The background of the entire page is a close-up photograph of bright orange and yellow flames, with dark shadows between the fire tongues, creating a sense of intense heat and danger.

STRAIGHT TALK ABOUT FIRE

Residential Fires Cost Us

- \$874,000,000 Property Loss
- 6,600 Lives Lost
(3,500 of these were children)
- The Average Home Fire Loss Costs Over \$1,200*

In The Next Hour

- More than 300 fires will start somewhere in the U.S.
- One person will die
- 34 will be injured
- We will lose \$300,000 worth of property*

***SOURCE – Report of the National Commission on Fire Prevention and Control.**



PHOTO COURTESY BANCROFT, COLORADO FIRE DEPT.



PHOTO COURTESY WILLOUGHBY, OHIO FIRE DEPT.



ROCKY MOUNTAIN NEWS PHOTO.



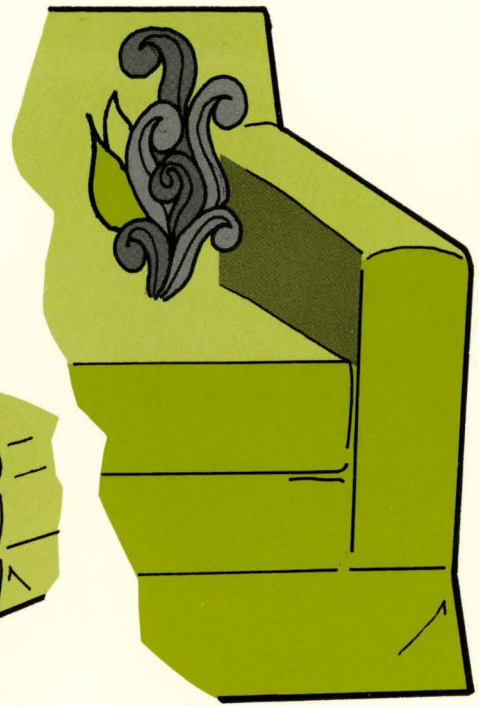
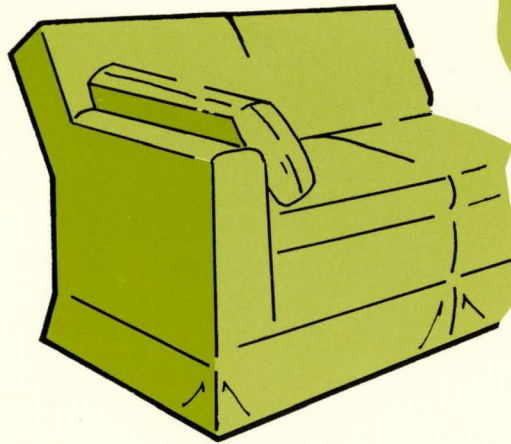
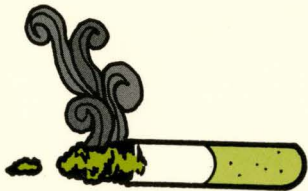
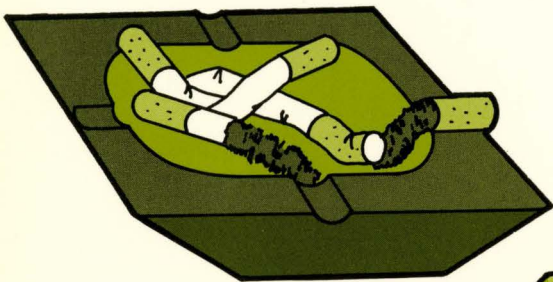
ROCKY MOUNTAIN NEWS PHOTO.

BASIC MISCONCEPTIONS



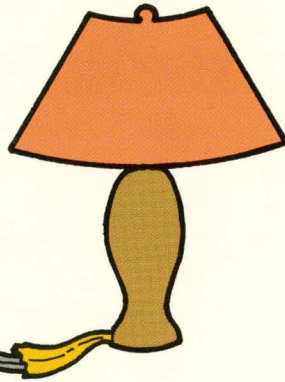
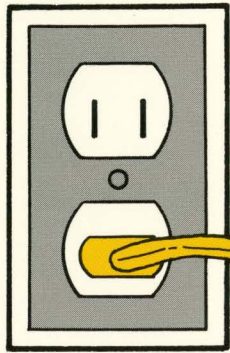
1. It won't happen to me
2. I will smell the smoke
3. There's plenty of time to get out

HOW DO HOME FIRES START?



**HEAT
SOURCE + FUEL = FIRE**

Home fires start in many ways, but all have in common a *heat source* and *fuel*.



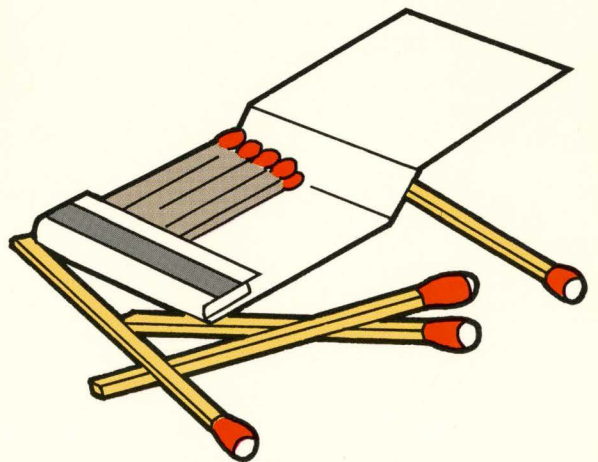
HEAT SOURCE



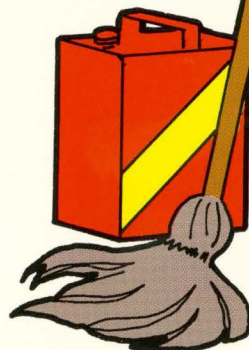
FUEL



FUEL



HEAT SOURCE



FUEL

WHERE DO HOME FIRES START?



25.7% LR, FR, Den

18.4% Kitchen

14.4% BR & Closets

11.9% Base, Furnace, Ldry. Rm.

11.2% Chimney

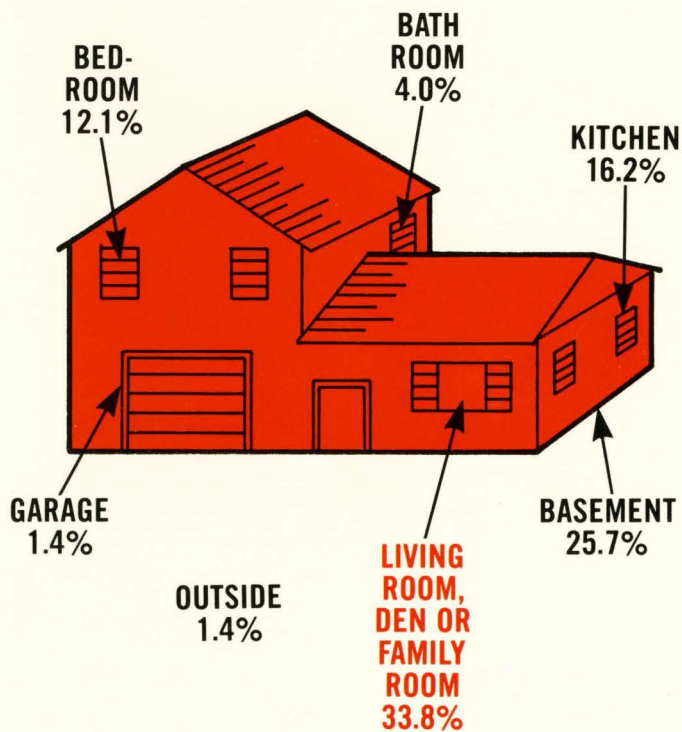
7.6% Outside House

6.0% Garage

SOURCE: Oregon State Fire Marshal Report

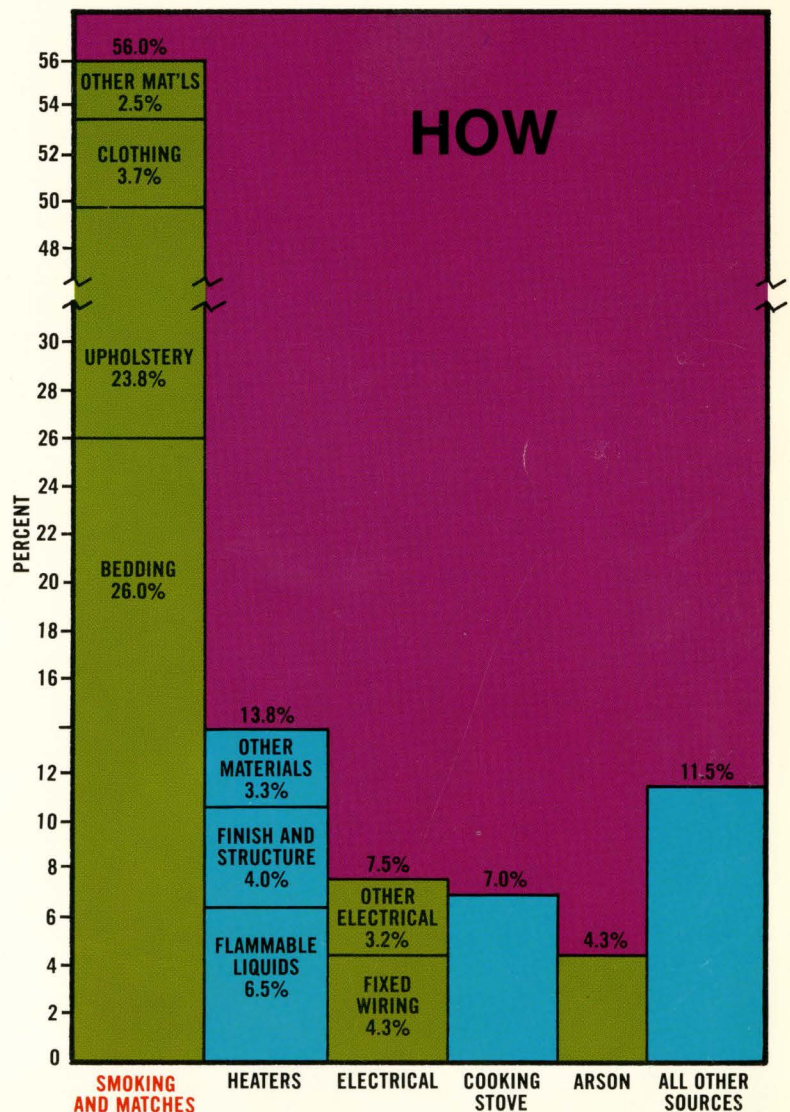
WHERE DO **FATAL** HOME FIRES START?

WHERE

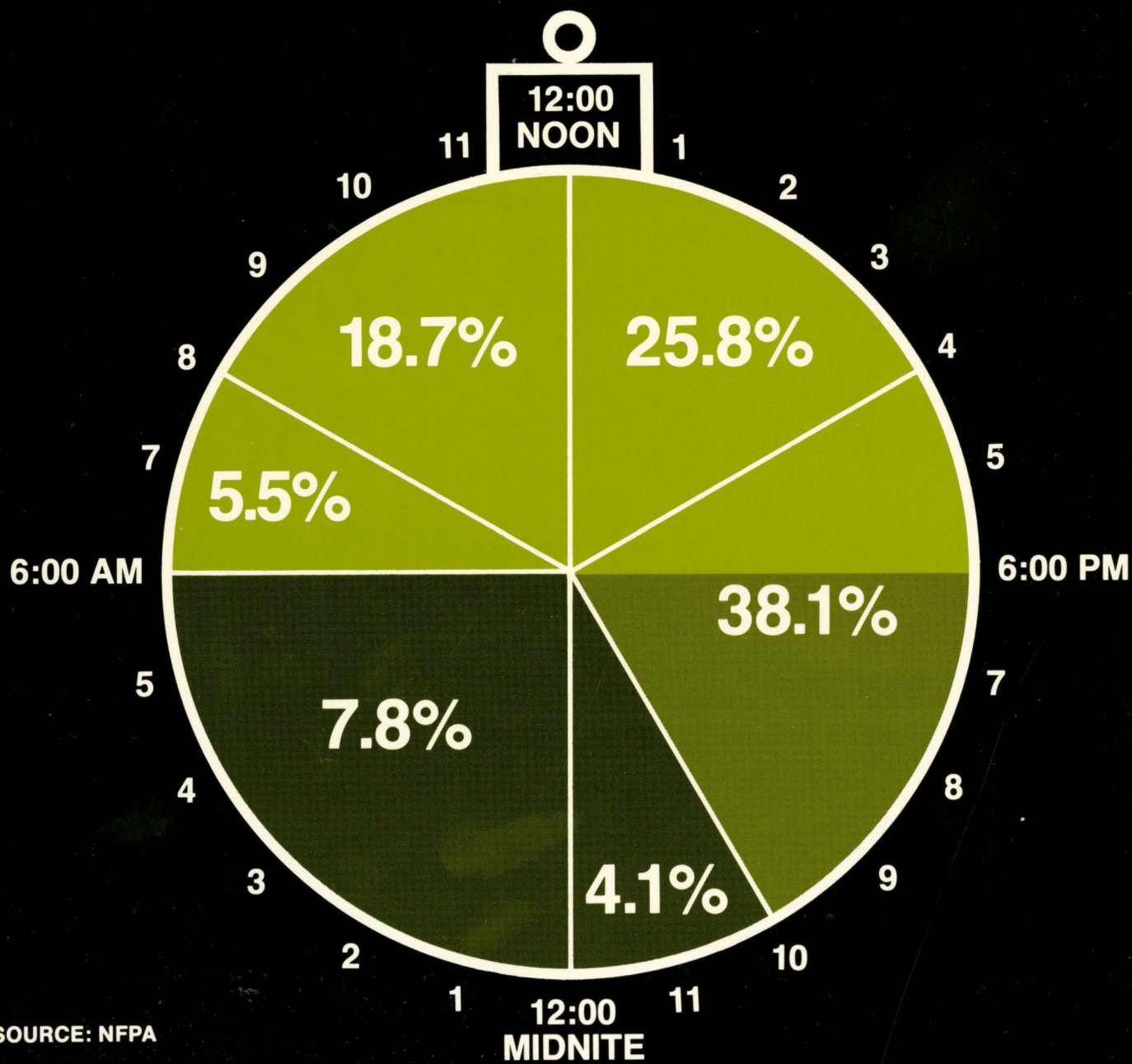


SOURCE: N.F.P.A. # FR72-1 Report
"Fatal Residential Fires" - 1972.

HOW

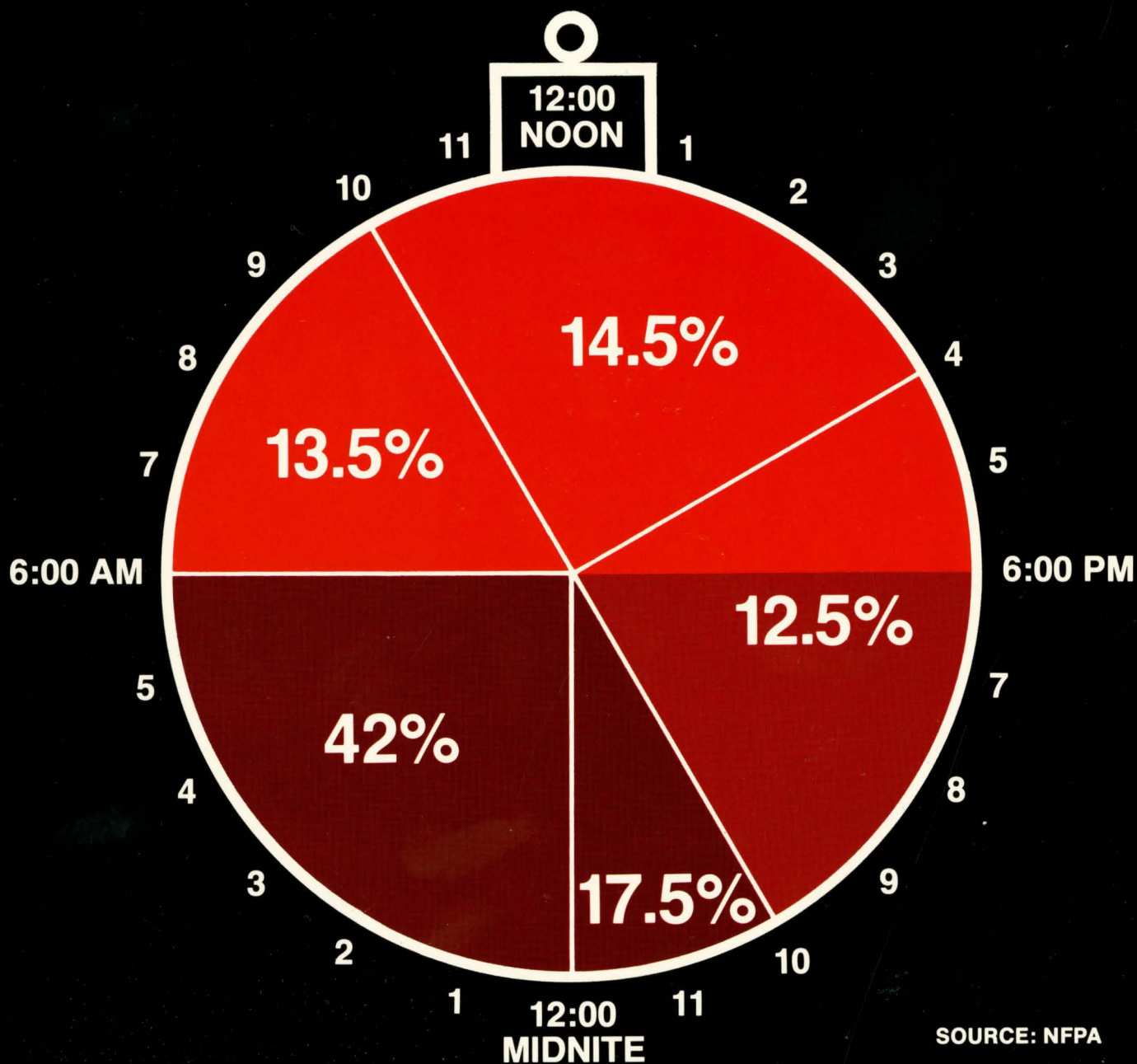


WHEN DO HOME FIRES START?



SOURCE: NFPA

WHEN DO **FATAL** HOME FIRES START?



SOURCE: NFPA

**MOST FIRE
DEATHS OCCUR
AT NIGHT-
WHEN YOU
ARE SLEEPING.**

*Let's Look at
The Causes*

The background of the slide is a close-up photograph of intense flames, showing a color gradient from bright yellow and orange at the bottom to deep red and black at the top. The flames are turbulent and appear to be rising.

3 MAIN KILLERS

1. Lack of Oxygen

2. Toxic Gases

**3. Failure to Escape
in Time**

KILLER #1... LACK OF OXYGEN...

OXYGEN IN AIR

**21%
(CLEAN AIR)**

17%

12%

BELOW 10%

RESPONSE

NORMAL-ALERT

UNCOORDINATED

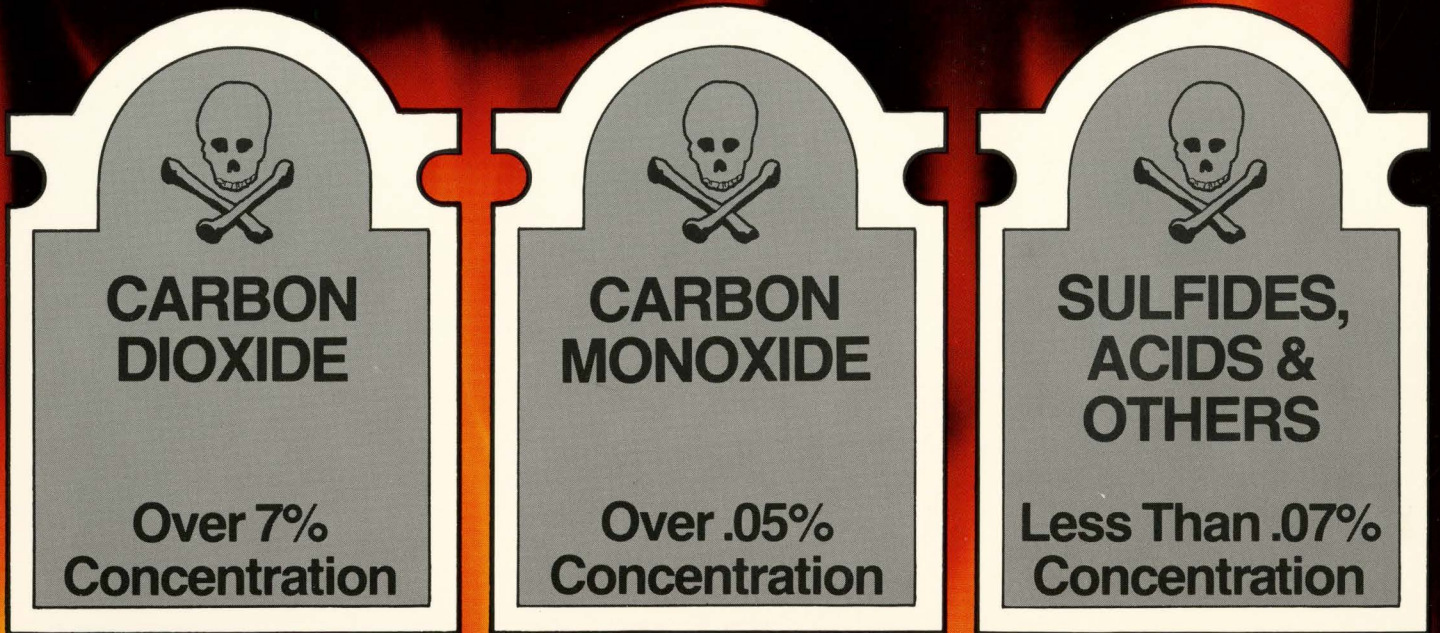
ILLOGICAL ACTIONS

STUPOR-DEATH



**SOURCE: NFPA Fire Protection
Handbook, Chapter 4.**

KILLER #2... TOXIC GASES



**LETHAL PRODUCTS
OF COMBUSTION**

SOURCE: NFPA Fire Protection Handbook, Chapter 4.

KILLER #3... FAILURE TO ESCAPE IN TIME

**Look at the 3 stages of
a fire:**

1st—OVERHEATED
(Days or hours to escape)

2nd—SMOLDERING
(Hours or minutes to escape)

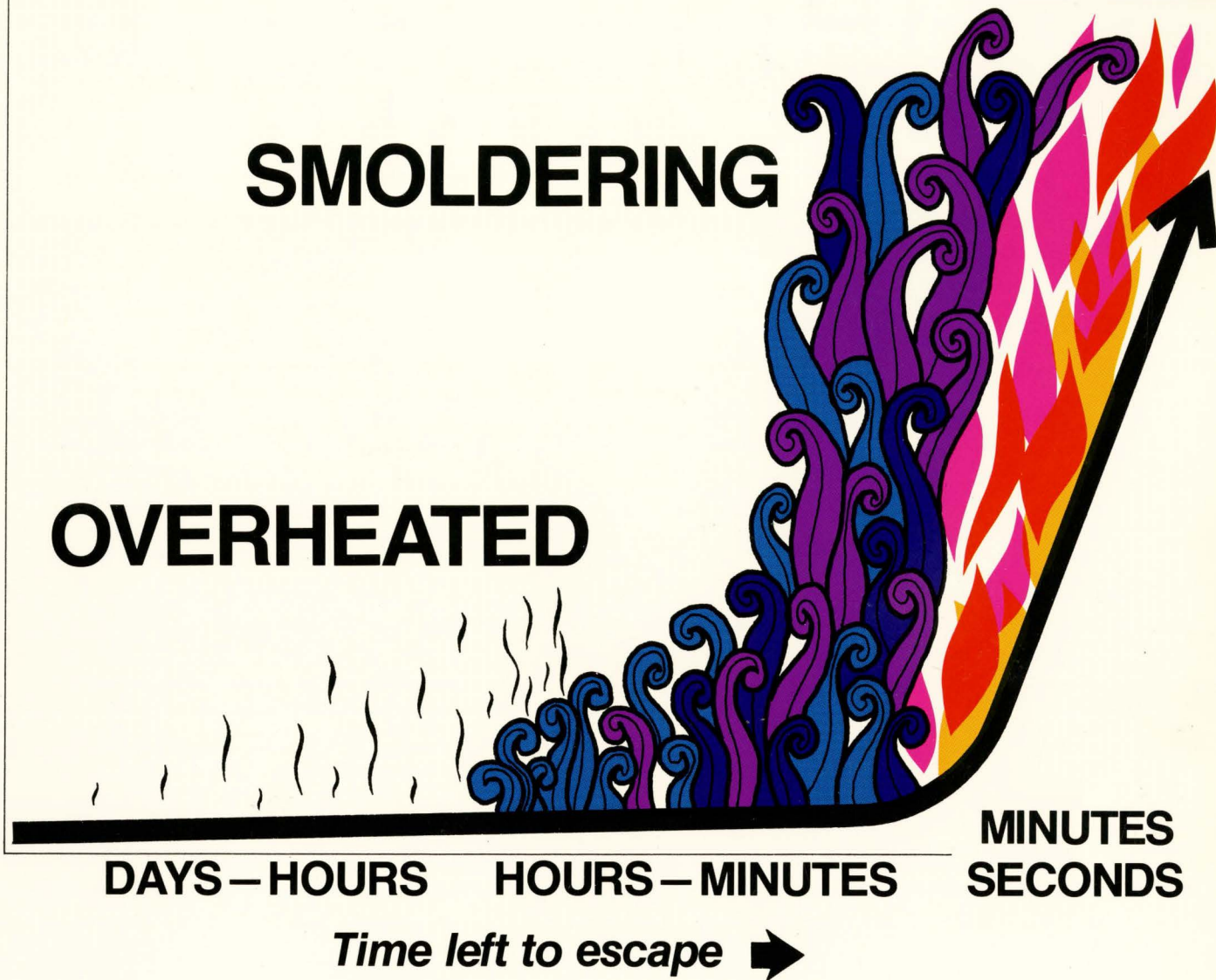
3rd—OPEN FLAME
(Minutes or seconds to escape)

TEMPERATURE ↑

OVERHEATED

SMOLDERING

OPEN
FLAME



***From the time of sensing an open fire in the living room, you may have less than 2 minutes to escape from your bedroom.**

*SOURCE: N.F.P.A. Report FR 72-1.

REMEMBER WHAT CAUSES FIRE?



**HEAT
SOURCE + FUEL = FIRE**

What Can You Do to Control?

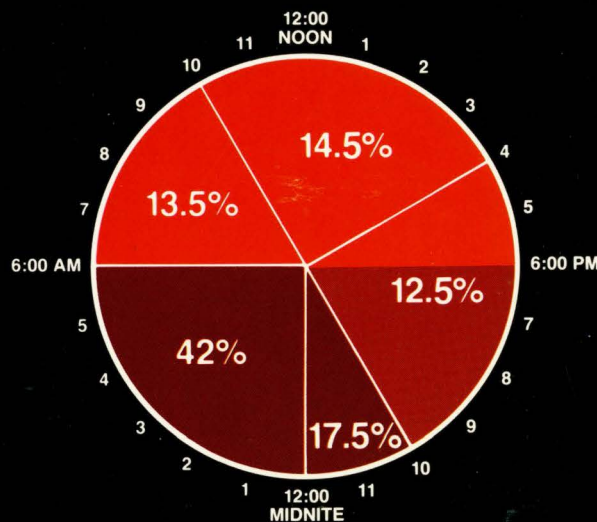
1. HEAT SOURCE

- Keep children away from matches
- Throw away frayed electrical cords
- Watch the ashtrays

2. FUEL

- Clean rubbish out of the attic, basement, closets
- Store paint, flammable liquids correctly
- Practice good fire safety housekeeping

REMEMBER WHEN **FATAL** FIRES OCCURRED?



What Can You Do to Escape in Time?

1. PRE-PLAN FOR FIRE

- Set up an escape plan
- Have home fire drills

2. INSTALL AN AUTOMATIC FIRE DETECTION SYSTEM.

- Alert your family in time to evacuate

HOW GOOD IS YOUR ESCAPE PLAN?

You Do Have One, Don't You?

Let's look at your home:

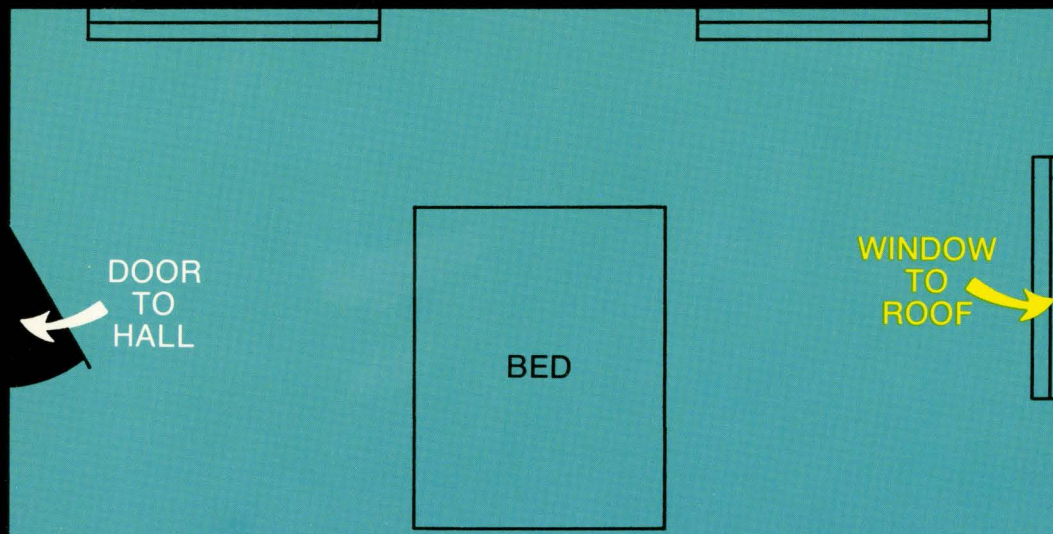
- Do you have two exits from each bedroom?
- If window, is it:
 1. easy to open (screens too)?
 2. easy to get through?



HERE'S WHAT TO DO:

- 1. Make a simple floor plan**
- 2. Select & show the two escape routes from each bedroom**
- 3. Instruct your family & conduct your home fire drill**
- 4. Do you need an escape ladder?**
- 5. How about a fire extinguisher?**

TYPICAL FLOOR PLAN



REMEMBER THE STAGES OF A FIRE?

- 1. Overheat**
- 2. Smolder**
- 3. Open Flame**

A Fire Will Produce:

**First – Invisible Particles
of Combustion**

Next – Visible Smoke

Last – Flame & Heat

**Invisible
Particles of Combustion**

80 TO 90%

**Visible
Smoke**

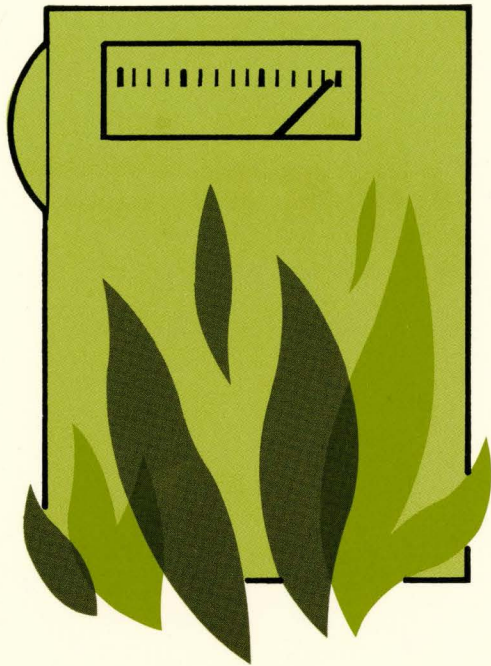
10 TO 20%

Flame & Heat



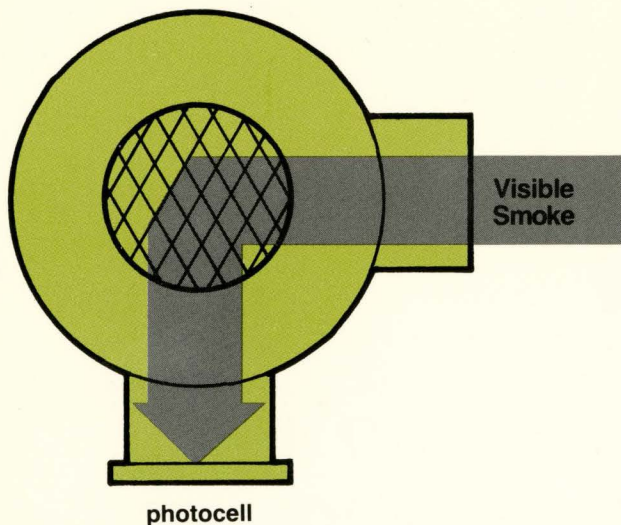
***To make your escape plan work,
you need early warning.***

HEAT DETECTORS



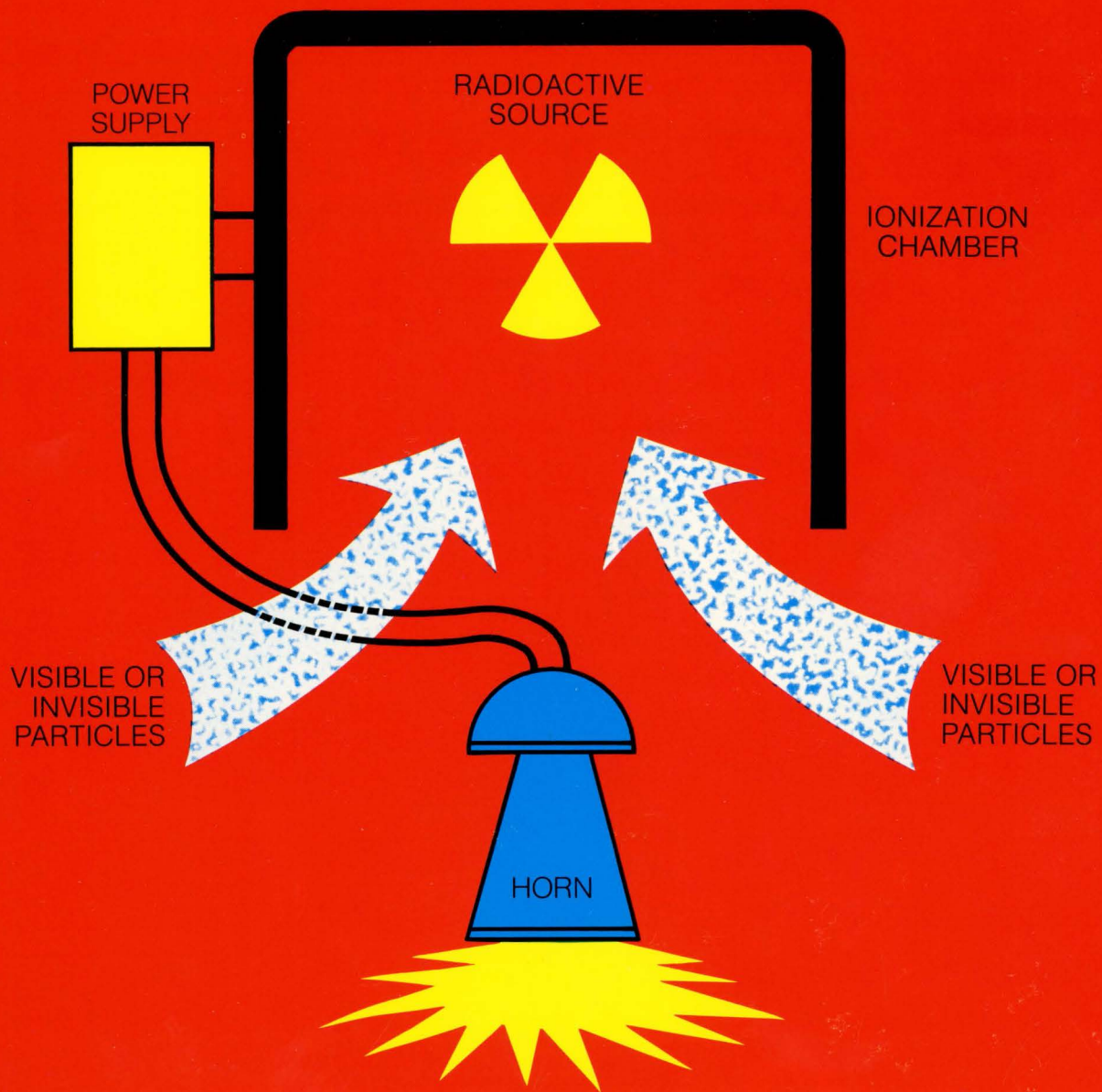
Heat detectors operate like the thermostat on your wall. The air temperature must reach 135° to alarm.

PHOTO – OPTICAL SMOKE DETECTORS



Visible smoke must enter the detector, scatter the light beam to activate the photocell – responds to approximately 20% of the generated products.

IONIZATION DETECTORS



A tiny amount of radioactive material causes a current flow inside the chamber. Particles of combustion, *visible or invisible*, enter the chamber & decrease the current flow. The electronic sensor sounds the alarm –

**FOR BEST
LIFE SAFETY PROTECTION
—YOU SHOULD
CONSIDER INSTALLING
A DETECTOR THAT
GIVES YOU THE
EARLIEST WARNING
POSSIBLE.
THAT DEVICE IS
ONE UTILIZING
THE IONIZATION PRINCIPLE**

Because

IONIZATION DETECTION...

1. Operates at all stages of a fire.
2. Detects both visible & invisible particles of combustion.
3. Same thoroughly proven principle used in commercial applications.
4. Will alarm before fire reaches the high-heat stage.

*What is available
to you?*



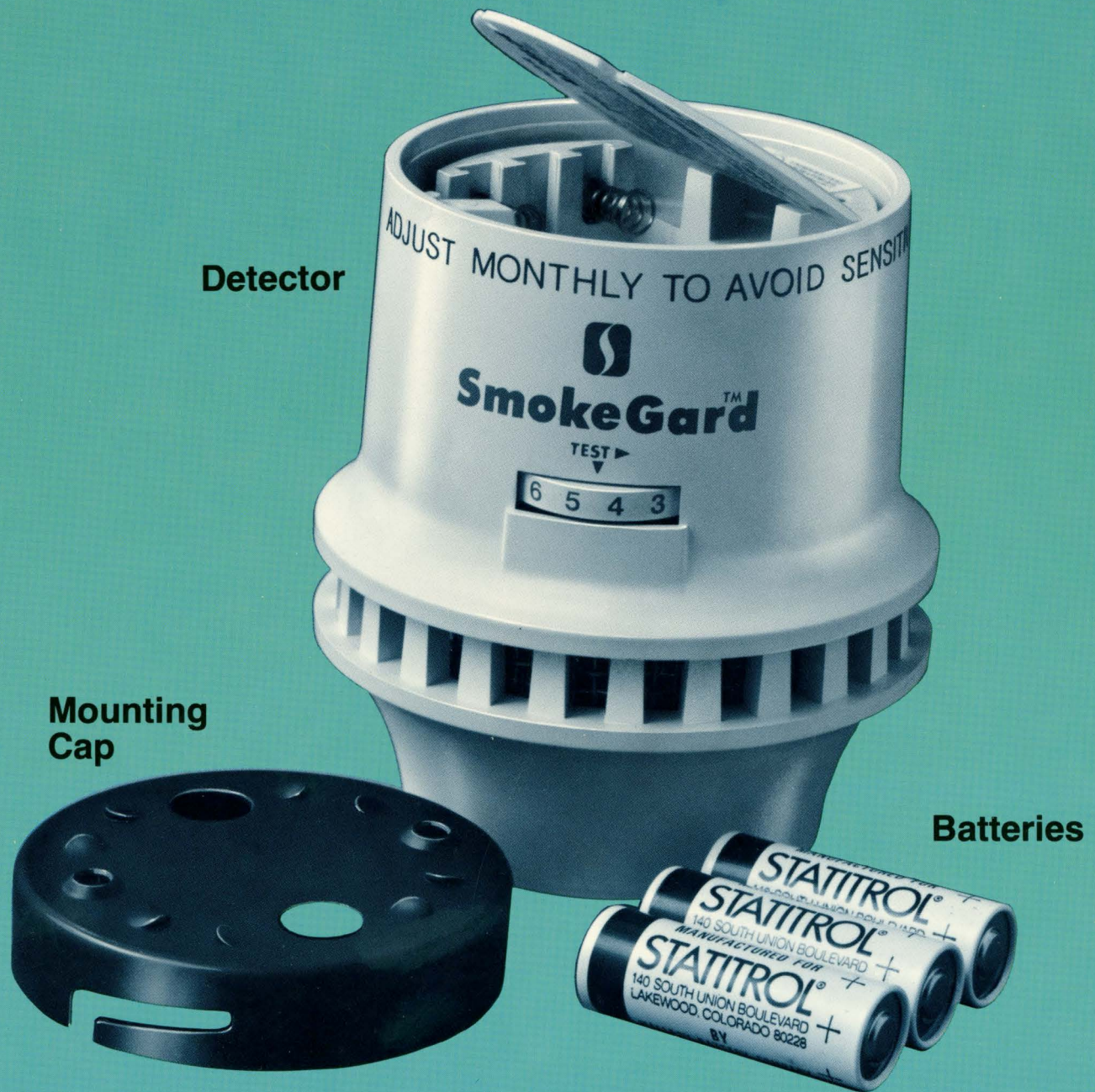
SmokeGard[®]

EARLY WARNING HOME SMOKE DETECTOR



**Factory
Mutual
System**
Approved

- Battery powered – no wiring.
- Batteries last one year.
- Designed for life safety – alerts the family before smoke or toxic gasses accumulate.



WHY IS EARLY WARNING DETECTION SWEEPING THE COUNTRY?

Let's look at the new national codes for dwellings

NATIONAL FIRE CODES – PAMPHLET #74 – 1972

Par. 2421 "A smoke detector shall be installed in the immediate vicinity of, but outside, the bedrooms. Other smoke detectors placed in strategic locations around the household and in each bedroom are recommended."

UNIFORM BUILDING CODE – 1973

Fire Warning System

Sec. 1413. "Every dwelling shall be provided with approved detectors of products of combustion other than heat conforming to U.B.C. Standard No. 43-6 mounted on the ceiling or wall at a point centrally located in the corridor or area giving access to rooms used for sleeping purposes. Where sleeping rooms are on an upper level, the detector shall be placed at the center of the ceiling directly above the stairway. All detectors shall be located within 12 inches of the ceiling. Care shall be exercised to insure that the installation will not interfere with the operating characteristics of the detector. When actuated, the detector shall provide an alarm."

BASIC BUILDING CODE – 1973

Sec. 1209.1. "Each dwelling unit within buildings of use group L-2 (Multi-family) and L-3 (one- and two-family) shall be provided with a minimum of one approved smoke detector, sensing visible or invisible particles of combustion, installed in an approved manner and location approved by the authority having jurisdiction. When activated the detector shall provide an alarm suitable to warn the occupants within the individual dwelling unit."

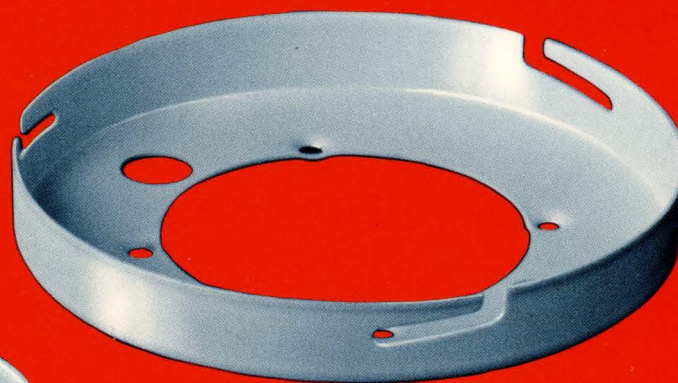
NATIONAL FIRE CODES – STANDARD 501B – "STANDARDS FOR MOBILE HOMES – 1973."

9. Mobile Home Fire Warning Equipment

9.1. "At least one listed, automatic smoke detector (which may be a single-station alarm device) shall be installed in each mobile home outside each sleeping area to warn any sleeping occupants of the presence of any fire condition which might develop."

In addition to National Codes, many individual states are passing similar regulations.

- Battery powered – no wiring.
- Batteries last one year.
- Designed for life safety – alerts the family before smoke or toxic gasses accumulate.



**Mounting
Cap**



Detector



Batteries

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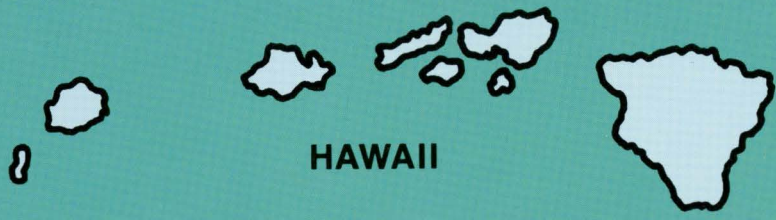
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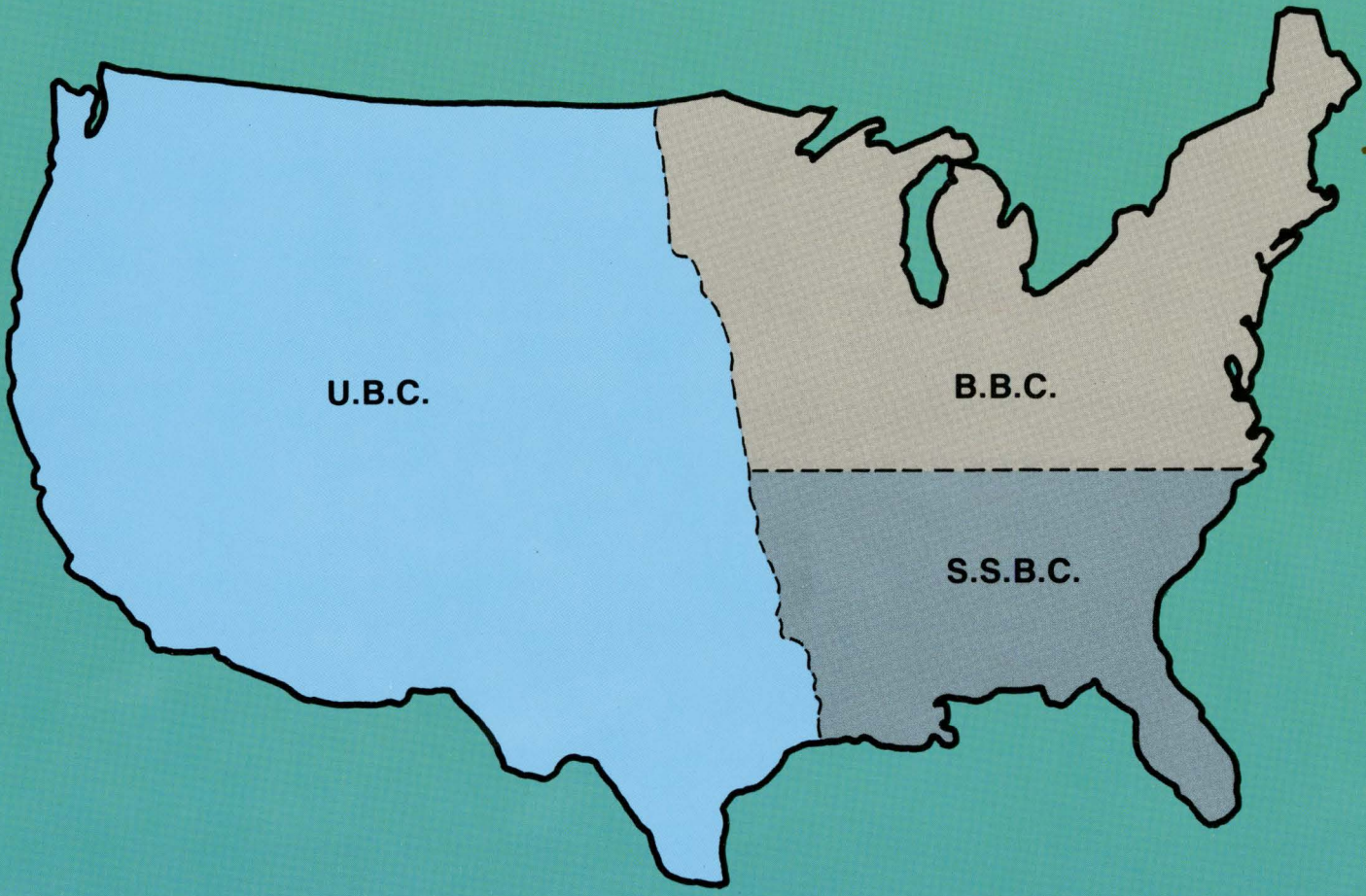
In addition to National Codes, many individual states are passing similar regulations.



HAWAII



ALASKA



U.B.C.

B.B.C.

S.S.B.C.

REVIEW

- **Home fires start small – from many sources.**
- **Most people believe it will happen to somebody else.**
- **Most fatal home fires start at night – when you are asleep.**
- **Fire consumes oxygen – lack of oxygen dulls your thinking.**
- **Fires generate deadly gases – which can cause death.**
- **Most people killed by fires are overcome by combustion products, not heat.**
- **The less advance notice you have – the less time available for you to get out.**

- **From the time of sensing an open fire in the living room, you may have less than 2 minutes to escape from your bedroom.**
- **To escape in time:**
 - 1. Pre-plan for fire.**
 - 2. Install early warning detection.**
- **Ionization detectors sense both visible smoke & invisible products of combustion.**
- **You need at least:**
 - One detector outside each bedroom area.**
- **National building codes soon will require early warning detection in all new residential occupancies.**



PHOTO: COURTESY BANCROFT, COLORADO FIRE DEPT.

**INSTEAD OF LIVING
WITH FEAR ...**



**YOU CAN LIVE WITH
PEACE OF MIND**



SmokeGard®

Another Fire Defense Product by
STATITROL® CORPORATION

*“Better Fire Defense Products
World Wide”*