Healthwise

MONASH University

Study investigating the health of Alcoa employees
Victorian Sites Newsletter 2021

The University of Western Australia

About the Healthwise study

Healthwise is one of the largest and most comprehensive occupational health studies ever conducted in Australia. It investigates whether there are any links between work and health outcomes amongst Alcoa Australia employees.

The study is run by independent researchers from Monash University and the University of Western Australia. Results of the study are reported to an Advisory Board, which consists of independent scientific advisors, and representatives from Alcoa and unions representing Alcoa employees.

Why am I receiving this newsletter?

Usually Healthwise has communicated findings to Alcoa employees through face-to-face presentations at workplaces or via newsletters. As the study has been running for over 20 years many employees are now retired or are no longer working at Alcoa.

As a result, we are reaching out to both current and former employees through this newsletter to communicate the latest study findings.

What are the benefits?

The study benefits employees by providing knowledge of how workplace conditions can affect health. The results can be used, where indicated, to target improvements and modify how work is carried out. This potentially means a safer working environment.

If you have been part of the study, you have contributed to enhancing occupational health and safety at Alcoa and in the broader aluminium industry worldwide.

Should you have any further questions after reading this newsletter, please feel free to call or email the Healthwise study team via the details at the end of this newsletter.

We are trying to get in touch with as many former employees as possible.

Do you have contact with former workmates who have left Alcoa or retired?

We ask that you pass this newsletter onto them.

Healthwise Cancer and Mortality Study

This is an on-going study that monitors the long-term health of employees that produces updated results approximately every five years. This newsletter communicates the latest findings from the **Healthwise Cancer and Mortality Fourth Report** for employees at Victorian sites.

The study examines the rates of cancer and death among past and present employees compared to the general population. It also compares the risks of cancer and death for employees undertaking different types of work and with differing levels of exposure. This allows the researchers to examine whether there are any increased risks associated with the different types of work being undertaken or with workplace exposures.

Healthwise Cancer and Mortality Study

Latest Findings for Victorian Sites

Who is in the study?

Healthwise has previously conducted two large scale studies on the health of Alcoa employees, a cross-sectional study of respiratory health in 1995/1996, and a study which tracked the respiratory health of all new starters commencing at Victorian sites between 1995 and 2004. These studies are complete, and the results have previously been communicated to employees through newsletters and on-site presentations.

If you participated in the Healthwise cross-sectional or new starter study, then you are also likely to be included in the long-term cancer and mortality study. Additionally, employees who left Alcoa prior to these studies commencing and who worked since 1983 for longer than three months are also included in the study. This means that the study covers the vast majority of employees at Victorian sites between 1983 and 2004.

The locations in the study include the now closed Point Henry smelter and rolling mill, the former Angelsea power station and the Portland smelter which is still operational. The findings are relevant for both former and current Alcoa employees as they examine any long-term effects associated with working at Alcoa's Victorian locations.

What did we study?

The **Healthwise Cancer and Mortality Fourth Report** examined the risk of cancer and death until the end of 2016 for employees at Victorian sites. The study examines numerous common causes of death and types of cancer.

The workplace exposures investigated for Victorian smelters were benzo(a)pyrene (BaP), benzene soluble fraction (BSF), total fluoride, oil mist, sulphur dioxide (SO2), inhalable dust and asbestos. These are the most common exposures in the workplace and might have the potential to cause health effects. The results include allowing for known smoking and asbestos exposure related effects on health where appropriate.

Overall findings

- Male employees were at a similar risk of death overall when compared to the general Australian population and also at a similar risk for all major causes of death, including deaths from cancer, circulatory, respiratory and digestive diseases and injury.
- Male employees were at a similar risk of cancer overall compared to the general Australian population.
- Female employees were at a lower risk of death and a similar risk of cancer overall compared to the general population. No further results were available for females due to the small numbers of women in the study.

Detailed findings for male employees and mortality

- There was no association with any of the workplace exposures examined and death from circulatory and non-cancer lung disease which are categories of death that could have occupational causes.
- There was an increased risk of suicide in production employees in their first ten years of employment compared to males of the same age in the general population.
- There was an increased risk of death from Alzheimer's disease in maintenance employees, which was based on an extremely small number of deaths, which restricted the ability to examine for any link to workplace exposures. The small numbers mean that this could be a chance finding.
- All other non-cancer causes of death were at similar risk to the general population for male employees at Victorian sites.

Healthwise Cancer and Mortality Study

Latest Findings for Victorian Sites

Detailed findings for male employees and cancer

- There was an increased risk of mesothelioma in male employees, mainly amongst those who had worked in production jobs. This had already been previously reported by the Healthwise study and was found to be associated with known asbestos exposure at the Point Henry smelter before asbestos removal was undertaken in the early 1980s. Information from Alcoa is that there was no known asbestos exposure at the Portland smelter.

- There was evidence of an increased risk of overall death from cancer in production employees at the smelters, and specifically death from liver, lung and prostate cancer when compared to the general population. The risk of developing lung cancer was also increased for production employees, but the risk of developing all other types of cancer was similar to the general population. It is likely that higher rates of smoking amongst production employees is a significant factor contributing to these observed increases in mortality risk.

- There was little evidence of an increased risk of lung cancer associated with workplace exposure once smoking behaviour was accounted for. Lung cancer had been previously identified as a major area of concern in aluminium smelters overseas and monitoring the numbers of lung cancers was a primary reason for setting up the Healthwise study.

- Although there was an increased risk of death from prostate cancer, there was no increase in the risk of developing prostate cancer when compared to general population. However, there was evidence of an association between being exposed to BaP in the workplace and developing prostate cancer. These findings are unusual as they have not been reported in overseas studies examining much higher levels of exposure in aluminium smelters and will be carefully monitored into the future.

- There was no increased risk of being diagnosed with liver cancer, but there was an increased risk of death from liver cancer in male production employees compared to the general population. There was some evidence of a workplace association between being exposed to BaP/BSF and developing liver cancer, but it was difficult to make confident conclusions as this was based on an extremely small number of cancers.

- There was inconsistent evidence of an increased risk of being exposed to BaP/BSF in the workplace and an increased risk of stomach cancer. Although there was no increased risk in production employees, there was an increased risk of stomach cancer deaths seen in maintenance employees. There was some evidence that those exposed to BaP/BSF in the workplace were at a higher risk of stomach cancer. There is inconclusive evidence on stomach cancer risk in overseas studies, and this will be carefully monitored into the future.

- There was preliminary evidence of an increased risk of kidney cancer in those exposed to oil mist which is an exposure unique to those working in the rolling mill. As this was based on a very small number of cancers it requires further investigation and follow-up before it can be reported with confidence.

- There were decreased risks of developing melanoma, brain and pancreatic cancers for male employees compared to the general population.

- There was no evidence of any association with the workplace exposures examined and the incidence of bladder, pancreatic or kidney cancer at the smelters, which continue to occur at similar or lower rates than compared to the general population. All of these cancers have previously been identified as cancers of concern in the aluminium industry.

More information

The Healthwise study will continue to monitor the rates of cancer and death among employees into the future. If you have any questions please feel free to contact the Healthwise Study Team at Monash University.

Free call number: 1800 062 534
Email: hwise@monash.edu
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