



Naval Air Facility, Atsugi, Japan Health and Environmental Fact Sheet

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This fact sheet is the first in a series designed to inform residents and other interested parties about health risks and the Navy's efforts to reduce those risks resulting from exposure to air pollution at Naval Air Station, Atsugi, Japan. Fact sheets will be produced periodically to keep individuals informed about ongoing health risk reduction efforts, health studies, and in response to other items of community interest. Distribution is coordinated through the NAF Atsugi Health Risk Communication officer, telephone: 011-81-311-764-4920/4921/4922/4923

Introduction. The Navy is committed to protecting the health and well being of all our personnel and their families. In keeping this commitment, we have prepared this **Health and Environmental Fact Sheet** to inform you of the environmental conditions at Naval Air Facility (NAF), Atsugi and the Kanto Plain area of Japan where NAF Atsugi is located. This fact sheet also discusses the possible health effects of living in this area of Japan.

Background. In addition to a moderate climate, which can cause problems for asthma and allergy suffers from pollen counts, the air quality on the Kanto Plain and at NAF Atsugi is generally poor. Overall, the air quality is worse than in most major cities in the United States (US). Several factors are involved:

- 1. The first is population. Japan has one half the population of the US in a land area the size of California.** This means more vehicles in a smaller area and more pollution from vehicles. It also means there is little room for disposal of trash and garbage. As a result, the Japanese burn their refuse in incinerators, which adds to the pollution.
- 2. The second is that the Kanto Plain is one of the major industrial centers of Japan and there are many sources of air pollution.** Environmental laws related to pollution are less strict in Japan than in the US and Japanese environmental officials have less enforcement authority when violations are identified.
- 3. The third is the presence of a primary pollution source, the Jinkanpo Incinerator, next to NAF Atsugi.** This incinerator, which is located very close to

several Navy family housing units, the child care center, and the elementary school, burns both residential trash and hazardous waste. The prevailing winds blow air emissions from this incinerator across the base approximately six months out of each year. This occurs primarily during the months of April through October. Many NAF Atsugi residents believe the incinerator to be a major health and quality of life issue.

Air Quality and Health Effects. The Navy has conducted three air quality studies; 1991, 1994 and 1997. Two screening health risk assessments were done with data collected in 1994 and 1997 to study the possible health effects from exposure to air pollutants at NAF Atsugi. A full health risk assessment is now underway. While the air quality at NAF Atsugi meets Japanese air standards, it does not meet US Environmental Protection Agency Standards for breathable dusts and a number of chemicals, including benzene, dioxin, nitrogen dioxide, chromium, and several other metals. The results of the two screening health risk assessments indicate that there is a potential for increased risk for both cancer and non-cancer health effects.

These possible health effects are greatest for children less than six years of age, and for individuals who suffer from respiratory diseases such as asthma.

Short Term Health Effects. The health effects of short-term exposure to air pollution depend on a variety of factors. These include the type and amount of pollutants present, weather conditions, duration of exposure, and the susceptibility of the exposed individual. In view of the wide variability of these parameters, the actual air

quality and its effect on your health can vary considerably from day to day.

Many of the air pollutants present at NAF Atsugi are mucous membrane irritants. In high concentrations these can irritate your eyes, nose, and throat. This irritation can cause eye watering or redness, sneezing, and sore throat. Many pollutants, including several of those present in the air at NAF Atsugi, are lung irritants. These pollutants can cause bronchitis, coughing, shortness of breath, and wheezing. They may also make you more open to diseases such as the common cold, influenza, and pneumonia. Exposure to these pollutants can also result in asthma even if you have no prior history of that disease. Children can be especially open to asthma-like conditions caused by air pollution.

Clearly related to the poor air quality in the Kanto Plain is a condition known as **Tokyo-Yokohama asthma**. Although not really definable as asthma, this condition was first seen in soldiers and sailors living in the heavy industrial areas of Japan in the 1940s. The illness differs from true asthma in that most people affected have no history of allergy, and when they leave the polluted area their symptoms go away and don't return.

If you have a chronic respiratory disease, such as asthma or chronic obstructive lung disease, you may be more open to the affects of exposure to air pollutants. If you have asthma, you are likely to experience aggravation of your symptoms.

Long Term Health Effects. Based on two screening health risk assessments, the poor air quality at NAF Atsugi could result in as much as one additional cancer in a population of 10,000 adults after approximately 6 years of exposure. This represents an increase over and above the background incidence of cancer estimated by the American Cancer Society, which is 5000 cases per 10,000 men and 3,333 cases per 10,000 women. For children under 6 years of age, this same level of risk (1 additional cancer case per 10,000 population) is reached after an exposure period of approximately 3 years. Using the American Cancer Society background incidence, if 10,000 men and 10,000 women lived at NAF

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Atsugi for six years we would expect 5001 men and 3334 women to get cancer. The added cancer risk from exposure to the air at NAF Atsugi does not go away after exposure ends. It lasts the lifetime of those exposed.

To help individuals put the excess cancer risk at Atsugi into perspective, the increase in cancer risk from exposure to cosmic radiation by living in Denver, Colorado, a mile above sea level, as opposed to living at sea level is provided for comparison. For Denver residents, the excess cancer risk is one additional case of cancer in 10,000 individuals after two years of residence in Denver, when compared to a population living at sea level.

Things You Can Do to Protect Your Health.

- Limit your exercise to indoor activities when air pollution levels are high.
- Keep your children indoors when air pollution levels are high.
- Wash your children's toys frequently.
- Keep surfaces in your home free of dust.
- Wash your hands frequently.
- Recognize that your children ingest more soil as a result of hand to mouth contact and take actions to lessen their exposure.

Conclusion. We are concerned for the health and well being of all our personnel and their families living at NAF Atsugi. That is why we are working with the Government of Japan (GOJ) to reduce air emissions from the Jinkanpo incinerator. Specifically, we are pressing the GOJ to close the incinerator or cause the incinerator owner to significantly change his operations. We are also taking action to reduce your exposures by filtering indoor air and providing information about other protective measures. At the same time, we are conducting additional health and environmental studies to better understand the nature of the health risks to ensure protection of your health.

Additional Information. For additional health information about health and environmental issues at NAF Atsugi contact the Health Risk Communication Officer at 011-81-311-764-4920/4921/4923/4924 or Navy Environmental Health Center in Norfolk, VA at (757) 363-5548

