



## Kids and Smoke Detectors

Don't be so sure that your smoke detectors will wake your sleeping children if there is a fire. Recently there have been several reports that show that sleeping children do not respond to smoke detector alerts. Based on these reports the U.S. Consumer Product Safety Commission has launched a two-year study to investigate smoke-alarm waking effectiveness among children and

the elderly. The study is currently in progress.

In Australia, Dorothy Bruck, a psychologist at Victoria University in Australia, was the first to identify the problem. In her 1999 study published in the *Fire Safety Journal*, Bruck tested 20 children in Australia between the ages of 6 and 17 to determine their response to a 60-decibel alarm sounding at pillow level. She conducted her test twice and found 17 of the children slept through one or both tests. Two of the three who woke were 16 and 17 years old, among the older children in the sample. Indeed, for the children 15 and under, the reliable waking rate was only 5.6 percent. In contrast, Bruck found all of the parents woke when the alarms sounded.

The Columbus Children's Research Institute did a study to compare the ability of different types of smoke alarms to awaken children while monitoring sleep stage. The personalized parent voice smoke alarm at 100 dB successfully awakened 96% of children 6- to 12-years-old from a deep sleep with 83% successfully performing a simulated self-rescue escape procedure, significantly outperforming the 100-dB conventional residential tone smoke alarm. These findings suggest a clear direction for future research, as well as important fundamental changes in smoke alarm design, that address the unique developmental needs of children. The development of a more effective smoke alarm for use in homes and other locations where children sleep provides an opportunity to reduce fire-related morbidity and mortality among children.

The net result is that if you have young children you should consider adding a smoke detector with voice commands. SignalONE's KidSmart Vocal Smoke Alarm features the newest technology and actually records your voice so kids respond quickly. You can also record personalized escape instructions to calm and guide your child to safety. Kidde makes a combination smoke / carbon monoxide detector that use generic voice alerts.

Pacific Crest Inspections reminds homeowners that smoke detectors are tools that are supposed to save your life, but you also need to have a plan that works for your family. Parents need to clearly understand their supporting roles in the escape plan. After going over the plan with your family, you should conduct a walkthrough of the plan. When you feel comfortable with your plan, hold a fire drill at night with the lights out and the children in bed so that you and they can determine the appropriate response to a smoke alarm.