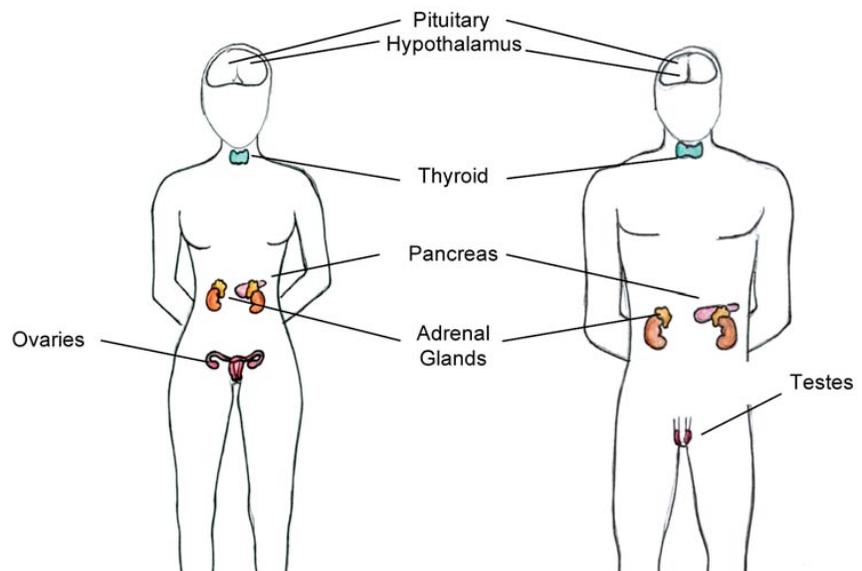


# Endocrine Problems after Childhood Cancer: Hyperprolactinemia

Some people who were treated for cancer during childhood may develop endocrine (hormone) problems as a result of changes in the function of a complex system of glands known as the endocrine system.

## WHAT IS THE ENDOCRINE SYSTEM?

The endocrine system is a group of glands that regulate many body functions including growth, puberty, energy level, urine production, and stress response. Glands of the endocrine system include the pituitary, hypothalamus, thyroid, adrenals, pancreas, ovaries (in females), and testes (in males). The hypothalamus and pituitary are sometimes called the “master glands” because they control many of the other glands in the endocrine system. Unfortunately, some treatments given for childhood cancer can damage the endocrine system, resulting in a variety of problems.



## WHAT ARE HORMONES?

Hormones are chemical messengers that carry information from the endocrine glands through the bloodstream to the body’s cells. The endocrine system makes many hormones (such as growth hormone, sex hormones, adrenal and thyroid hormones) that work together to maintain specific bodily functions.

## WHAT IS HYPERPROLACTINEMIA?

Hyperprolactinemia is a condition that occurs when there is too much of the hormone known as prolactin in the body. Prolactin is a hormone made by the pituitary gland.

Prolactin is important in breast development in females during pregnancy and milk production after childbirth. Too much prolactin can cause problems with functioning of the ovaries (in females) or testicles (in males). In females, high levels of prolactin can cause galactorrhea (breast milk production by a person who is not breastfeeding) and irregular or absent menstrual periods. In males, high levels of prolactin can cause galactorrhea and decreased testosterone levels that may result in a diminished sex drive (libido). In preteens and teens, high prolactin levels may interfere with normal pubertal development.

## RISK FACTORS FOR HYPERPROLACTINEMIA

The risk of developing hyperprolactinemia after treatment for childhood cancer is quite low. Risk factors for its development include radiation to the pituitary gland in very high doses, the development of a second tumor (usually non-cancerous) in the pituitary region, pregnancy, and certain medications and drugs (such as marijuana and alcohol). Rarely, thyroid failure (a condition in which the thyroid gland fails to secrete enough thyroid hormone) can cause hyperprolactinemia. Correcting the thyroid problem may correct the high prolactin level.

## RECOMMENDED SCREENING

All childhood cancer survivors should have a yearly comprehensive health check-up. If hyperprolactinemia is suspected, a prolactin blood test will be done. If a problem is detected, your healthcare provider may order additional tests (such as a CT scan or MRI of the brain) and refer you to an endocrinologist (a doctor who specializes in the treatment of hormone problems) for further evaluation and treatment.

## HOW IS HYPERPROLACTINEMIA TREATED?

Endocrinologists may use medications to suppress prolactin production. If a tumor is detected, surgery or radiation is sometimes needed. The length and type of treatment varies for each patient and should be discussed with your doctor.

Additional health information for childhood cancer survivors is available at [www.survivorshipguidelines.org](http://www.survivorshipguidelines.org)

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