

## Learning from a big quake



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On May 2, 1983, at 4:42 P.M., a 6.5-magnitude earthquake rocked Coalinga, California. Within 15 seconds, most of the unreinforced masonry buildings downtown were damaged beyond repair. Many older wood-frame houses were shaken off their foundations, and lots of newer houses lost chimneys and masonry veneer. All suffered from the violent shaking, as furniture toppled and dishes and cans flew from shelves. Water, gas, electricity, and telephone lines were immediately cut off.

Seismic safety officials, engineers, and architects will be interpreting the damage for many months, but preliminary findings reemphasize the critical importance of earthquake preparedness by homeowners. Chance of injury is much less in a well-braced house, with potentially hazardous objects secured. This subject was covered in a major *Sunset* article, published in March 1982 (for information on reprints, see below).

In Coalinga, homes that were adequately braced fared extremely well. Older structures not bolted to their foundations, or resting on unbraced "cripple" walls, suffered considerable damage. Of the town's 2,000 houses, 345 were destroyed, 558 were severely damaged, 811 sustained minor damage; most had no earthquake insurance.

Brick chimneys and masonry veneer performed poorly, as they have in past quakes; even with adequate mortar, they often toppled. This is a point reminder to locate children's play areas away from where masonry might fall and to consider the hazard of chimneys near sleeping quarters.

Coalinga's tremor surprised townsfolk with its sudden, violent ground movement. Several compared the first jolt to a truck hitting the house, and one told *Sunset*: "We tried to run down the stairs and were batted back and forth like ping-pong balls."

The vital importance of discussing a family-action plan *before* a quake was underscored by the experience of the family who lived in the house shown in the bottom photograph. All five family members escaped serious injury by following their plan to move quickly to a small wood-frame room in the center of the house. This protected them from falling masonry when the exterior walls of their house collapsed.

The Coalinga quake is also a reminder to those of us who live in the West's "earthquake country" that no one can predict when or where the next quake will strike; geologists hadn't even mapped what now appears to be a major fault close to the town.

### What can you do to get ready for an earthquake?

To learn how to make your home more earthquake resistant, see "Getting ready for a big quake," on page 104 of the March 1982 *Sunset*. Thousands of reprints of this eight-page illustrated article have been ordered by individuals, organizations, and government agencies. To obtain a copy, send \$1 (includes postage) to Earthquake Report, *Sunset Magazine*, Menlo Park, Calif. 94025; quantity discounts are available. The reprint includes a sample registration form for organizing a neighborhood preparedness group.

To learn about the nation's major faults of California and the nature of quakes, see *Earthquake Country* (Lane Publishing Co., Menlo Park), which has photographs showing structural damage caused by past quakes. If you can't find the book locally, send \$5.95 (California residents add appropriate sales tax) to *Earthquake Country*, *Sunset Books*, at the address above.

### WINDOW ON THE WEST: *Coalinga damage*

Brick chimneys crumbled or were sheared off many Coalinga houses, as shown at top. Equally vulnerable were short "cripple" walls (see center photograph); when these studs are inadequately braced, they're easily pushed over by a quake's lateral force. The danger of unreinforced masonry is evident in the photograph at left; the five residents survived by seeking protection in an interior wood-frame room.