



Project Noah - Month 9

Billie Nicholson



Project Noah is a yearlong food storage and emergency preparedness program designed to help you set and obtain goals in the area of family preparedness. The program is divided into twelve monthly assignments touching on lots of short and long term preparedness subjects including a preparing, a reporting and a sharing segment each month. These lessons are designed to be used in church or community groups focused on self reliance and preparedness. Start your own group and use these newsletters as a reference resource. Many articles will link to previous articles on SunOven.com or other sources. Click for additional information.

Our NINTH month's lesson focuses on pre-disaster preparations for hurricanes/flooding evacuation, survival and recovery. Grab that 72 hour kit and take it with you. Do you have an evacuation plan and know two ways to get there? If you ride it out, how do you prepare?

Our first aid topic covers pandemic and flu preparations, enduring and recovery.

The non-food items to acquire are vitamins/pain relievers and candles. We will review storage techniques and shelf life.

How can you keep warm if the power generating electricity goes off in your neighborhood? Individual privacy may need to be sacrificed to keep everyone warm.

We are continuing to collect recipes to prepare using food storage items. What are some of your favorites? You can send your recipes to editor@sunoven.com

Speaking of food storage, how can we preserve citrus fruit in order to enjoy them longer?

Assignments on Page 10

Ask Billie

Q. How can we cook outside on a cloudy day?

A. On cloudy or rainy days our [Cloudy Day Cube Stove](#) is a great solution. It is quick to set up and gets hot fast. It has been engineered to cook with a variety of different fuel sources and can be positioned to cook in 7 different ways, from fast to slow or for a large pot or a small cup.



What is your Most Burning Question about Food Storage or Emergency Preparedness?

Send your questions to editor@sunoven.com



Billie Nicholson



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Make Your Hurricane Plan Now

Hurricanes occur in North America between June and November, not this month. But, now is the time to begin putting together an emergency plan. In 2010, 123.3 million people or 39 % of the nation's population live within 50 miles of hurricane prone coastal areas. ¹ Hurricanes are tropical cyclones with torrential rains and winds that range from 74-155 miles per hour or faster. In the northern hemisphere, these winds blow in a counter-clockwise direction (clockwise in the southern hemisphere) around a center "eye". The 'eye' is usually 20 to 30 miles wide. The storm may spread up to 400 miles wide.²

As a hurricane approaches coastlines, a huge dome of water precedes it (storm surge) and crashes into the coast. This surge often causes flooding that can be fatal. In addition to the storm surge, hurricanes contain torrential rains and tornadoes. If you live near a coast, pay attention to the weather forecasts. Hurricanes are classified into five categories based on wind speed, central barometric pressure and damage potential. The larger the number, the more catastrophic the damage will occur.

Learn the Buzzwords:

- Hurricane/Tropical Storm Watch - a storm poses a *possible* threat within 36 hours.
- Hurricane/Tropical Storm Warning - the storm is expected within 24 hours. Follow instructions issued by local officials. Cover windows with boards or storm shutters; secure outdoor objects; fuel your car; get your disaster supply kit ([72 hr kit](#)) ready. This is the time you may be told to evacuate. If so, do it, don't wait until the last minute.
- Storm surge - the large dome of water preceding the storm formed as the winds push water toward the shore. Surges may be 20 feet high and 50 - 100 miles wide
- Eye wall - the area that circles the eye of the storm and contains the most damaging winds and heaviest rains.
- Outer bands - the bands or rings of thunderstorms that make landfall first.

Create an emergency plan

Talk with your family or household members about how to prepare and respond to the types of emergencies that are most likely to happen in your area. This includes developing a plan for home, work and school. Decide who will be responsible for what. This way you can work as a team. Practice some of these elements as you develop them.³ In addition to planning what you will do if you're at home, plan what to do if you are separated; include plans for any animals, too. If your community experiences a disaster, be sure to register on the American Red Cross [Safe and Well](#) website to let your family and friends know you are safe. The Red Cross has a free emergency app for your cell phone or tablet. You can get this FREE from the Apple Store or Google Play. You can also download a family disaster plan template [here](#).

Evacuation

If you live in a mobile home or temporary structure or you live on the coast, on a flood plain or near a river or inland waterway, prepare to evacuate. Decide in advance the destination of your egress. Make sure that the place you're headed knows you are coming. Review maps to determine major routes and shelter locations. Develop more than one route. Have road maps with you in case the GPS doesn't work. Be prepared to spend at least 12 hours on the road. That means bring extra food, drinks, toilet paper, and entertainment for children. Purchase two large gasoline cans before you need them. Have one filled and take both with you. Be sure to shut off all utilities before leaving, secure your home, unplug appliances, take pictures for a last minute inventory. Remember that text messages can get through when phone lines are jammed.⁴

[References](#)

Riding Out a Hurricane

Should a hurricane be headed to your home and you can safely stay there, there are some things to remember to do before the storm arrives.

- First fill your bathtub. If water lines could be affected (or sewage treatment plants) this water will be precious. A [WaterBob](#) will fit into the tub and keep water fresh for drinking as well as sanitation.
- If you are expecting a flood, turn off the main breaker to your electricity. If there is already water in the floor, don't touch the panel! Move valuables to a higher floor before leaving.
- Gas valves are usually outside and require a special wrench for shut off.
- Taping windows offers little if any protection from flying storm debris. Storm shutters or impact resistant windows are better.
- Secure outside and inside doors. Go to a small room away from windows. Keep blinds closed.
- Way before storms are imminent, consider buying a generator. A portable one will run the basics. 5,000 watts should cover fridge and microwave. If AC is a must, consider 10,000 watts. Learn how to use it before you need it. Run it once a month to keep starting battery charged.
- Gather some essential cooking tools: manual can opener, water purifier filter, appliances that can be plugged in to a generator, like slow cookers and portable microwaves. A [Sun Oven®](#) or a [cloudy day stove](#) will be useful after the storm passes when power is out or limited.
- Wash everything that needs it before the storm hits. Have clothes pins and a line to hang them. Wet clothes can be placed on hangers and hung from trees, if available.
- Make sure cars are filled with gas. Extra gas cans filled with gas can be used to fuel generator. If your car will accept a siphon pump you can use one to replenish generator from auto fuel.
- Check your food storage. What do you have that can be opened manually and eaten entirely so there will be no need for refrigeration of left overs? Get a supply of drinking water. Use paper plates.
- Make sure you have fuel for any camping stoves or grill: propane, charcoal, matches, lighter fluid, etc. Scour your Dutch oven so it's not rusty.
- Have plenty of flashlights and batteries, solar lights make great night lights for bathrooms.
- Charge all electronics before the storm hits. Back up computers. Get battery operated radio.
- Get plenty of insect repellent!!
- Get a well insulated cooler designed to keep ice for 5 days. Turn freezer and refrigerator to high before storm hits and minimize opening. Use chest as intermediary. Freeze bottles of water to help keep fridge cool when power goes out.
- Store lots of toilet paper and a camp potty with disposable bags.
- Have tarps, heavy duty trash bags and cleaning supplies on hand for clean up. Tools like saws and work gloves will be useful. A wet/dry vacuum will also help.
- Have some cash, in small bills and coins, on hand in case credit cards won't work.
- Hunker down and plan to share and to help others during the recovery.

[MORE](#)

Disaster Recovery

Recovering from a disaster is a gradual process. Safety is a priority as well as mental and physical well-being. Your first concern is your family's health and safety. If family members are injured, do not attempt to move them unless they are in immediate danger of death or further injury. Be sure to stabilize neck and back first and then call for help. Keep the victim warm with blankets, but don't let him get overheated.¹

Be aware of exhaustion. Don't try to do too much at once. Set priorities and pace yourself. Get enough rest. Drink plenty of water and take time to eat. Wear protective clothing like sturdy work boots and gloves. Wash your hands thoroughly with soap and clean water often when working in debris. Be aware of safety issues created by the disaster. Inform local authorities if you find a dangerous situation.

If you have never been in a disaster before, it is hard to imagine how you will react. Coping with human suffering and the stress involved requires inner strength. The emotional effects may be slow in appearing. Remember, people can and do recover from disasters, but be aware that there is a natural grieving process and everyone will handle it differently.

Normal reactions, including shock, fear, disbelief, and difficulty making decisions, may occur right after a disaster. These feelings may expand over time to include anger or moodiness, depression and even domestic violence. Children may respond by thumb sucking (self comforting), bed-wetting, clinginess, tantrums and problems at school. If your reactions to a disaster lasts for a long time, consider seeking professional counseling for Post-Traumatic Stress Disorder (PTSD). Ask for help.

When communications have been restored, local TV and radio will announce where to get emergency housing, food, first aid, clothing and financial assistance after a disaster. The Red Cross and Salvation Army as well as church groups often set up at the scene of a disaster to offer help to victims. If the President of the USA declares a major disaster, FEMA steps in and provides temporary housing, counseling, low interest loans and grants for repair and business and farm aid. Disaster Recovery Centers (DRC) will be set up at local schools and municipal buildings where people can meet face-to-face with agencies and manually process applications. Or victims can apply by calling 1-800-621-FEMA or on the website: www.DisasterAssistance.gov. Together with the Red Cross victims may get some assistance for long term shelter if homes are damages or destroyed and rendered unsafe to live in.

When allowed back into your home, check for serious damage to roof, foundation and chimneys first. Check utilities for leaks, sparks or broken wires. Clean and disinfect everything that got wet. Wear gloves and sturdy shoes, masks and eye protection. If basement is flooded, pump it out slowly to avoid wall collapse. Remove valuables, try to make temporary repairs, and notify your insurance company right away. Conduct an inventory to make sure you can get financial recovery for lost items. Hopefully, you already have an inventory and copies of your important documents in your vital records notebook. Notify all creditors and employers what has happened. File an insurance claim (you will need policy numbers). Then begin the process of applying for local loans and grants for repair. Get several estimates to avoid getting ripped off. Be sure to ask for proof of licenses, permits and contractor's insurance. Get a contract in writing; never prepay; check out contractors with local Better Business Bureau. Make sure all construction complies with local building codes. Make sure roof is firmly secured to the main frame of the house. Make sure they follow the code and that construction is inspected by a local building inspector. Be sure to include repairs that will allow ways to avoid or reduce the impact of a disaster, if it happens again.²

For additional information, download a copy of the FEMA "[Recovering from a Disaster](#)".

References

Preparing for and Surviving a Pandemic



[Wikipedia](#)

Enhancing Your Immune System

The immune system is one of the most complex systems in the human body. It is used to defend the body against foreign invaders, like bacteria, viruses, parasites and fungi. If the system fails to block the invaders, then it's their job to search out and destroy pathogens.

The immune system is a collaboration between cells and proteins that are dispersed throughout the body to provide rapid

response to infection. The cells travel through the blood stream or in lymphatics. Lymph nodes and the spleen facilitate cell-to-cell communication. All cells of the immune system begin their development in the bone marrow from a hematopoietic (blood forming) stem cell. There are two categories of immune response are the innate immune system and the adaptive immune system. Innate response cells are those that rely on cells that require no additional training to do their jobs. They are the first line of defenders and respond to infection rapidly and reliably.

Adaptive immune responses are those that rely on cells that do require additional training. They need to learn how to recognize pathogens and distinguish them from healthy cells. The first responders trigger an alert to the adaptive cells, which can take several days to fully activate.¹

When the immune system is functioning smoothly, we don't notice it. When the system is compromised, we face illness. To run smoothly, the immune cells must be able to differentiate between self and non-self cells, organisms and substances. Non-self substances are called antigens, which include proteins on the surfaces of bacteria, fungi and viruses. When the first responders recognize an antigen, the immune system recalls stored memories in order to quickly defend itself against known pathogens. Our own cells also have surface proteins, it's important that the immune system does not work against them.²

Immune System Boosters

Dr. Axe recommends [10 immune system boosters](#), which include herbs, supplements and essential oils. They include echinacea, elderberry, colloidal silver, probiotics, astragalus root, ginger, ginseng, Vitamin D, myrrh and oregano. These items need to be used with some caution. They help prevent and fight infections due to their antimicrobial and immune-boosting properties.

In addition to these system boosters, get plenty of exercise, eat healthy foods, get plenty of sleep, no alcohol, and no smoking. Avoid high sugar junk foods and drinks, eliminate processed foods with preservatives, artificial sweeteners or MSG. Lastly pray. Anxiety is a form of stress that weakens the immune system and prayer is a proven way to relieve anxiety and stress.

According to the Center for Disease Control and Prevention, infectious diseases are the leading cause of death worldwide.³ Pandemics don't care what season it is, they just show up. Determine who in your family or community are at the greatest risk of death. These are the people to emphasize in your preparations because they may not be able to help themselves. This includes the economically disadvantaged, those without a social network, dependent individuals needing support for daily activities and those who have trouble reading, speaking or understanding English.⁴

Most experts agree that the medical community as we know it will cease to exist during a pandemic. It is critical that we learn how to care for family and friends ourselves.⁵

What is a Pandemic?

[Continue Reading](#)

[References](#)

Stockpiling and Storing Vitamins/Pain Relievers

Preparing for a long-term disaster is part of critical thinking. Should such an event occur, it will be important to stay as healthy as possible. There is a good possibility that many will not be eating a balanced diet and will consequently suffer from vitamin and mineral deficiencies.¹ The medical community may not be available to provide prescription drugs, so folks will want to have some over-the-counter items like pain relievers on hand as well.

The questions arise, “how long can we store them?” and “what about expiration dates?”

Medicines and most vitamins (though not required by FDA) have an expiration or discard after date imprinted on the bottle containing them. This date means that the manufacturer will not guarantee the full effectiveness of the product beyond that date. Most over-the-counter pain relievers have a shelf life of four to five years and vitamins two years, depending on the storage conditions.²

Do not store meds in the bathroom because humidity hastens breakdown. Same for the kitchen. It has moisture and heat. Vitamins B and C are more susceptible to these conditions. The best place is one that is high (out of children’s reach), dry and dark. Some vitamins should be stored in the refrigerator if they contain oil that will go rancid, like fish oil. Supplements like probiotics also keep better refrigerated. For the majority of meds and vitamins, the pantry or linen closet will work. For long term storage, keep them sealed and stored in an air tight container. Sealing them in mylar or Food Saver bags will remove the oxygen and moisture. Preparedness Mama suggests storing them in the freezer to extend vitamin life.³

Even though there have been no documented cases of people getting sick from taking expired vitamins, why take the chance? If they have changed color or smell rancid, get rid of them. If they’re moldy, they could be dangerous.

Research carried out by the U.S. Army Medical Materiel Agency has suggested that most over-the-counter medication, including medicine bought from an [online pharmacy](#), actually remains stable for several years after reaching its expiration date, assuming correct storage procedures have been followed. Generally, even years after the expiration date, most medicines will be safe to consume. Their effectiveness, on the other hand, cannot be so easily guaranteed.

There are some exceptions to using old medications. Insulin, eye drops and antibiotics, especially liquid ones should never be used beyond their expiration dates.⁴

What to do with expired medicine and vitamins? Don’t just flush them down the toilet. They can end up in ground water or municipal drinking water. Mix the old vitamins or meds with coffee grounds or cat litter (something disagreeable) and place them in a plastic bag. Dispose of the bag in your outdoor trash bin, close to the time for pick up.⁵

When it’s time to replace vitamins, make sure you choose a quality product. Look for terms like “whole food multi-vitamin” or “ingredients derived from whole foods.” This will assure that you are not getting synthetic ones.

References

Sun Roasted Carrots with Mint*



The fresh mint is a nice twist in this recipe, but if you can't find it, flat-leaf parsley will do.

INGREDIENTS

2 pounds carrots, peeled and cut into chunks

1/2 cup olive oil, divided

Zest and juice of 2 lemons

1/8 to 1/2 teaspoon red pepper flakes

1/2 teaspoon salt

4 ounces feta cheese, crumbled

1/4 cup fresh mint leaves, chopped

* Adapted for the Sun Oven® from *Not Your Mother's Casseroles* by Faith Durand

PREPARATIONS

Set *Sun Oven*® out to preheat.

In a large bowl, toss the carrots with 1/4 cup of the olive oil, the lemon zest (save the juice for later), the red pepper flakes, and the salt. Spread the carrots out in a baking pan. Cover the pan with a second baking pan or aluminum foil and a dark tea towel. Transfer to the Sun Oven and bake until the carrots are tender, 1 to 1 1/2 hours. Remove the cover and sprinkle the cheese over the carrots. Continue cooking, uncovered until the cheese blends in, 15 to 20 more minutes. In a small bowl, whisk together the remaining 1/4 cup oil, lemon juice, and mint leaves. Toss with the carrots and serve.

Keeping Warm with No Electricity



7 “C’s” for Keeping Warm - What can you do to stay warm if your electricity goes out? Here are the 7 “C’s”:

1. **Conserve** heat by bringing everyone into one room, preferably a small one. Add rugs to the floor, cover interior doorways with blankets and windows with shower curtains (lets daylight in to allow solar heating during the day.) Avoid opening and closing exterior doors. Go out thorough a porch or garage that can act like an air lock.
2. **Clothing** - Dress in multiple layers to minimize body heat loss. Hats, gloves or mittens, and warm socks should be included. Several thin layers work better to hold body heat.
3. **Chimney** - Hopefully that small room has access to a fireplace or wood burning stove. Stoves are 70% more efficient than fireplaces for severe weather because there are more surface areas from which the heat can radiate and the firebox is out in the room.. Fireplace inserts can help move warm air out into the room. Cold air entering at the bottom of the inserts and coming out hot on top is forced back into the room. Some propane heaters, or kerosene heaters, which are approved for indoor use, can also be used. (Be sure to keep a carbon monoxide detector and a fire extinguisher handy.)
4. **Calorie-dense** food will provide the extra energy needed to keep warm. Eating stimulates the metabolism, too. Be sure to drink plenty of liquids to stay hydrated. Warm drinks or soups held in cups also serve as hand warmers. Avoid alcohol. That “warm feeling” is not a metabolism booster and can do more harm than good.
5. **Cuddling** is a great way to share body heat. Bring out the sleeping bags and set up your tent. The kids will love it and you’ll all stay warmer if you sleep inside it. Pets make great bed warmers, too.
6. **Chemical** hand warmers can be used in gloves, pockets and shoes to keep extremities warm. Hands & feet are the first body parts to suffer.
7. Your **Car** can be a refuge. Start it and run the heater to warm up. Only do this with the garage door open enough for ventilation. Hope you keep your gas tank more than half full.

References

Preserving Oranges

Sweet, juicy oranges bring a ray of sunshine in the cold winter months. We have been busy harvesting a bunch from a friend's tree. What a project just picking them. The tree we picked from had been growing for thirty years before it began to produce, but wow, when it started producing, it has been loaded. This tree, but not all varieties, has huge green thorns that you must watch out for or they'll get you! It took three people, one to cut and the other two to catch the fruit. No, we didn't run around trying to catch each one, we used an 8 foot sheet of shade cloth ('cause that's what we had handy) held by two people. If oranges hit the ground, they split open. Once the branches came down into the net, we could roll them over gently onto the ground and separate them. We worked two days harvesting fruit and enjoyed sweet oranges so fresh, the tree didn't even know they were missing.

Once home, we began the washing and juicing process. Squeezing the oranges first by hand and then with an electric juicer, we had juice and pulp everywhere. We saved pulp and rinds for other projects, and froze the juice.



We prepared some oranges for marmelade by cutting them on a mandolin into 1/4" slices, rind and all. After removing the seeds, we cut the slices into quarters. We added more deseeded pulp along with some squeezed juice to the slices. While this simmered on the stove, we cleaned the insides of remaining rinds, boiled them in water for 10 minutes, allowed them to cool and scraped off the inside pith. These will become [orange rind candy](#). We mixed some of the remaining pulp with honey and spread on dehydrator trays to make orange fruit leather. The last of it with [water kefir](#) microbes to make homemade orangina.

There are lots of other recipes to make [orange goodies](#) and ways to [use every part](#) of them.

[Read More](#)

Project Noah - Ninth Month Assignments



[Project Noah](#)

1. Pre-Disaster Preparation:
 - a. Make an evacuation plan in case of hurricane or flooding
 - b. Learn where you will go, who to contact and alternate routes to get there.
 - c. Review safety precautions
2. Pre-Disaster Preparation:
 - a. Prepare now for a flu or other pandemic
 - b. What food do sick people eat?
 - c. How and what to sanitize?
3. Non-Food Items: vitamins/pain relievers
 - a. Determine how much your family will need for 90 days and for a year - is this doable?
 - b. Shop for the best prices and buy what you can afford
4. Short Term: Keeping warm without electricity
 - a. Select one or two alternatives to heat your home
 - b. Stockpile supplies
5. Long Term: Disaster Recovery
 - a. Learn safety precautions for returning home after a disaster
 - b. Expect emotional reactions
6. Preserving oranges
 - a. Don't let citrus fruit spoil; learn how to make juice
 - b. What else can you make?
 - c. Send us your favorite recipes.

Next Month's topics will be: winter storm preparedness and emergency cooking

What about freeze drying?

Short Term Storage: Rubbing alcohol, hydrogen peroxide and bandaids