



Robert L. Williams bundles corn stalks.

STAYING WARM

By
Robert L.
Williams

It is common knowledge that among the basics needed for human existence are food, water, air, and heat. And while there is no real substitute for any of them, this article is concerned with the problem of heating your dwelling.

The particular thrust here is, in fact, how to heat in times of emergency. For example, there is a blizzard raging outside and the power lines are down. Or the long-awaited and feared computer collapse has finally hit and the devastation is worse than any of us expected. Or, more likely, you simply forgot or neglected to pay the power bill.

What do you do when you find yourself, as we did a few short months ago, in the middle of an ice storm that left us without any form of power for days on end.

You may still have your gas heat intact, but without fans that are powered by electricity how do you get the heat distributed to the rooms of your house? If you heat by a heat pump, then your whole system is down. Odds are fairly good that you also cook on an electric range. Even if the smokehouse is filled with hams and other meats, you can't cook them, if it's electric.

You may be among the people gifted with foresight, and you have a generator on hand to use for temporary electrical power. But what fuels the generator, and how long will your fuel last?

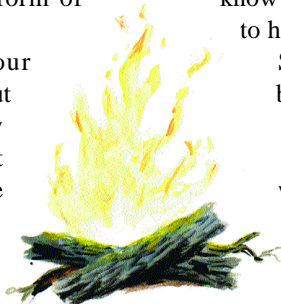
The problem you may find yourself facing is a world without any form of heat, except that which you provide for yourself. How can you keep your family warm?

Obviously, if you live in a tropical setting, heat is not a problem, but what if you live in an area where the temperatures can get down into the single digits or, worse by far, into the sub-zero areas? Below you will find

some tips, all of which we have tried and found successful, for dealing with a cold world.

The most obvious solution to your problem is to build a fire in either your fireplace or in the woodstove. But to do this you must have a supply of firewood that will not only last for a long time but which will burn well.

If you live in a backwoods environment, you may, as we do, have acres of trees waiting to be used, if necessary. Your best bets for a good fire—one that produces enough heat to keep your house or at least the area you are confined to warm enough for you to remain in a healthful environment—is a hardwood fire in a huge woodstove. We all know how drastic and tragic hypothermia can be, and you can be so far advanced in the debilitating experience before you know it that it is too late for you to help yourself.



So you don't need just a fire, but a good fire, one that will produce the maximum amount of heat. The best woods for the ideal fire may include a mixture of softer woods and hardwood.

We try to have an abundant supply of oak and hickory (two of the best of all woods for heating purposes), poplar, pine, maple, and that most neglected of all terrific heating woods, the wild cherry or fire cherry.

We are not too particular. When we start our annual wood-cutting work, we tromp through the forest and find, first of all, the trees that died standing and have already started to cure. You do not want to heat with green wood, except to mix in occasionally with the cured woods. Green wood is hard to burn until you have a good bed of coals, and it also produces a great amount of creosote, which can clog up your chimney and create a fire hazard.

Cut any hardwoods that are dead or so damaged that they cannot survive. These include sourwoods, which give off a wonderfully pleasant aroma



If you split the wood along the sides and leave the center square, you will get more hours of warmth from the wood.

while they burn, and dogwoods, which are extremely hard and last a long time in the fireplace. Most dogwoods are small enough that you do not need to split them.

We try to have a good supply of all sizes of wood, from sticks of firewood the size of my wrist up to the size of my upper arm. The larger the wood, the longer it will burn, obviously, but when you stoke the stove at night you cannot get more than a couple of chunks of large wood into the stove, and you may not have a fire in the morning. It is better to use the larger pieces and then poke in smaller pieces to fill the empty spaces.

For our stove, we open the dampers all the way until the fire is really roaring, and then we close them down all the way, and then open them half a turn. These openings allow enough air to keep the fire burning but not enough to allow the fire to consume all the wood.

For best results, cut your wood at least six months before you plan to burn it and let it air-cure. If you are caught by emergency conditions, burn the driest wood you can find. If you can't tell the dry from the green, simply lift it. The green wood is so much

heavier than the dry wood that you can tell the difference in an instant.

In addition to the wonderful heat from a fireplace or cast-iron woodstove, the added delights of such a fire is that you can cook on the stove and the cost of the wood is minimal, if you have your own trees. In that event, the only costs are for the gas and oil to run the chain saw and the fuel for the tractor you use to pull the logs from the forest.

You can, in an emergency, use a one-man bow saw to cut your firewood. This is not an easy way to get the wood, but it works, and it costs nothing except for an occasional blade. For years we cut all of our firewood with a bow saw.

You can use such a saw for smaller limbs and saplings that must be cut. I strongly recommend that you keep a chain saw and plenty of fuel on hand at all times. If you run out of gas, your saw is not much help. I also suggest that you keep an extra spark plug or two around for use in the tractor as well as in the chain saw. If you cannot get out to buy the plugs, you are again in a real jam.

Another suggestion I make over and over is not to cut the great, sound, and valuable trees. We never cut anything that is not damaged or diseased. And you may want to think twice before you cut the mid-sized trees. Why stop the growth of a small tree? This is too much like eating the piglet before it can produce some real meat.

Another suggestion: leave trees growing close to your house. You never know when an emergency will cause you to need the trees quickly. If you are ill or injured, or if time is crucial, you can step into the yard and harvest a tree much easier than you can make the trek into the deep woods.

If all of your utilities are down, a fire in the fireplace will not only provide heat but also some amount of light. While a fireplace is not economically sound in terms of how much wood is needed and how little heat,

comparatively speaking, is produced, you will be amazed at the comfort generated by the flames and, much more so, by the thick bed of coals. Do not make the mistake that many people make and shovel out the ashes as fast as they drop. Let the ashes remain. They hold a great deal of heat, and the hot coals produce far more heat than the flames do.

You will also be surprised at how much you can cook over a fireplace bed of coals. You can bake biscuits, cakes, corn bread, and loaves of wheat bread. You can cook spaghetti, soups, steaks, fish, chicken, and stews with ease.

A woodstove is far better than a fireplace for producing the most heat possible for the amount of wood used. You do not have the light produced by a fireplace (unless you have a glass door or leave the door open, and the extra ventilation causes the wood to burn faster), but you have 360-degrees of heat that will last long after the fire has gone out. One of the fine advantages of a woodstove, as mentioned earlier, is that the coals will still be hot the next morning, and all you have to do is toss in a few pieces of wood and you have an instant roaring fire.

Propane logs

One of the best substitutes for wood for the fireplace is propane gas logs. You can buy these logs for \$100 or so, and you can buy or rent a propane gas tank for \$40 or thereabouts. The great advantage of this type of heat is that it is instantly ready. All you have to do is open the fuel valve and the pilot light (I am assuming that you left the pilot light on) ignites the gas, and within ten seconds the flames are engulfing the "logs," which are made of a variety of materials. Ours are cast concrete, so they will not burn.

The heat from the propane gas comes, not from the flames as such, but from the heated logs. The logs absorb heat, and then the heat starts to radiate outward from the logs and into

the room. The logs will retain their heat long after the gas has been turned off. While I like a fireplace very much, the propane gas logs have several advantages. One of them is that the gas heat is much cleaner than wood heat. Another is that while a wood fire takes several minutes to start and then several more minutes for the hot coals to start to accumulate, the gas fire is ready immediately.

Keep in mind that you can buy propane logs that do not require venting, so you can have the propane logs and your fireplace for wood fires, at the same time.

But what if you are caught without propane gas logs or firewood when the storm, power failure, or other disaster hits? What can you do for emergency heating?

Burning newspaper logs

One instant solution is to burn old newspapers.

I can hear the objections already: newspapers don't last more than a few seconds, they burn with such a high flame that they are dangerous, the smoke pollutes, and you will spend most of your time scouring up more papers with which to feed the flames.

Read the article in this issue on heating with old newspapers. You will be surprised at how easy it is to heat a small house with the papers and how long the heat will last. The newspaper logs work best when they are mixed with real wood logs. We often use a mixture of paper logs, dry or cured hardwood, a small amount of green wood, and an equally small amount of pine or other evergreen.

Burning plastic

You will be surprised at how much heat you can get out of old plastic oil cans and empty soda pop bottles. Simply remove the metal caps from the pop bottles and put them into the fire. It is better to use this type of fuel as a supplement to a wood fire.



Small twig bundles like the one shown here will burn for three or more hours, but if the twigs are put into the stove loose, they will burn away in minutes.

If you wonder about the heat potential, keep in mind that these containers are made from plastic, and plastic is made in part from oil. Again, you may worry about pollution, but keep in mind that if you are facing a drastic emergency, it is better to pollute a little than it is to freeze or die of hypothermia.

Burning corn cobs

If you are out of everything else to burn, look around your property for other potential fuels. For example, corncobs make a wonderful fuel. Corn itself burns well, but you will probably need the kernels for food or for livestock food. There are, in fact, corn-burning stoves on the market, and they seem to work wonderfully well.

But when you have your summer garden and when you harvest your corn, just toss the cobs into a sack and let them air-dry. Once they are ready, they burn readily without much

starter, such as kindling, and they last a surprisingly long time. Keep in mind that it takes a large amount of the corncobs to keep a fire going over a period of several days.

Twig bundles

If you are in perilous shape, you can make a twig fire. The twigs can be gathered from almost any kind of tree that grows in your area. Wait until the leaves are off and then snap off the dead growth at the tips of the branches. Or, if you have evergreen trees, you can break off the twigs without needles. The major problem is that twigs burn almost as fast as newspaper.

But there is a twist here: the twist is the wire you use to compress the twigs together and then fasten with scrap wire that you can usually find around a toolshed or work area. The secret to combustion is, in a large part, air. The more air that gets to the flame, the higher and hotter the flame will burn. Shut off the air completely and the fire will die.

The trick is to regulate the amount of air that reaches the twigs. You can do this in part with the damper of your stove, and you can do the same with a fireplace damper. But if you compress the twigs, you also cut off the air supply to all but the outer twigs, and by doing so you can cause the twig "logs" to burn much longer and with a hotter flame.

If you bundle small branches (one inch or so in diameter), you can have a long-lasting fire. Bundle them as you did the twigs, but use pliers to pull the wires as tight as you can get them. A small bundle will burn for three hours or even longer if the damper is partially closed.

Weed bundles

What about burning weeds? If your garden is like mine, it is easier to find weeds than it is to find the plants. Actually, you can burn the plants as



Believe it or not, when you clean up honeysuckle or other vines, you can bundle the trash and burn it. Bundle it as you would corn cobs or other small fuel. Pull the wires extremely tight and then let the vines dry out so they will burn readily.

well. For cornstalk fires, cut the stalks into appropriate lengths and bundle them with wire as you did the twigs. Then mix them with wood or, if your wood supply is limited, burn them alone. Use your damper to keep the fire under control. The bundled cornstalks will not burn at a dangerously high flame under normal circumstances, and the damper will keep the flame as low as you want it to be.

Smaller weeds can be bundled and tightly wrapped just as if you were compacting trash. Burn these bundles just as you would the other fuels mentioned. Most property has an abundance of weedy growth, including honeysuckle, ragweed, goldenrod, broom sedge or broomsage. Vines of all sorts can be cut into short lengths and prepared for burning.

In an emergency you can burn the old buildings standing on your property. Take them down piece by piece with a crowbar and cut them into

length suitable for burning. Avoid the wood that has been coated with a lead-based paint. Most studs, lath strips, rafters, joists, and subflooring will not have been painted and can be burned without problem. You will find that much of an old house or outbuilding was constructed with a good grade of lumber—that is, if the structure is fairly old. Back in the early years of this century, the lumber was often much better than the materials you buy today, and the wood has over the years seasoned until it is as hard as it is going to get.

When you handle the wood and when you saw it, be alert for nails and staples that will cause injury to you and damage to your saw. And watch for insects that make their winter homes in the old wood. You don't want to bring a family of black widows, for example, into your house.

Whatever kind of fire you are building, be careful. Do not use kerosene, fuel oil, gasoline, or any other highly flammable products to start the fire. Stay away from charcoal lighter and other liquids that can burst into flames or explode.

Start the fire by using a scrap of wadded paper, kindling made from twigs or thinly split wood, and then add small pieces of wood to the flaming kindling. Add larger wood as the flames start to rise and consume the kindling.

Do not build a roaring fire. As a rule, the higher the flame, the lower the output of heat. The low-burning flame which is as a rule associated with denser woods (like oak and hickory) will give off greater heat, and the wood will burn much slower.

Perhaps some of the methods described here are lacking in aesthetics, but when you are left without heat, they will work well for you.

Exercise to stay warm

Some final suggestions: work, move around, remain active. The more you move, the more the blood circulates

and the more heat you generate on your own. When you become still, your heat-generating ability diminishes.

If you are confined to the house, play games or take part in activities that require some expenditure of energy. Keep the heart pumping modestly fast. You can do exercises, isometrics, aerobics, and light weight-lifting. This may be the time to start or complete some minor projects around the house.

Use a handsaw to cut out some bird houses for the next spring. Trim the windows. Rearrange furniture. Clean the house. Pet the dog or cat. Build a better mousetrap.

Plan to spend part of each day in active work periods. It is better to work 15 minutes out of each hour than it is to work for six or eight straight hours and then rest for equal amounts of time. If you work 15 minutes, it will take you at least that long to cool off, under normal circumstances. And then you will need another 15 minutes to start to feel too cool. So in essence the 15 minutes of working basically keeps you warm for nearly an hour.

Have the entire family move about. Get involved with something that is interesting and challenging. Go for walks if weather and energy levels permit. It's amazing how warm a cool house feels if you have been outdoors in the cold for a while.

Dress in layers

Dress warmly. Don't try to sit around in a short-sleeved shirt and be comfortably warm. Wear a shirt and sweater, even in the house. Keep your head covered. More heat escapes the body through the head than from any other part. You will stay warmer longer if you wear a wool cap or a hat that is made of solid fabric.

Dress in layers. Wear insulated underwear with a long-sleeved shirt over your upper body. If you are still cool, slip on a loose sweater. The key to warmth is not so much the bulk of the clothing but the trapped air inside

it. The reason a sleeping bag works so well, in a large sense, is that your own body heat is kept inside the bag with you. Tight-fitting clothing sometimes does not permit room for trapped air.

When you go to bed, do not stay over-dressed. Once you are under the covers your own body heat will keep you warm, unless the weather is incredibly cold.

Close off rooms that do not need to be heated. If you are in dire straits, run a cord across the room and hang a blanket or quilt on it to hold the heat within a small area.

Whatever you do, do not panic when you see that you are running out of fuel. Look around your property. There is always something that you can burn.

If you can use your gas range, this might be a good time to bake the potatoes, cakes, and breads that you will want to use for a later meal. The heat from the oven will help warm the room.

Be really careful of space heaters, kerosene heaters, or auto or truck heaters. Be sure you have adequate ventilation for these types of heat. The same is true of charcoal heating.

Kerosene heaters do a fine job of heating small areas. You need to have a supply of fresh kerosene on hand (and maybe a new or spare wick). When you buy a kerosene heater, spend another buck or two and get one that automatically shuts off when it is knocked over.

Finally, keep your mind active. Work crossword puzzles or jigsaw puzzles. Start a journal. Play scrabble or card games. Remember that in summer we often hear people say, "It's not the heat, it's the humidity." Well, in winter the saying might go, "It's not the cold, it's the monotony." So keep a good book on hand, or engage in lively and interesting conversation. Who knows? You might emerge from the crisis a happier, more enriched, friendlier, more educated person. Δ