

Don't get all shook up over quakes, expert says

By TOM LONG
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SANTA CRUZ — When your house is shaking like Tina Turner on the dance floor; when the ground beneath your feet is shifting and the overhead lamps are swinging wildly above you, console yourself with this expert opinion:

"The odds are much higher that you'll die in your bathtub than in an earthquake."

So said UC Santa Cruz Earth Sciences Professor Gary Griggs at a talk before a group

of UC alumni Wednesday afternoon.

"Your risk of dying while driving on Highway 17 is much higher than from dying in an earthquake in Santa Cruz County — to date," Griggs said later.

But, according to Griggs, the key words in that statement are "to date." Because nobody really knows when the next big earthquake is going to hit Northern California or what its impact will be.

Still, America is a comparatively safe place to suffer through a case of the land shakes. According to Griggs, an average of 15 people a year have died from earthquakes in the United States during this century. That doesn't mean that 15 people a year are actually dying; it just means that when you take the total number of deaths in the few major American earthquakes in the 20th century and divide that number by 89 you get about 15.

But 15 is pretty dinky when compared to an average of 18,000 people who have died annually worldwide as a result of earthquakes in the 20th century.

Why is America so much safer?
"It's not because we have fewer earthquakes. It's because we build better," Griggs said.
In fact, California has plenty of earthquakes.



Dan Coyro/Sentinel

Geologist Gary Griggs says not to worry.

"On a daily basis there are probably 10-20 earthquakes in Northern California, but we don't feel them because they're so small," Griggs said.

Sooner or later there's sure to be a shakeup that isn't so small. The problem is that while earthquakes have been recorded in China and Europe for centuries, earthquakes have only been tracked in California for about 75 years. Since the intervals of quake patterns can consist of hundreds of years, scientists simply don't have much to go on in predicting local shifts in the earth.

"We haven't had enough earthquake history in California to know what patterns occur," Griggs said.

But one thing's for sure. "Since 1906 there's been essentially no movement, so there's been 83 years of strain (in the earth)," Griggs said.

When that strain is finally released, certain areas and structures will be more at risk, according to Griggs.

"Wood frame houses are built very standard and are relatively safe," Griggs said. Mobile homes and other structures on weak foundations might not fare so well, though. "We have dozens and dozens of large buildings in California that don't meet earthquake standards," Griggs said.

It's not just a matter of what kind of structure, it's also a matter of where that structure is. Specifically, any building near mud-sediment type earth is in more danger of shaking violently during an earthquake than one on rock.

Downtown Santa Cruz, along the San Lorenzo River, and downtown Watsonville near the Pajaro River, are both on softer ground.

REFERENCE