



**PUBLIC HEALTH ASSOCIATION**  
of Australia Inc

## **SMOKE DETECTORS IN RESIDENTIAL HOUSING**

### ***The Public Health Association of Australia notes that:***

1. Each year in Australia an average of 110 people are killed in residential fires<sup>1</sup>.
2. Most deaths in residential fires occur at night, when the occupants are asleep and almost half die as a result of smoke inhalation, not burns. Those who die from burns are often incapacitated by smoke first.
3. Smoke alarms are able to give early warning in the event of a residential fire, allowing the occupants to escape. Published reports indicate that the risk of death in a house fire is reduced by 60% if a smoke alarm is installed<sup>2</sup>. And that, programs to increase the installation of smoke alarms can reduce death and property loss (the latter because emergency services are called earlier).
4. The Building Code of Australia requires that smoke alarms be fitted in all new residential properties and several states require smoke alarms be fitted in all residential properties. Additionally, some insurance policies now make it compulsory to have smoke detectors fitted.
5. Research indicates that photo-electric smoke alarms are more effective at detecting smouldering fires and fires starting in areas remote from smoke alarms, and that ionisation smoke alarms are more effective at detecting flaming fires. Both types of fires may occur in residential accommodation.
6. The risks associated with the small amounts of radioactive material in ionisation smoke alarms are insignificant. Warnings are displayed and the means for safe disposal of these alarms are in place (suppliers are required to accept the alarms back for safe disposal).

### ***The Public Health Association of Australia believes that:***

7. All homes should be fitted with smoke alarms to offer the early warning necessary to escape a fire alive according to the following recommendations:
  - photo-electric smoke alarms should be installed in paths of travel between sleeping areas and exits to the open air or to common corridors;
  - either photo-electric smoke alarms or ionisation smoke alarms be installed in all sleeping areas;

- where a smoke alarm is to be located in close proximity to a kitchen or bathroom because the location is in a sleeping area or in the path of travel to an exit, then the smoke alarm should be a photo-electric smoke alarm.
  - every house should have enough alarms installed on every level – at least one outside sleeping areas and one on each additional level
8. New homes should include fire alarms hard-wired to 240-volt electrical circuits and fitted with battery back up, and existing homes should be installed with battery-operated smoke alarms.
  9. All smoke alarms installed in residential accommodation meet Australian Standard 3786 or Australian Standard 12239.
  10. Governments have an obligation to protect the occupants of public housing through installation of smoke alarms in publicly owned residential housing.
  11. Landlords also have an obligation and in some states are required by law to insure that smoke alarms are installed in their properties.

***The Public Health Association of Australia resolves that:***

12. The Board and Branches, advised by the Injury Prevention Special Interest Group, should request all State and Territory governments to initiate public education campaigns to:
  - Work toward compulsory use of smoke alarms in all dwellings;
  - Advocate for the voluntary installation of smoke alarms in private residences, and maintenance of smoke alarm units;
  - Encourage families to practise fire-drills and to test escape routes;
  - Test smoke alarms monthly to ensure the battery and the alarm sounder are operating;
  - Clean smoke alarms with vacuum cleaners annually to remove particles that may affect smoke alarm performance;
  - Replace removable batteries, including those powered primarily by 240-volts, annually;
  - replace smoke alarms as recommended in the manufacturer's warranty acknowledging that smoke alarm units have a limited life span
13. The Board and Branches, with advice from the Injury Prevention Special Interest Group, will alert Commonwealth, State and Territory governments to the need to:
  - Enact legislation or regulations (where not currently in place) to mandate the installation of smoke alarms in all residential facilities;
  - Install, or continue to install, smoke alarms in publicly owned housing.
14. The Injury Prevention Special Interest Group will involve its members in supporting:
  - Public education campaigns advocating installation of smoke alarms, maintenance of smoke alarm units, and the use of fire reduction measures, particularly in low-cost rental housing;

- Monitoring of issues regarding safe disposal of old ionising (radioactive based) alarms.

***References:***

1. Accidental Fire Fatalities in Residential Structures *Who's at Risk?* March 2005. Commissioned and published by the Queensland Fire and Rescue Service.
2. Cited in Ozanne-Smith J. Watson W. A review of product related fires. Monash University Accident Research Centre. Melbourne 1991.
3. Australian Radiation Laboratory Information Sheet, June 1994, Radioactivity in Domestic Smoke Detectors.

***Adopted at the 1992 Annual General Meeting of the Public Health Association of Australia, amended at the 1996 Annual General Meeting, amended at the 2002 Annual General Meeting and revised at the 2005 AGM of the PHAA.***