Emergency Preparedness,
Saving Energy, and
Creating Delicious
Meals Using the Sun

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## **Taking Care of Your Garden Tools**

Billie Nicholson

**Rust is the Enemy** - A sunny day in February is a great time to begin thinking about your garden. Just in case you didn't have time to clean your tools before the harsh winter set in, that should be one of the first things you consider. With the exception of the dry south west USA, rust on tools is almost unavoidable. Clean, sharp tools will make your garden work easier.

- Wash the dirt off your tools at the end of each gardening day. Most dirt will come off with a squirt of a hose. If the dirt had dried hard, soak the tool in water for a few minutes and scrub with a good stiff brush. Any tools that are used to cut plants should be wiped down before and after use with a mild bleach solution to prevent the spread of diseases. Dry with a cotton rag, never put away wet.
- Dull tools make the work harder. After cleaning, every tool should be sharpened. This can be done with a file or a rotary sharpening device attached to your drill. Apply a drop of WD 40 and file at a 20-45 degree angle following the bevel of each tool. Use a whetstone for finer finishing. Always file in one direction, sharpening both front and back of shovels and edgers and only one side on hoes.
- Lubrication will stop rust and enhance tool movements. Some gardeners use a bucket of sand mixed with fresh motor or linseed oil to abrade and coat the surfaces on digging tools. A drop of 3 in 1 oil will lubricate pivot points on shears. Sharp, clean pruning shears will provide a cleaner cut and prevent plant diseases. Replace any worn out parts and tighten any loose screws or bolts on moving parts, then lubricate.
- Sand any rough spots on handles to reduce the chance of getting a splinter. A linseed oil wipe down on all wooden handles adds a protective coating. Broken handles can be easily replaced with a new one purchased at your local garden/hardware store. Simply remove the old screws or nails, replace the handle, and secure.
- Store your tools inside away from moisture. Hanging them on a pegboard will keep them organized, too.

**Stainless steel tools are recommended**. They will resist rust and continue to be useful for decades.

References













Order Your Sun Oven® Today

# Ask Billie

Q.What should I do when steam builds up on the glass door of my *Sun Oven*®?

A. If the food has been in the oven for a good while, this is an indication that the food is done. Water will start condensing at the bottom of the glass and build up to the top. If the condensation builds up on the glass early in the cooking cycle, I use a chopstick wedged between the gasket and the door above the top latch. This will allow the oven to vent without loosing a lot of heat. Early condensation build up usually means that the pot lid does not fit tightly on the pot (try a different lid) or too much water was used. The next time you cook the same food, reduce the amount of water. The Sun Oven® requires 20-33% less water than when cooking on a stove top or in a regular oven. When the oven has cooled, wipe down the inside to remove the water puddle before storing it.

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

editor@sunoven.com

Billie Nicholson

## **Family Survival Skills**

Billie and Robert Nicholson

We all know that as a family we need to have a designated place to meet in case of fire. We know to change the batteries in our smoke alarm. We also know we need a bug-out-bag stocked with necessities like water, food, maps, etc., if we have to leave our home immediately. We even know to keep our vehicle's fuel tank at least half full.

Things we often take for granted include the BIG THREE: a properly functioning body can generally live 3 minutes without oxygen, 3 days without water, and 3 weeks without food.

Survival skills are important to know no matter your age. Start early with your children and grandchildren teaching them how to call for help if something unusual should happen. Here are some safety skills each member can learn.



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- Call 911 for emergency assistance
- Stay away from broken electric wires
- · Heimlich maneuver in the case of choking
- · Basic first aid, stopping bleeding, etc.
- · How to answer the door when home alone, and keeping the door locked when unattended
- · Install and train every capable household member in the use of a fire extinguisher
- In bear country, keep pepper spray or wasp spray by each exterior door

The list of home security enhancements can be as basic or as comprehensive as needed. One important thing to teach all family members is how to maintain situational awareness. This skill will help each of them avoid many dangerous situations. Children and seniors can learn how to become aware of the people and events around them by playing games. For example, when driving, ask others to give you directions. Ask them to describe what someone in the room looks like, including details of hair color and length, clothing, piercings or tatoos. Teach them to make eye contact when meeting strangers and to walk looking ahead, not with their eyes down in a cellphone or tablet.

Paying attention to their surroundings can be especially important in a situation when a person is lost. A lost person quickly becomes a scared person. Teach your family members to stop and sit as soon as they realize they are lost. Assure them that you will be searching for them and if they stop moving around, it will be easier to find them. They can also approach a police officer for help. When they venture outdoors, have them carry a small backpack containing some simple items like a whistle, a bright bandana, a snack bar or piece of fruit, and a bottle of water. These items could go a long way in helping them get found and in sustaining them if the search time is extended.

Practicing survival skills frequently will make each family member more comfortable in the case of an emergency. They will know what to do automatically. Be safe.

# Fukushima - Nuclear Crisis Continues

#### Billie Nicholson

It has been five years since the Fukushima nuclear disaster caused by an earthquake and the subsequent tsunami that struck the coastally located electrical generating plant. Very little is known about the causes and effects of this disaster. Many proponents for restarting currently idle nuclear power stations believe that the gigantic barriers erected near other plants will be sufficient to protect them from another enormous tsunami.

The reasons for the breakdowns and the sequence in which they occurred are still unknown. New control standards have been developed but testing of these standards is unreliable because the causes and consequences of the disaster have not been clarified. Without this data it is impossible to make plans and to proceed with clean up and repair at the site. The site is still too highly contaminated with radioactivity, making evaluations and direct investigations unthinkable. The underground areas of the turbine buildings and nearby facilities are submerged under highly contaminated radioactive water and can not be investigated.<sup>1</sup>

The M9.0 Great Eastern Japan Earthquake on March 11, 2011, and the subsequent tsunami, caused severe damage especially in the Fukushima area. The death rate has been higher in this area than in other nearby regions. The numbers are much higher than those reported following the disaster and are believed to have increased due to a high suicide rate of the survivors attributed to despair. There is still a question of safety should evacuees return to their properties. The national government aims to withdraw the evacuation orders by March 2017, provided the exposure rate is no greater than 20 mSv/y. This exposure rate is extremely high as data has emerged of a healthy, young man exposed to about 5.1 mSv/y who died of chronic myelogenous leukemia at the age of 29. He had worked at another nuclear electric plant. Citizens of the area have filed suit against the government protesting the withdrawal. Only time will provide the answers to the health issues. There is considerable concern about the increase in the incidence of thyroid cancer in children in the Fukushima area.<sup>2</sup>

There has been some clean up and packaging of contaminated radioactive waste into flexible container bags. These were to be stored at an intermediate storage site. Several sites have been identified but when these storage site will be ready to receive waste is unknown.

But wait, there's more. At the meltdown site, there has been lots of ground water from the nearby mountains flowing through the site and into the ocean. Wells have been drilled, and walls have been built to control the direction of the water. This bypass system sends the water through a water processing facility to separate contaminants before releasing it into the sea, although tritium still remains in the treated water. Preparations for inspecting the inside of the reactor by robots is underway.<sup>2</sup> But there are other problems. The ground beneath the plant's Unit 4 is gradually sinking and there is concern that the entire structure will collapse. This unit contains a collective 37 million curies of deadly radiation, that if released could make much of the world uninhabitable.<sup>3</sup> Note, there are 31 similar nuclear units in the U.S. Should the right disaster conditions arise will, we have another Fukushima disaster in America?

References

# 4

# 15 Things That Should Not be Refrigerated

#### **Living Traditionally**

Are you running short on refrigerator space? Perhaps you are refrigerating items that don't need it. Here are fifteen items that should not be refrigerated.

The refrigerator is a great tool for storing foods. But do you know which foods should not be refrigerated? There are certain items, even against popular belief, that should not be stored in the refrigerator. By refrigerating many items, the flavor can be lessened or the texture changed, and in some cases, even make them spoil faster because of condensation from the refrigerator.

- 1. Refrigerating tomatoes changes their texture and flavor. Storing them on a window ledge will help them ripen more completely, too.
- 2. Honey will crystallize and thicken faster in the fridge. Keep it a room temperature.
- 3. Garlic will sprout and grow mold in the fridge. Gross!
- 4. If you don't want your coffee to lose its bold flavor and absorb odors in your fridge, leave it out.
- 5. Bread gets hard and dry in the fridge. Keep it in a paper bag with a cloth towel around it.
- 6. Hot sauce can be stored in your cabinet for up to three years.
- 7. Onions\* get moldy and mushy when refrigerated.
- 8. Basil and other fresh herbs will wilt and absorb odors. Keep them in a glass of water. Change water often.
- 9. Melons lose their antioxidants in the fridge ... and you want all of those you can get!
- 10. Refrigerating potatoes\* affects their flavor and makes them gritty and dried out.
- 11. Always store hard liquor at room temperature but away from the kids.
- 12. Batteries can diminish performance in the cold.
- 13. Nail polish gets thick, hard to spread and slow to dry.
- 14. Olive oil should be stored in a cool, dark place, but not in the fridge where it will condense and harden.
- 15. Winter squash store perfectly well on the counter and look pretty there, too.\*
- \* Onions, potatoes, and squash can be stored for several months in a root cellar.

### Zika Virus - What Do You Know?



Aedes aegypti Wikipedia

**Zika Virus** is a member of the *Flavivirus* family, which contains a number of diseases such as yellow fever, chikungunya, and West Nile virus. Zika virus, like the others, is carried by the *Aedes* mosquito as the main agent for transmission. This virus has mild symptoms but has been suggested to affect the unborn. The mosquito vector is common in the western hemisphere in every country except Canada and Chile. It's breeding ground is standing, stagnant water. Brazil reported its first case in May 2015 but the situation has dramatically changed. Brazil is now considered the epicenter of the Zika outbreak, which coincides with about 4,000 babies being born with microcephaly just since October. <sup>2</sup>

The World Health Organization (WHO) is deeply concerned about this rapidly evolving situation. The Zika virus seems to have exploded out of no where. Discovered in 1947 in Africa and seen sporadically in Asia, it appears to have jumped the pond to the western hemisphere. Health officials in El Salvador have advised its young women to avoid pregnancy for at least two years due to the concerns about possible birth defects linked to the virus. <sup>3</sup> Officials from the U.S. Centers for Disease Control (CDC) announced that they have confirmed evidence that links the Zika virus to the dangerous birth defect when genetic material of the Zika virus was found in brain tissue from two infants who had died with microcephaly.<sup>4</sup>

Symptoms of a viral infection include headache, rash, fever. and conjunctivitis. Lots of people may have been infected but have no symptoms. The genetic material (RNA) from the virus lingers in the blood stream and has been suggested to be transmitted through saliva and semen as well. <sup>5</sup> There is no vaccine or treatment available that is effective against Zika virus. Vaccine research is under way but will be months away because human testing has not been approved.<sup>6</sup>

Doctors at Red Universitaria de Ambiente y Salud (Environment and Health) have released a contradictory explanation for the microcephaly. According to their research that same area where most of the sick people live, has been subjected to a chemical larvicide (pyriproxyfen) introduced into the drinking water by State officials. Pyriproxyfen is a growth inhibitor of mosquito larvae, which alters the development process of larvae to pupae adult, generating malformations in the developing mosquitoes, killing or disabling them.<sup>7</sup>

Who is right? There will be more info coming on this crisis.

Advice from health officials include 1. discouraging pregnant women from traveling to areas where the outbreak is prevalent because the virus infection can damage developing babies. 2. Avoid mosquito bites by covering skin when going outside as well as applying mosquito repellant. 3. If you have traveled to areas of outbreak and develop flu-like symptoms, get tested to confirm it. 4. Please avoid additional mosquito bites by using repellant. 5. The biggest fear of spreading in the northern hemisphere right now is infecting local mosquitoes who will then multiply the infection. There are currently 72 confirmed cases in the US.

References



# French Onion Soup with Cheese Toast from Our Solar Chef



Slow cooked caramelized onions are always a good thing to have on hand. During the shorter winter days I like to take advantage of the morning sun to make a batch. That way I can put together a dinner stovetop and the bulk of the cooking has already been done in the sun.

### **INGREDIENTS**

For the Soup\*:

2 tablespoons unsalted butter

2 tablespoons olive oil

4 pounds yellow onions, thinly sliced

4 cloves garlic, thinly sliced

Salt and pepper to taste

1/2 cup port or other fortified wine such as sherry or Marsala

2 cans (14 1/2-ounces) beef broth

2 cans (14 1/2-ounces) chicken broth

2 cups water

For the Toast Topping:

8 slices baguette or French bread

2 cup shredded Gruyere or Emmental cheese \*from Martha Stewart's Everyday Food Light

### **PREPARATIONS**

Set Sun Oven® out to preheat.

Heat the butter and oil in a Dutch oven over medium heat. Stir in the onions and garlic. Season with salt and pepper. Cover and transfer to the Sun Oven®. Cook until the onions are golden, 1 to 1 1/2 hours.

About 20 minutes before serving the soup gently reheat the onions over medium heat. Stir in the sherry and cook until the mixture is syrupy; about 3 minutes. Stir in the beef broth, chicken broth, and water. Bring to a simmer and cook for 20 minutes.

Prepare the toast while the soup is simmering.

Heat the broiler with the rack 4-inches from the heat. Divide cheese among the bread slices. Broil until golden, 2 to 4 minutes.

Ladle the soup into 8 bowls and top each serving with a cheese toast.

Makes 8 servings.

## **Caring for the Wounded**

Disasters happen every day. Most of us can recognize a bad situation where a doctor could be needed. But suppose there is no doctor available. How prepared are you to care for the wounded? Here are five medical techniques you should learn. They could save a life.

- 1. Always start by washing your hands. This helps avoid infection. Put on protective gloves if available. An open wound is an injury that involves a break in the skin. There are five types of open wounds: Abrasions occur when the skin rubs or scrapes against a rough or hard surface. There is usually not a lot of bleeding, but the wound needs to be cleaned to avoid infection. Incision a sharp object such as a knife or shard of glass causes an incision. They bleed a lot and quickly. A deep incision can damage tendons, ligaments and muscles.

  Laceration is a deep cut or tearing of the skin. Bleeding is rapid and extensive. Puncture is a small hole caused by a long, pointy object or a bullet. They may not bleed much but they can be deep enough to damage organs. They also have a tendency to close and trap bacteria inside. A tetanus booster shot is recommended if you have a puncture wound. Avulsions is a partial or complete tearing away of skin and tissue. These usually occur during violent accidents. They bleed heavily and rapidly.<sup>1</sup>
- 2. Stop the Bleeding. Minor cuts and scratches usually stop bleeding on their own. If not, apply a little direct pressure with a sterile bandage or clean cloth and elevate the wound.<sup>2</sup> You need to recognize the difference between venous and arterial bleeding. Arterial bleeding has red, purple blood. It is clear because it is oxygenated. Usually it gushes or pulses from the arteries because it is being pumped by the heart. Venous bleeding has a darker color blood because it contains carbon dioxide. Blood in contact with air and tissue normally coagulates naturally. Compression helps, be patient. To stop a large vessel bleeding you will need a clamp. Once the clamp is in place put a thread behind it and tie it off. If you did it right, when you release the clamp, no blood will flow. Tie a second knot as a backup. Use bandages to move the tissue around to be able to see where the blood is coming from. Once the bleeding is under control you can treat the wound.<sup>3</sup>
- 3. Old or new wounds? In the first eight hours a wound is considered a new wound. There are many treatment options for dealing with new wounds, After that the wound is considered an old wound. Old wounds are believed to be contaminated by bacteria (which are everywhere). Old wounds will need to be left open allowing the body to heal itself from the inside out. Then the critical issue will be keeping the old wound clean. So for best result get an open wound treated immediately.<sup>3</sup>
- 4. Cleaning the Wound. Minor wounds should be washed to clean and disinfected. Use clean tweezers to remove any debris or dirt. Don't gouge into the wound. Wash the wound with lots of lukewarm running water and a mild soap. If you have a water spryer in your sink, use it. Creating a saline (salt water) solution makes a good wound rinse. Dissolve 1 teaspoon of salt in 16 ounces of boiled water. Betadine swabs can also be used to gently clean out debris. Rinse with clean water or saline.<sup>4</sup>
- **5. To suture or not.** Small cuts will naturally heal without being stitched but if you have a large wound, some way to hold the wound closed may be required. There are a variety of options including, skin glue, steristrips or sutures. For instructions on suturing watch <a href="Pass PASchool's video.">Pass PASchool's video.</a>

References

## **How to Heal Open Wounds Faster**

from Surgery Supplements

There are a variety of techniques to help wounds heal faster. The first step is to make sure the bleeding has stopped and the wound is clean.

**Keep the wound moist** - Scientific research has shown that a moist healing environment is beneficial for wound healing. Wounds heal 50% faster if kept moist (Winter, 1962). Moist wounds enhance the regrowth of new skin (epithelialisation). Other studies have shown that a moist wound prevents tissue dehydration and cell death. The cells in an air-exposed wound will dry out and die. This dead tissue, often mixed with gauze pad fibers will lead to more wound pain, chance of infections and as a result scarring. Why covering wounds? Necrotic tissue and slough in a wound prevent healing. An epitheliasing wound is a wound that is forming a film of new cells. (the beginning of a crust) When a wound is left uncovered this new epithelium dries out and forms a scab or a crust. This is not desirable because crusting slows down wound healing and is a major factor in scar creation. Dr. George D. Winter's wound care study showed that the regrowth of skin over a wound (epithelialization) was twice as fast in those wounds covered with a film dressing.

Wounds Heal Faster with Vaseline - Vaseline (petroleum jelly) not only keeps wounds clean and moist but also provides an occlusive layer, thus keeps the wound covered. It keeps germs out decreasing the risk on infection. Apart from that, it hydrates the wound stimulating the healing process. If you have tried it once yourself you will probably have noticed the wound scabs far less. Normally the creation of a scab is accompanied by a little inflammation. The skin surrounding the wound is a little pink or red colored and raised. Healing wounds often itch due to histamine production. Scratching an itching scab off is not desirable. When using Vaseline the wound will scab less and the new skin will be less raised (or not at all) and with less discoloration. Vaseline, being a non-irritating product, also soothes minor scrapes and burns.

**Vitamin C Supplements** - Increase your intake of vitamin C. Michael A. Fiorillo, MD a New York City area plastic surgeon recommends 2,000 milligrams of vitamin C to anyone with an open wound because it helps them heal faster.

Wound Care with Honey - Since the dawn of time, honey has been used effectively in wound care. With the development of resistance against antibiotics, honey is being rediscovered as a medicine. "Honey provides a protective barrier defending the wound against infections and the tissue growth is not slowed down by drying," says a spokesperson from the Waikato University in New Zealand. They have seen remarkable results with a locally produced Manuka honey. This honey contains strong antibacterial properties that prevent microbial growth in the moist healing environment created. Unlike other topical antiseptics, honey causes no tissue damage: in animal studies it has been demonstrated that it actually promotes the healing process. It makes direct contact with the wound's surface but the dressing does not stick, so there is no pain or tissue damage when dressings are removed. Honey promotes a moist wound environment by drawing lymph into the wound through osmosis and preventing dressings from adhering to the wound bed. Medical grade (sterilized by gamma irradiation) manuka honey, marketed as Medihoney dressings, has shown to effectively treat various types of wounds. Clinical trials show infections being cleared rapidly, inflammation, swelling and pain are quickly reduced, sloughing of necrotic tissue is generated, granulation and epithelialisation are hastened, and healing occurs rapidly with minimal scarring. Medical Manuka honey products manufactured by the company Derma Sciences, are the only FDA-cleared, honey-infused wound dressings on the American market.

Iodex Antiseptic Ointment - If you for any reason should not want to use Manuka honey as a wound care product, Iodex is the next best alternative. Iodex feels like a gel, it doesn't stain, takes out splinters, stops infections and generally speeds up the healing of cuts. Just put a dab on and throw a bandage over it. It doesn't take much – A little bottle will be sufficient for many years. (Lee Pharmaceuticals Iodex, 1-Ounce Jar)