

## BULLET BACKGROUND PAPER

ON

### NON-HODGKIN'S LYMPHOMA (NHL) COMMANDER RESOURCE SHEET

#### PURPOSE

To summarize available information for Commanders and provide resources for Airmen and families who may be concerned about risks for Non-Hodgkin Lymphoma (NHL).

#### BACKGROUND

Concerns have been raised over a potential increased risk of NHL in the missileer career field. Educating Commanders, missileers, and families on this condition will increase their understanding of the causes, risk factors, as well as possible prevention strategies related to NHL as these concerns are addressed.

#### INFORMATION

##### - CAUSE, STATISTICS AND KNOWN RISK FACTORS FOR NHL

- NHL is a cancer that starts in the white blood cells which are part of our immune system.
- The cause of NHL is still not known but certain risk factors have been identified
- NHL is one of the most common cancers in the United States, accounting for about 4% of all cancers. The American Cancer Society's estimates for non-Hodgkin lymphoma in 2023 are:
  - About 80K people will be diagnosed with NHL to include both adults and children
  - About 74% 5-year relative survival rate and 86.5% if detected early
- RISK FACTORS
  - Age: Increased risk with aging, people in their 60s or older are at higher risk
  - Gender: There is an overall higher incidence in men
  - Ethnicity: In the United States, Caucasians are more likely to develop NHL
  - Family history: Increased risk is seen if a close family member has NHL
  - Exposures to chemicals, drugs, radiation: herbicides and insecticides may be linked to a higher incidence of NHL. Previous treatments that used radiation is also thought to cause a slightly increased risk for NHL.

- Weakened immune system or Autoimmune disease: Individuals with compromised immune systems have been linked with increased risk for NHL
- Infections: Some types of infections may raise the risk of NHL
- Body Weight: Being overweight or obese may increase your risk of NHL
- Breast Implants: Although rare, some women with breast implants might develop lymphoma
- SYMPTOMS
  - Symptoms included swollen lymph nodes, fever, and weight loss
- PREVENTION
  - There are no screening tests or sure ways to prevent primary NHL and most people with NHL can't change their greatest risk factors. Measures you can take that may decrease your risk include
    - Limiting your exposure to certain infections
      - Avoid known risk factors for HIV: avoid intravenous drug use or unprotected sex with many partners
      - Detecting and treating *Helicobacter pylori* (*H. pylori*) infections
    - Reducing exposure to tobacco smoke and chemical exposures in the workplace
    - Following a healthy diet that includes plenty of fruits, vegetables, and whole grains, and that limits or avoids red and processed meats, sugary drinks, and highly processed foods
    - Maintaining a healthy weight and keeping physically active
    - Maintaining a healthy level of sun exposure and considering vitamin D supplementation

Additional information and resources:

[Non-Hodgkin Lymphoma \(cancer.org\)](https://www.cancer.org)

[Non-Hodgkin Lymphoma — Cancer Stat Facts](#)

[Epidemiology of Non-Hodgkin's Lymphoma - PMC \(nih.gov\)](#)

[Survival | non-Hodgkin lymphoma | Cancer Research UK](#)