

# INFORMATION SHEET FOR FORMER CONWED WORKERS

SEPTEMBER 1993; UPDATED DECEMBER 2021

## How were workers exposed to asbestos at Conwed?

Asbestos was used at the Conwed Corporation (Wood Conversion Company) plant in Cloquet, Minnesota, in making ceiling tiles and other products from 1958 through 1974. Conwed purchased approximately 50-120 tons of asbestos per month during that period. Dumping bags of asbestos, as well as mixing, sawing, grinding, and other processes used in making these products created asbestos-containing dusts that were inhaled by many workers. This is how most workers were exposed to asbestos.

## Were any workers exposed to asbestos before or after 1958-1974?

While most workers were exposed during 1958-1974, it is possible that some workers were exposed to asbestos outside that period. For example, workers involved with maintenance and repair of equipment that had asbestos insulation, such as steam pipes and boilers, may have been exposed to asbestos before or after this time period.

## Which workers had the most exposure to asbestos?

The Minnesota Department of Health (MDH) has very limited information on actual levels of asbestos fibers in the plant air. Data presented in a Conwed lawsuit (CX-00-2200, Supreme Court, October 4, 2001) noted that testing by Union Carbide at the Cloquet plant showed asbestos fiber levels in air ranging from 1.9 f/cc to 5.5 f/cc. The current OSHA TWA standard is 0.1 f/cc. Asbestos dust levels likely varied at different locations, at different times, for different jobs. Overall, people who worked in the following departments probably had more exposure to asbestos than other workers:

- Nuwood Board Mill, Nuwood Finishing, Nuwood Shipping
- Balsam Wool Pulp Mill
- Lo Tone
- Maintenance and Repairs

## How many workers were exposed?

Anyone who worked at Conwed's Cloquet plant at any time during the years 1958-1974 *may* have been exposed to asbestos-containing dusts. Company records and other sources of information show that about 5,700 workers were employed at some time during those years.

## What types of asbestos were used?

Purchasing records and legal filings indicate that Conwed obtained multiple types of asbestos from multiple suppliers over different periods of time. While different types of asbestos may

pose different levels of risk, all types of asbestos are considered capable of causing serious diseases.

## Could family members also have been exposed?

Most workers wore their work clothes home or took them home for washing. Asbestos-containing dusts could have been carried into the home on the workers' clothing, shoes, or hair. Any exposure to family members in the home would be small compared to exposures in the plant. The 1988 MDH medical screening study included 450 spouses of former Conwed workers to address this issue.

## What are the diseases and lung abnormalities related to asbestos exposure?

Asbestos-related diseases and lung abnormalities include the following:

**Asbestosis** – a scarring of the lung tissue.

**Lung Cancer** – risk factors include smoking (accounts for 85% of cases), radon, asbestos, occupational exposures to metals, silica, diesel exhaust.

**Mesothelioma** – a cancer of the tissue lining the lungs or abdomen.

**Pleural plaques** – small hard structures in the tissues around the lungs; do not cause symptoms, but an indicator of previous exposure to asbestos.

**Pleural thickening** – a thickening of the membranes surrounding the lungs which can make breathing more difficult.

**Pleural effusion** – a buildup of fluid, blood, or air in the space between the linings of the lungs and chest cavity which can lead to shortness of breath, coughing, and other symptoms.

## How many former Conwed workers have developed asbestos-related lung abnormalities?

Complete information is not available on how many former Conwed workers have developed or will develop cancer or other lung diseases because of their asbestos exposure. The effects of asbestos do not occur until decades after a person was first exposed.

In 1988, MDH provided chest X-rays and medical exams for about 1,100 former Conwed workers and 450 spouses. These exams showed that about 28 percent of the workers had X-ray evidence of lung abnormalities consistent with previous asbestos exposure as judged by at least one expert radiologist. As expected, those who had the most exposure and who were exposed the furthest back in time were the most likely to have lung abnormalities. Few spouses of workers (about 5%) had any lung abnormalities as judged by at least one expert radiologist, showing that exposures were relatively low.

## What about cancers?

The two cancers most closely associated with asbestos exposure are **mesothelioma** and **lung cancer**, although international agencies have concluded that asbestos may also increase the risk

for cancers of the larynx and ovary.

Mesothelioma is a rare and usually fatal cancer of the membranes that line the chest cavity and abdomen (and the internal organs). It usually develops decades (20-50 years or more) after first being exposed to asbestos. Rates are about 5-fold higher among males than females due to occupational exposures. Rates in males peaked in 1991 in the U.S., some 40 years following the peak of asbestos use in 1951. Male rates have declined subsequently by about 1.5% per year. Rates among females have remained relatively constant for the past 40 years. Asbestos is the primary cause of mesothelioma in the U.S.

Through computerized matching of the roster of Conwed employees to records from the statewide Minnesota Cancer Reporting System (MCRS), 38 cases of mesothelioma were found among former Conwed workers diagnosed in Minnesota between 1988 and 2015. Three additional cases are known to have occurred, one out-of-state and two prior to the start of MCRS in 1988, bringing the total to 41 known cases. Media reports and legal filings indicate that additional cases have occurred since 2015.

Among family members of Conwed workers, two spouses were diagnosed with mesothelioma prior to 2015. One was a female with no direct occupational history of exposure to asbestos. The other was a male with an extensive history of employment with likely asbestos exposure. Finally, a law firm notified MDH that a daughter of a long-term Conwed worker had been diagnosed with mesothelioma and had lived in the household of the Conwed worker for over a decade during the 1958-74 period. That case was confirmed by MCRS.

Data from the Centers for Disease Control and Prevention (CDC) for the 21-year period 1999-2019 show that death rates from mesothelioma as the underlying or contributing cause of death among males who resided in Carlton County at the time of death were higher than any of the other 500 U.S. counties with reliable rates (based on  $\geq 20$  deaths). The age-adjusted mesothelioma death rate among males was 10.0/100,000 in Carlton County compared to 1.5/100,000 for all U.S. counties and 2.0/100,000 for all Minnesota. Carlton County males also had the 8<sup>th</sup> highest death rate from asbestosis (10.1/100,000 based on 38 deaths) among the 320 U.S. counties with reliable rates. While the majority of those deaths are likely among former Conwed workers, some deaths may also be associated with other industries or with military service. In contrast to the 40 mesothelioma deaths among Carlton County males, only one mesothelioma death occurred among Carlton County females over that 21-year period.

Lung cancer is the second most frequently diagnosed cancer and the leading cause of cancer deaths among both males and females. Smoking is the main cause of lung cancer and because most Conwed workers were current or former smokers (70% of those in the 1988 MDH study), many lung cancers would be expected among Conwed workers due to smoking. It is not known whether lung cancer rates are higher than expected among Conwed workers. In some other industries that manufactured asbestos products, lung cancer rates have been significantly higher than expected.

While it is important to know about these special health risks from asbestos, it is also very important to recognize that the major and often preventable health risks facing Conwed

workers are the same as those affecting all Americans, including heart disease, other cancers, strokes, injuries, Alzheimer's, COPD, Parkinson's disease, and diabetes.

## Can I reduce my risks of asbestos diseases?

There is presently no known way to reverse or undo the effects of past asbestos exposure. There are, however, several things that you can do to reduce your risks of developing or dying from asbestos-related diseases:

(1) If you smoke, stop. Smoking and asbestos exposure are both known to increase your chances of developing lung cancer. Together, they result in an even higher risk of lung cancer. There is evidence that asbestos workers can reduce their risk of lung cancer if they stop smoking. This would also benefit your health in many other very important ways, such as reducing your risk of a dozen other smoking-related cancers, heart disease, lung infections, and COPD.

(2) Get annual influenza vaccinations and consult with your doctor about getting the pneumonia vaccines and a Covid-19 vaccine. Tell your doctor about your possible asbestos exposure and if you have symptoms such as chest pain, shortness of breath, or persistent cough. Your doctor can advise you if any routine or specialized exams are needed.

## Where can I get more information on studies of Conwed workers?

### Reports and Publications

Robins T G and Green M A. *Respiratory morbidity in workers exposed to asbestos in the primary manufacture of building materials*. Am J Ind Med **14**: 433-448. 1988.

<https://pubmed.ncbi.nlm.nih.gov/3189358/>

*Medical Screening for Asbestos-Related Lung Disease Among Conwed Corporation (Cloquet) Workers and their Spouses*. Minnesota Department of Health, Section of Chronic Disease and Environmental Epidemiology, 1989. (This report may no longer be available.)

Kouris S, Parker D, Bender A, Williams A. *Effects of asbestos-related pleural disease on pulmonary function*. Scandinavian J Work Environ Health **17**: 179-83; 1991.

<https://www.ncbi.nlm.nih.gov/pubmed/2068556>

Bender A, Williams A, Parker D. *Experiences of a state-sponsored notification and screening program of asbestos workers*. Am J Ind Med **23**: 161-169; 1993.

<https://pubmed.ncbi.nlm.nih.gov/8422046/>

Finendale M J. *Beyond notification: a case study from Cloquet, Minnesota*. Am J Ind Med **23**: 153-159; 1993. <https://pubmed.ncbi.nlm.nih.gov/8422045/>

Williams A. *An Epidemiologic Study of Radiographic Abnormalities Among Asbestos Ceiling Tile Workers and Their Spouses* [PhD Dissertation]. Minneapolis: Univ. of Minnesota, 1994.

<https://search.proquest.com/news/docview/304105285>

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*Cancer Incidence Rates in Northeastern Minnesota: MCSS Epidemiology Report 99:2.* Minnesota Department of Health, September 1999.

[https://www.health.state.mn.us/communities/occhealth/documents/NE\\_Cancer99.pdf](https://www.health.state.mn.us/communities/occhealth/documents/NE_Cancer99.pdf)

*Cancer Incidence Rates in Northeastern Minnesota with an Emphasis on Mesothelioma.* Minnesota Department of Health, February 2003.

[https://www.health.state.mn.us/communities/occhealth/documents/NE\\_Cancer03.pdf](https://www.health.state.mn.us/communities/occhealth/documents/NE_Cancer03.pdf)

*Mesothelioma in Northeastern Minnesota and Two Occupational Cohorts: 2007 Update.* 24p. Minnesota Department of Health, Dec.2007.

<https://www.health.state.mn.us/communities/occhealth/documents/nemeso1207.pdf>

### **Asbestos and Cancer**

American Cancer Society, *What is Malignant Mesothelioma?*

<https://www.cancer.org/cancer/malignant-mesothelioma/about/malignant-mesothelioma.html>

National Cancer Institute, *Asbestos Exposure and Cancer Risk.* <https://www.cancer.gov/about-cancer/causes-prevention/risk/substances/asbestos/asbestos-fact-sheet>

**Suggested citation:** Williams, A.: Information Sheet for Former Conwed Workers Update. Saint Paul, Minnesota Department of Health. December 2021

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12/31/2021

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