Hazelwood HEALTH STUDY

Research Summary | The Latrobe ELF Study:

Were children exposed to mine fire smoke more likely to have minor illnesses a few years later?

Aims of the study

We wanted to find out if children who were exposed to more smoke from the coal mine fire during their mother's pregnancy or in their first two years of life were more likely to have common illnesses like coughs and colds, asthma, and skin rashes in the two to four years after the fire.

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Background

In February and March 2014, the Hazelwood coal mine caught fire and burned for about six weeks. The air in the nearby town of Morwell was full of smoke and ash for most of this time, affecting the people who lived there and causing a lot of concern in the community.

The Hazelwood Health Study was set up to find out the impact of the fire on the health of the people in Morwell, particularly children and older people.

The **Latrobe Early Life Follow up (ELF) Study** is the part of the Hazelwood Health Study that follows the health of children who were younger than two years old when the fire happened. This includes children whose mothers were pregnant with them at the time of the fire.

What we found

For unborn babies exposed to the fire, we found that the more smoke they were exposed to during their mother's pregnancy, the more likely parents were to report coughs, runny noses, wheeze, visiting a health care professional, and having a cold, in the two to four years after the fire. For example, children unexposed to the fire reported coughs or colds in 13% of their monthly diaries, while children exposed to the fire during their mother's pregnancy reported coughs or colds in 17% of diaries (once we accounted for other factors which might affect this).

For children exposed in early life the results were not as clear.

Smoke exposure was not linked with reports of rashes, fever, use of antibiotics or steroid skin creams.

We found that cough and cold symptoms were much more common in younger children and during winter. Reports of rashes and prescribed skin creams were more evenly spread across the age-groups and seasons.

To request a copy of the full technical report,
please call 1800 985 899 or email contact@hazelwoodhealthstudy.org.au

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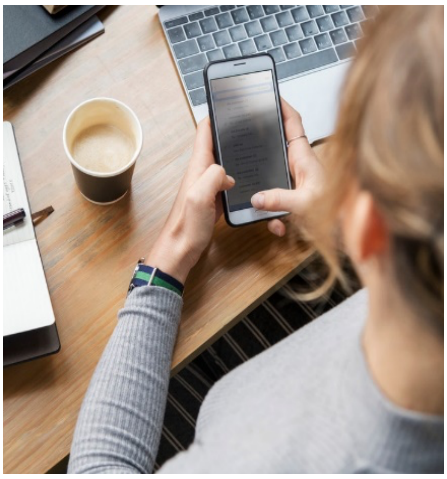
What we did

We enrolled children living in the Latrobe Valley into the study in late 2016. This included children aged two years and under at the time of the fire, children whose mothers were pregnant with them at the time of the fire, and a comparison group of children who were born after the fire.



Between June 2016 and October 2018, each month we asked parents in the study to complete a short online questionnaire. We asked whether, in the previous month, their child had any symptoms such as cough, runny nose, wheeze, or rash; whether they had been to a doctor or another health care professional; whether they had used any antibiotics, asthma inhalers, or skin steroid cream; and whether a doctor had diagnosed any coughs/colds or other lung infections, asthma, or eczema/dermatitis.

We worked out how much smoke each child had been exposed to by looking at where the child was (or mother for children in the womb) during each day of the fire and how smoky the air was in that place.

Then we looked to see if the things we asked about in the monthly diaries were reported the same, more, or less in children exposed to different amounts of smoke during their mother's pregnancy or their first two years of life.

We also looked at other factors that can affect how commonly these illnesses occur, including the age of the child, the season, if they lived with a smoker, and how much air pollution from traffic or other sources they were exposed to.

Considerations

It was not possible to know whether the differences we saw were completely due to the coal mine fire smoke. It might be that parents of young children or those who were pregnant at the time of the fire may have been more concerned about their child's health and reported more symptoms or been quicker to take their child to the doctor.

The differences we found were small and it is difficult to know what they mean for the risk to an individual child. We need to do more studies to understand this better.

Where to from here?

We will share these findings with the community and local organisations to make sure that they are used to improve the health of people in the Latrobe Valley.

What we find in the Latrobe ELF Study also helps us understand more about the effects of smoke on children's health in general. This is important to know as other children may be exposed to smoke from bushfires or other sorts of fires in the future.

Website: www.hazelwoodhealthstudy.org.au/study-reports @hazelwoodhealthstudy @HazelwoodHS

The Latrobe ELF Study is led by the Menzies Institute for Medical Research at the University of Tasmania, with help from Melbourne University and the Telethon Kids Institute.

The Hazelwood Health Study is led by Monash University with help from Menzies, Federation University, the University of Adelaide, and CSIRO.