

Less than one-third of children ages 5-15 will wake up to home smoke alarms

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An Australian study to determine the likelihood of school-aged children waking up to their home smoke alarm found that 78% of children slept through a smoke alarm sounding for 30 seconds. The outcomes of the study are published today in the journal *Fire and Materials*.

Home smoke detectors have been relied on since the 1960s, and have been known to save lives in domestic fires. The study's results show children are most at risk of not waking up to the sound of their home's smoke detector. Though related studies have been conducted in the past, the sample size used in this study has been the largest to date.

In order to gather data for the study, parents of 123 children (79 families) were asked to trigger their smoke alarm for 30 seconds after their child, or children, had been asleep for one to three hours. 60 boys and 63 girls were included in the study and the average age was 8.82 years. The group was split into two age groups so that the younger group would be prepubescent. This is because plasma melatonin levels drop with [puberty](#) onset and the [melatonin](#) hormone is known to be sleep-inducing. About 70% of the participants were aged from 5 - 10 years (87) and 30% from 11 - 15 years (36).

Volunteer parents reported whether or not their children woke using a research website, and the results showed that 78% of the children slept through the alarm. Of the small number of children who did wake up, only half recognized the sound as a smoke alarm, and half of those children knew they should evacuate. The data collected also showed that

younger children (five to ten years old) were significantly more at risk, with 87% sleeping through the alarm, compared to 56% of 11-15 year olds.

"Parents should not rely on their children waking to the smoke alarm in the event of a fire and should not assume that they will immediately evacuate if they do wake up to a fire," says Dr. Dorothy Bruck, lead author of the study at Victoria University in Melbourne, Australia. "In summary, [home safety](#) plans should not assume children will wake up to an alarm. This data suggests fire safety training needs more emphasis on the need for [children](#) to evacuate the home in the event of an alarm sounding."

More information: Dorothy Bruck and Ian Thomas; "Community Based Research on the Effectiveness of the Home Smoke Alarm in Waking Up Children" ; *Fire and Materials*; 2010; [DOI:10.1002/fam.1081](https://doi.org/10.1002/fam.1081)

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