

Surviving the Earthquake, Steps to Take BEFORE It Happens

By Dr. Kenneth S. Cheng

This is one article in a series written by your Emergency Preparedness Committee to help you prepare, be self-reliant and be of assistance to your neighbors in the event of a regional emergency. Every month we see and hear in the news of natural disasters (earthquakes, tornados, floods, and hurricanes) that should remind us of the importance of preparation. By failing to prepare, you are preparing to fail (Benjamin Franklin).

The information provided is not meant to be exhaustive or complete, but instead is a good starting point in your planning process of preparation. These articles, and additional information, can also be accessed and downloaded through the Nellie Gail website (www.nelliegailranch.org) by signing in, clicking on the Resource Center tab, and opening the Emergency Preparedness Folder.

Last month we described the likelihood (“inevitable” according the USGS) and possible magnitude (7-10 times stronger than Haiti) of an earthquake striking the Southern California area. Despite that devastation, earthquakes are very survivable with simple preparation. You can minimize the damage within your home and improve your chances of rescue and full recovery by taking some very simple steps. This month’s focus will be an overview of what should be done BEFORE the earthquake occurs. The Boy Scouts say it best in their motto, “Be Prepared.” In order to minimize injury and inconvenience, we must prepare ourselves, our home and our community. Below are some basic, yet essential steps to becoming prepared.

Most of us have our water heater strapped to the wall, but are the straps sturdy and attached to studs? Water heaters weigh anywhere from 600 lbs to over 900 lbs. Check your water heater straps to make sure they can support this weight (the old “plumber’s tape” and nails are woefully inadequate.) This is important for several reasons: it lessens the chance of a gas leak and fire, it minimizes your chances of flooding from broken water pipes, and it preserves 75-100 gallons of usable drinking water should you need it. Water heater straps are available at any hardware store and can be easily installed with minimal effort. If you are not sure how to do this, a handyman can easily accomplish this in about an hour.

Attach a gas and water shut off tool on your gas meter and practice how to use it. Attaching it to the meter with a lightweight chain or thin cable is important so it won’t get lost nor will you waste time searching for it through the mess and devastation in your garage while gas is leaking from your water heater (which is probably in your garage as well.) Practice shutting off your water from the meter (at the street) and/or from the entry point in your home (usually found at the base of your front yard hose bib.)

ALL unsecured items on your walls and shelves WILL BE on the floor. Most of our homes have a hallway or two with family pictures hanging on it. The floors in these hallways will be littered with broken glass. Secure your pictures (especially ones over or near your beds) so that they can’t fall off. This is easily done by placing two or more finishing nails into the wall immediately above the frame of the hanging picture. These nails will prevent the picture from coming up and unhooking from the picture hanger. Kitchens are also notorious for being extremely vulnerable to earthquakes. Contents from your cabinets and drawers will likely be on your floor, including food, cooking utensils, pots and pans, broken jars, etc. This can be minimized by having childproof locks on the cabinets. Yes, this is

inconvenient and most will not do this but at least consider this for lesser used cabinets and glass containing pantries. It is strongly recommended that the cabinets containing household chemicals (cleaning supplies, etc.) be childproofed as the chemicals can be hazardous by themselves, possibly fatal if mixed with other chemicals. The lock will prevent these chemicals from spilling and mixing with each other.

Tall furniture, book shelves and refrigerators should be attached to the studs behind them. Rescue teams have seen refrigerators that have “walked” from their location, travel 6 feet across the kitchen floor and take out large chunks from a granite countertop (Northridge Earthquake, magnitude 6.7, 1994.) These furniture attachment straps are easy to install and readily available at Home Depot or other hardware stores.

With all the broken glass described above, you should have closed-toed shoes under your bed (some also recommend that you store one of your emergency flashlights in these shoes so that it will always be nearby.) You do not want to be running down a dark hall in bare feet or slippers with broken shards of glass on the floor as one of the most common injuries from earthquakes is from victims cutting their feet on broken glass within their own home. Avoid the temptation of running to different rooms or running outside; FEMA research shows that most earthquake injuries happen when one is entering or exiting a structure.

Prepare by having adequate food, water and supplies. This is a whole topic in itself and will be thoroughly covered in a future article, but to summarize, one should have one gallon of water per person per day, canned or dried foods that require little or no preparation, and shelter (tents, tarps, blankets, etc.) in the event your home is uninhabitable.

An Earthquake Fault In Our Own Backyard?

On Monday, April 23, 2012, a 3.9 earthquake struck much of south Orange County. This quake’s epicenter was located in Laguna Niguel (specifically near the corner of Crown Valley Parkway and La Paz). Most of the readers of the *Pony Express* won’t remember this earthquake, and although no injuries or property damage occurred and having startled only a few residents, it definitely startled the geologic community. This small earthquake brought to light a little known “thrust” fault, the San Joaquin Hills fault. Thrust faults are difficult to identify because unlike the San Andreas Fault where the fracture of the earth’s crust is visible and on the surface, thrust faults have fractures deep beneath the surface. One might ask, “Since these faults are under the surface, aren’t they less dangerous?” Geologists feel that these blind thrust faults are likely more dangerous since their boundaries can’t be identified. Geologists were not aware of the faults that caused the 6.7 magnitude Northridge Earthquake (1994) and the 6.0 magnitude Whittier Narrows Earthquake (1987) until the ground started shaking as both were caused by these blind thrust faults. We now know a blind thrust fault lies literally in our backyard. All the more reason to be prepared.

New Earthquake Kit Option

As many of you know, I have assembled a very extensive earthquake kit that should easily sustain my family in the event of an emergency. I chose to assemble my own (vs. purchasing a pre-made kit) because I could customize it and to insure that I had high quality items in my kit. All too often, pre-assembled kits cut costs by using inferior products (and you certainly don't want inferior products when your life may depend on it.) Additionally, these kits often contain items that sound good, but are of limited usefulness. For these reasons, I have always directed our readers to sites to assemble your kit (using the previously published list of items for an earthquake kit), but I have not recommended pre-made earthquake kits.

Recently, I had a chance to evaluate a high quality, pre-assembled earthquake kit that made its debut at the Los Angeles County Fair. The company is actually a local Orange County company, Emergency Case (www.emergencycase.com). It should be noted that my evaluation below of Emergency Case is done so without their knowledge or input, and that this author and other members of the Nellie Gail Emergency Preparedness Committee have no financial interest in Emergency Case, nor do we receive any financial considerations from them.

Most impressive is that much thought went into developing this particular kit. The items in the kit are of high quality (including some Stanley-branded tools that I want to include in my current kit.) They have designed this emergency kit around five basic components: Food and Water, Shelter and Sleep, Advanced Medical, Tools and Safety, and Health and Hygiene. Each of these five components are packaged separately within the case and easily identified as such. These kits include a sleeping bag and bivouac sac, shelter/tent, water filter, head lamps and a number of items not found in the cheaper pre-made kits. Of particular interest to me was the Advanced Medical component. The supplies found here are more robust than your basic first aid kit. These "advanced" items include a SAM splint, hemostatic gauze, burn relief ointments, etc.

One of the inherent difficulties with pre-made kits is that one size doesn't fit all. Emergency Case addresses this by allowing you to purchase additional components based on your needs. One can purchase a "food vault" for additional food and water, and/or purchase a 2 person add-on kit (the standard kit accommodates a family of four). There are still items that one will need to add to have a fully ready emergency earthquake kit, but these items (toilet paper, eating utensils, etc.) are minor and not difficult to acquire.

The other impressive part of this case is the case itself. This is not a bucket or soft-sided bag; Emergency Case uses high quality, hard sided, waterproof cases that can be wheeled along much like luggage (in the event you need to move.) On their website is a video showing the ruggedness of their case. Another plus is that these cases are made in "rescue orange" for easy identification and are stackable in your garage.

In summary, this kit is ideal for the non-do-it-yourself individual but still desires a high quality, ready-made earthquake kit. It should be noted, however, that having even a high quality earthquake kit alone does not make you truly prepared. You will need to add knowledge; something that you will continue to receive from your Nellie Gail Emergency Preparedness Committee and these articles in the *Pony Express*. Future articles will address what to do DURING and AFTER an earthquake, as well as how to turn off

utilities, if necessary. As always, please feel free to contact us with your questions at emergencypreparedness@nelliegailranch.org.

Attention: Mark Your Calendars!

October 21, 2021, 7:00 PM

Nellie Gail Clubhouse

The Emergency Preparedness Committee will be holding a live lecture on “How to Put Together your Home Emergency Kit.” Come learn what goes in your kit, why certain things are needed during an emergency, and how to easily put this kit together over time.

We look forward to seeing you!

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