequent imaging tests. However, the number of larger cancers has also increased. Thus, it is clear that other factors are involved. Some of these other factors may include lifestyle and environmental factors. Prior studies have shown that obesity is a risk factor for several cancers and may contribute to the risk of developing thyroid cancer. Obesity is one aspect of metabolic health, which also includes blood sugar, lipids and blood pressure. Healthy metabolic health is described as having ideal levels of blood sugar, lipids, blood pressure and ideal weight without using medications. Unhealthy metabolic health would include those individuals with abnormalities in these areas, or requiring medication to control any of these areas. This study examined the effect of obesity on the incidence of thyroid cancer according to metabolic health status.

THE FULL ARTICLE TITLE

Kwon H et al 2019 Metabolic Obesity Phenotypes and Thyroid Cancer Risk: A Cohort Study. Thyroid 29:349-358.

SUMMARY OF THE STUDY

The study included 255,051 eligible participants from the Kangbuk Samsung Health Study who had a health maintenance examination between 2002-2014. Participants were 18 years and older, had at least one follow-up visit and were thyroid cancer-free at baseline. Information on socioeconomic status, lifestyle factors such as physical activity, smoking and alcohol use, medical and medication history was taken from self-administered questionnaires. Weight, height, waist circumference and blood pressure were evaluated by trained nurses. Blood was also obtained to test levels of glucose, lipids, insulin, and thyroid hormones. Additionally, self-reported information on thyroid cancer and age at diagnosis was obtained from the participants at baseline and at each follow-up visit. Thyroid cancer incidence was then estimated by body mass index (BMI) category and waist circumference in metabolically healthy and unhealthy men and women.

Overall, 57% of the participants were men. A total of 63.8% of men and 36.8% of women were metabolically unhealthy. Patients were followed-up for an average of 5.3 years. Overall, 1037 men and 1890 women developed thyroid cancer. The authors showed that a higher BMI was associated with an increased risk of developing thyroid cancer in metabolically healthy and unhealthy men and in metabolically unhealthy women. Additionally, increased waist circumference was associated with increased risk of thyroid cancer in metabolically unhealthy men and women.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

This study showed that higher BMI and increased waist circumference were associated with an increased risk of thyroid cancer in metabolically unhealthy men and women, as well as metabolically healthy men. This may suggest that obesity, especially if associated with metabolic abnormalities, such as high blood pressure, diabetes mellitus and high cholesterol, could be linked to the increased thyroid cancer incidence observed in the past few years. This has implications as obesity and its metabolic abnormalities are potentially risk factors that can be modified, for example, by lifestyle changes. Further research is needed to better understand the relationship between obesity and thyroid cancer, and whether weight loss may modify the risk for thyroid cancer.

— Maria Papaleontiou, MD

ATA THYROID BROCHURE LINKS

Thyroid Cancer (Papillary and Follicular): https://www.thyroid.org/thyroid-cancer/

THYROID CANCER, continued

ABBREVIATIONS & DEFINITIONS

Incidence: occurrence of a given medical condition in a population within a specified period of time.

Body-mass index (BMI): a standardized measure of obesity calculated by dividing the weight in kilograms by the square of the height. A normal BMI is 18.5-24.9, overweight is 25-30 and obese is >30.

Metabolic health: assessment includes levels of blood sugar, lipids, blood pressure and ideal weight. Healthy metabolic health is described as having ideal levels of blood sugar, lipids, blood pressure and ideal weight without using medications. Unhealthy metabolic health would include those individuals with abnormalities in these areas, or requiring medication to control any of these areas.