

Lymphoma - Non-Hodgkin - Late Effects of Treatment [1]

This section has been reviewed and approved by the [Cancer.Net Editorial Board](#) [2], 11/2014

ON THIS PAGE: You will find out more about side effects that can occur long after treatment for this type of lymphoma has ended. To see other pages, use the menu on the side of your screen.

Patients who have been treated for lymphoma have an increased risk of developing other diseases or conditions later in life because chemotherapy and radiation therapy can cause permanent damage to healthy parts of the body. Treatments have improved in the last 30 years, and now patients who have received treatment for lymphoma recently are less likely to experience late effects. However, there is still some risk. Therefore, it is important for people to receive follow-up care to watch for the late effects explained below.

- People who have received radiation therapy to the pelvis, high doses of cyclophosphamide, and high-dose chemotherapy for stem cell transplantation are at risk for infertility. Learn more about fertility concerns and preservation for [men](#) [3] and [women](#) [4].
- All survivors of lymphoma have a higher risk than the general population of developing a secondary cancer. This increased risk continues for up to 20 years after treatment. The most common secondary cancers include cancer of the [lung](#) [5], [brain](#) [6], [kidney](#) [7], or [bladder](#) [8]; [melanoma](#) [9]; [Hodgkin lymphoma](#) [10]; or [leukemia](#) [11].
- Women who have received radiation therapy to the chest before age 35 have an increased risk of developing [breast cancer](#) [12].
- Patients who have received doxorubicin-based chemotherapy or radiation treatment to the chest may be at higher risk for developing heart problems.
- Adults who have received chemotherapy, such as alkylating agents and methotrexate (multiple brand names), or radiation therapy to the chest area may be at risk for lung damage and shortness of breath later in life.
- Patients who have received radiation therapy to the neck have an increased risk of having low levels of thyroid hormones later in life.
- Patients who have received stem cell transplantation may be at higher risk for [myelodysplastic syndrome \(MDS\)](#) [13] and [acute myeloid leukemia \(AML\)](#) [14].
- Children who have received radiation therapy and chemotherapy to the brain and spinal cord area may be at risk for growth problems, learning disabilities, and delayed puberty. Teenage boys who receive chemotherapy may be at higher risk for low sperm counts, and teenage girls who receive chemotherapy may be at higher risk for damage to the ovaries. Learn more about [preserving fertility in children with cancer](#) [15].

- Children who have received total body irradiation (TBI) as part of the stem cell transplantation process may experience thyroid problems.

Learn more about [late effects of cancer treatment](#) [16].

The next section helps explain medical tests and check-ups needed after finishing cancer treatment. Use the menu on the side of your screen to select After Treatment, or you can select another section, to continue reading this guide.

Links:

[1] <http://www.cancer.net/cancer-types/lymphoma-non-hodgkin/late-effects-treatment>

[2] <http://www.cancer.net/about-us>

[3] <http://www.cancer.net/node/25268>

[4] <http://www.cancer.net/node/29096>

[5] <http://www.cancer.net/node/31273>

[6] <http://www.cancer.net/node/31327>

[7] <http://www.cancer.net/node/31256>

[8] <http://www.cancer.net/node/31330>

[9] <http://www.cancer.net/node/31265>

[10] <http://www.cancer.net/node/31271>

[11] <http://www.cancer.net/cancer-types>

[12] <http://www.cancer.net/node/31322>

[13] <http://www.cancer.net/node/31399>

[14] <http://www.cancer.net/node/31280>

[15] <http://www.cancer.net/node/29101>

[16] <http://www.cancer.net/node/25396>