Thyroid Cancer - Risk Factors [1]

This section has been reviewed and approved by the Cancer.Net Editorial Board [2], 05/2015

ON THIS PAGE: You will find out more about the factors that increase the chance of developing this type of cancer. To see other pages, use the menu on the side of your screen.

A risk factor is anything that increases a person?s chance of developing cancer. Although risk factors often influence the development of cancer, most do not directly cause cancer. Some people with several risk factors never develop cancer, while others with no known risk factors do. However, knowing your risk factors and talking about them with your doctor may help you make more informed lifestyle and health care choices.

The following factors may raise a person?s risk of developing thyroid cancer:

- **Gender.** Women are two to three times more likely to develop thyroid cancer than men.
- **Age.** Thyroid cancer can occur at any age, but about two-thirds of all cases are found in people between the ages of 20 and 55. Anaplastic thyroid cancer is usually diagnosed after age 60. Older infants (10 months and older) and adolescents can develop MTC, especially if they carry the *RET* proto-oncogene mutation (see below).
- **Genetics.** Some types of thyroid cancer are associated with genetics. Below are some key facts about this disease, genes, and family history. If you are interested in learning more your personal genetic risk, read this separate article about getting genetic testing [3].
  - An abnormal *RET* oncogene, which can be passed from parent to child, may cause MTC. Not everyone with an altered *RET* oncogene will develop cancer. Blood tests and genetic tests can detect the gene. Once the altered *RET* oncogene is identified, a doctor may recommend surgery to remove the thyroid gland before cancer develops. People with MTC are encouraged to have genetic testing to determine if a mutation of the *RET* proto-oncogene is present. If so, genetic testing of siblings and children will be recommended.
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A family history of MTC increases a person?s risk. People with MEN2 syndrome [4] are also at risk for developing other cancers.

- A family history of goiters increases the risk of developing papillary thyroid cancer.
- A family history of precancerous polyps in the colon, also called the large intestines, increases the risk of developing papillary thyroid cancer.

- **Radiation exposure.**Exposure to moderate levels of radiation may increase the risk of papillary and follicular thyroid cancer. Such sources of exposure include:
  - Low-dose to moderate-dose x-ray treatments used before 1950 to treat children with acne, tonsillitis, and other head and neck problems.
  - Radiation therapy for Hodgkin lymphoma [5] or other forms of lymphoma [6] in the head and neck.
  - Exposure to radioactive iodine, also called I-131 or RAI, especially in childhood. Sources of I-131 include radioactive fallout from atomic weapons testing during the 1950s and 1960s and nuclear power plant fallout. Examples are the 1986 Chernobyl nuclear power plant accident and the 2011 earthquake that damaged nuclear power plants in Japan. Another source of I-131 is environmental releases from atomic weapon production plants.
- **Diet low in iodine.** Iodine is needed for normal thyroid functioning. In the United States, iodine is added to salt to help prevent thyroid problems.
- **Race.** White people and Asian people are more likely to develop thyroid cancer, but this disease can affect a person of any race or ethnicity.
- **Breast cancer**. One recent study showed that breast cancer survivors may have a higher risk of thyroid cancer, particularly in the first five years after diagnosis and for those diagnosed with breast cancer at a younger age. This finding continues to be examined by researchers.

The next section in this guide is Symptoms and Signs [7] *and it explains what body changes or medical problems this disease can cause. Or, use the menu on the side of your screen to choose another section to continue reading this guide.*

Links:
[1] http://www.cancer.net/cancer-types/thyroid-cancer/risk-factors
[2] http://www.cancer.net/about-us
[3] http://www.cancer.net/node/24864
[4] http://www.cancer.net/node/19365

[5] http://www.cancer.net/node/31271
[6] http://www.cancer.net/node/31269
[7] http://www.cancer.net/node/19297