



An Extended Guide · No. 1759

Protecting Medical Equipment

Surge protection, battery backup,
and a calm plan that fits you

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! Read this first — two kinds of protection, one safety rule

There are two kinds of surge protection in this guide, and they are not the same job. A whole-home surge protector wires into your electrical panel, where the power is always live and a mistake can be deadly — that is strictly a licensed electrician's work, almost always with a permit, and never a do-it-yourself project. (It isn't something I do myself, either; I help you understand it, choose wisely, and line up a trustworthy local pro.) The other kind — the surge-protector strips and plug-in units you use at the wall — are perfectly safe for you to set up on your own. One honest note either way: no surge protector is a lightning rod or an iron-clad guarantee, so in a violent electrical storm, unplugging a treasured device is still the surest protection of all. When someone relies on powered medical equipment, protection matters more than ever — so we'll build a calm, layered plan together, and I'll be clear that I help with the equipment and the power, never with medical decisions.

Protecting the equipment someone depends on

If you or someone you love relies on a powered medical device, this guide is here to help you protect it from surges and outages — gently, practically, and without any scare tactics.

I'm Bill, of Bill's Home Tech in Portage County, Ohio. Over 30-plus years I've helped many families set up their homes so the important things keep working. I'll say this clearly and often: I'm a tech helper, not a doctor. I help with the devices and the power around them; your doctor and your equipment supplier guide the medical side.

The reassuring news is that a good plan isn't complicated or expensive. It's a few sensible layers, set up once, that let you breathe easier knowing you're ready.

★ Let's make this easy on you

This is exactly the sort of thing I'm glad to help set up and test in your home. Call or text me at (330) 200-8042 whenever you'd like a hand — no rush, no pressure.

The whole guide, on one page

If you remember only these things, you've got the shape of a solid plan.

- ❑ Surge protection is one important layer — but never the whole plan for a device someone depends on.
- ❑ Add battery backup (a UPS) for anything that can't safely lose power even for a moment.
- ❑ Keep the manufacturer's approved backups that need no power at all — like oxygen tanks or charged device batteries.
- ❑ Register with your electric utility's medical or priority list so they know your home matters.
- ❑ Talk with your equipment supplier and doctor about your backup plan — they're part of it.
- ❑ If a device fails and someone is in distress — trouble breathing, chest pain, confusion, blue lips — call 911 right away.

! People first, always

Equipment can be repaired or replaced. If you're ever unsure about someone's health during a power problem, don't wait and troubleshoot — call 911. That's never the wrong call.

Why medical equipment needs special care

Protecting a medical device is really two jobs at once, and it helps to see them clearly.

First, these are sensitive electronics. A CPAP machine, an oxygen concentrator, a powered wheelchair charger, or a medication refrigerator all have delicate circuit boards that a surge can damage, just like a computer or television.

Second — and this is the part that makes it special — you actually depend on the device. With a TV, a surge is a wallet problem. With medical equipment, keeping it working and keeping it powered can matter a great deal more. That's why we build in more than one layer of protection.

✓ Two goals, one plan

Keep the goals in mind: protect the device from surges, and keep it powered when the lights go out. A good plan handles both, calmly and ahead of time.

The honest truth: one layer, not the whole plan

This is the most important idea in the guide, so I'll say it plainly and kindly.

A surge protector is wonderful at what it does — stopping voltage spikes. But it does nothing during a power outage. It won't keep an oxygen concentrator running or a CPAP going when the power quits. So a surge protector, all by itself, is never a complete plan for equipment someone relies on.

The good plan treats surge protection as one layer among a few: surge protection to guard the device, battery backup to bridge an outage, and power-free backups plus a few phone calls to cover the rest. Each layer is simple. Together they're dependable.

! Please don't rely on a strip alone

If there's one thing I hope you take from this guide, it's this: a surge protector is a helper, not a safety net for someone's health. Build the other layers too, and you'll rest easier.

The three parts of a good plan

Everything in this guide fits into one of these three. Keep them in mind and the rest falls into place.

1. Surge protection

Guard each device from spikes with a good plug-in protector — and, for the whole house, a panel unit fitted by an electrician. This is the everyday layer.

2. Battery backup

For anything that can't safely lose power, a battery backup (a UPS) keeps it running through an outage or a dip, and buys you time to act. Most battery backups include surge protection too.

3. A people-plan

The backups that need no power at all (like oxygen tanks), your utility's medical list, and a clear plan with your supplier, your doctor, and your family. This is the layer that carries you through a long outage.

✓ You don't build it all at once

Start with whatever's easiest — often the surge protectors and a phone call to your utility — and add the rest over time. Every layer you add makes you safer.

Surge-protecting the devices themselves

Let's start with the layer you can set up today: plug-in surge protection for each device.

Use a good, quality surge protector for sensitive medical electronics — not a plain power strip, which offers no protection at all. Plug the protector straight into a properly grounded wall outlet, and plug the device into the protector. Keep the protector where you can see its indicator light.

A couple of gentle rules: don't daisy-chain (never plug one strip into another), and don't force a three-prong protector into an old two-prong outlet with a cheater adapter — without a real ground, it can't protect. If your outlets are old, have an electrician add a grounded one.

✓ Check the device's own manual

Some medical devices come with guidance about power and surge protection. When the maker's instructions and a general tip disagree, follow the maker — and ask your supplier if you're unsure.

Battery backup for what can't lose power

This is the layer that keeps a device running when the power goes out — and it's often the most valuable one.

A UPS — an uninterruptible power supply — is a battery in a box. Your device plugs into it, and if the power fails, the battery takes over instantly, keeping things running for a while and giving you time to respond calmly. Most UPS units include surge protection built in, so they cover two layers at once.

How long a UPS lasts depends on the device and the battery, so don't count on it for the whole outage — count on it to bridge the gap and buy you time. Ask your equipment supplier which backup is approved for your specific device before you buy one.

! Confirm compatibility first

Not every device is happy on every battery backup, and medical equipment is exactly where you want to be sure. Check with the device maker or your supplier that a given UPS is approved for it — I'm glad to help you ask.

If someone uses oxygen

Oxygen equipment deserves its own gentle mention, because the best backup for it often needs no electricity at all.

An oxygen concentrator runs on power, so it benefits from surge protection and a battery backup like any device. But the classic backup for an outage is the one your supplier provides: backup oxygen tanks, which need no power whatsoever. Keep the number your supplier recommends on hand, and know how to switch to them.

For getting around, portable oxygen concentrators usually have batteries and car adapters. Keeping those spare batteries charged is a simple habit that pays off in an outage.

★ Your supplier leads here

How much backup oxygen to keep and how to use it is a question for your oxygen supplier and doctor, not for me. What I can do is help you set up the surge protection and battery backup around the powered equipment. Call (330) 200-8042.

CPAP and other everyday devices

Many folks depend on smaller powered devices day to day. The same layered thinking applies.

A CPAP or BiPAP machine, a nebulizer, a powered wheelchair or scooter charger, a medication refrigerator — each is a sensitive electronic worth surge-protecting, and each may deserve a battery backup depending on how much you rely on it. Many CPAP makers offer battery packs and car adapters made for their machines.

A medication refrigerator is a good example of quiet planning: a surge protector guards its electronics, and knowing how long it holds temperature in an outage — and having a cooler and ice as a fallback — rounds out the plan. Ask your pharmacist about your specific medicines.

✓ Match the backup to how much you rely on it

Something you use all night, every night deserves more backup than something occasional. Let how much you depend on a device guide how many layers you give it.

Two kinds of homes, two sets of needs

Where you live shapes how long you might be without power — and that changes how much backup a medical home wants to keep on hand.

If you live in town or the suburbs

In town and the suburbs, outages tend to be shorter and help is closer. That doesn't mean you skip a plan — it means your battery backup and power-free backups mostly need to bridge shorter gaps.

- Surge-protect and battery-back-up the devices you depend on, just the same.
- Register with your utility's medical list — crews often restore listed homes with extra care.
- City water keeps flowing, so your planning can focus on the equipment and power.
- Keep a modest backup on hand and a plan to reach help if needed.

If you are out in the country on a well

Out in the country, outages tend to run longer and helpers are farther away, so a medical home needs a deeper cushion. When the power quits, the well pump stops too, so water becomes part of the plan alongside the equipment.

- Plan for longer outages — more battery capacity and more power-free backups from your supplier.
- A whole-home surge protector and a backup-power source (like a generator) are especially worth considering; see our backup-power guides.
- Store drinking water, since the well pump won't run without power.
- Have a clear plan to relocate to a home or facility with power if an outage stretches on.

★ Rural and relying on a device? Let's plan ahead

Longer country outages are exactly why planning matters. Tell me your setup and I'll help you build a calm, layered plan — and coordinate the electrician or backup power if you want it. Call (330) 200-8042.

Register with your utility's medical list

This is one of the most valuable steps, it's free, and folks often don't know it exists.

Most electric utilities keep a medical or priority list — a record of homes where someone relies on powered medical equipment. Being on it can mean advance notice of planned outages and extra attention when crews are restoring power. A simple phone call usually starts the process, sometimes with a form your doctor signs.

Do be aware it's a helpful courtesy, not a guarantee that your power will never go out. It's one more layer — an important one — alongside your backups, not a replacement for them.

✓ Make the call this week

Ring your electric company and ask how to get on their medical or priority list. It's a five-minute call that tells them your home is one to watch out for. I can sit with you while you make it if that helps.

Your supplier and doctor are part of the plan

You're not meant to figure the medical side out alone. The people who know your equipment and your health are part of your team.

Your equipment supplier can tell you which battery backups are approved for your device, how much power-free backup to keep, and how to get replacements. Your doctor can advise on what your particular situation calls for. A quick conversation with each turns a general plan into one that truly fits you.

Write down who to call and their numbers, and keep that list where the whole household can find it. In a stressful moment, not having to hunt for a phone number is a real gift to yourself.

★ I fit around your team

I don't give medical advice — your doctor and supplier do that. I take care of the technology: the surge protection, the battery backup, the testing, and coordinating an electrician. We each do our part. Call (330) 200-8042.

Whole-home protection for the household

For a home with medical equipment, a whole-home surge protector at the panel is an especially sensible foundation.

It's your first line of defense, stopping big surges before they reach any of your devices, and it guards the hardwired things too — the furnace, the well pump — that keep a home livable. It doesn't replace the plug-in protectors and battery backups on your devices; it strengthens the whole picture beneath them.

As always, that panel unit is a licensed electrician's job, with a permit — never a do-it-yourself project. I'll help you understand it and line up a trustworthy pro, and I'll set up the plug-in layers myself.

✓ See the whole-home guide

Our guide on whole-home surge protection walks through what a panel unit does and how to have one fitted safely. For a medical home, it's well worth the read.

A written plan, and a place to go

The best plan is one you don't have to remember under stress — because it's written down.

Put it on one page: which devices need power, what backup each one has, how long that backup lasts, who to call (supplier, doctor, utility, family), and where you'd go if an outage stretched too long. Tape a copy inside a cabinet door and keep one with your other important papers.

Having a place to go matters. If a long outage would leave a device without power, decide ahead of time where you could relocate — a family member's home, or a facility with power. Deciding calmly now beats deciding in the dark.

★ I'll help you write it

On a visit I can help you put this one-pager together and make sure the backups match what's on it. A little planning now brings a lot of peace of mind. Call (330) 200-8042.

Testing the plan together

A plan you've never tried is only a hope. A short, calm test turns it into confidence.

With everyone safe and unhurried, it's worth confirming the simple things: that the battery backup actually powers the device when you unplug it, that spare batteries are charged, that you know how to switch to power-free backups, and that the surge protectors' lights are healthy. Better to find a dead battery on a sunny afternoon than during a storm.

Do any testing gently and within what your device's maker allows — never in a way that puts the person who relies on it at risk. If you're unsure how to test safely, ask your supplier, or let me help.

✓ Test on a schedule

Tie a quick check to something regular — the first of the month, or when clocks change — so batteries stay charged and nothing quietly fails when you're not looking.

Knowing when to call 911

I want to give you this clearly and calmly, because knowing it ahead of time helps you act without panic.

If a device fails or its backup is running low and the person who relies on it is showing any sign of trouble — difficulty breathing, chest pain, confusion, a bluish tint to the lips or face, or unusual sleepiness — call 911 right away. Don't spend those minutes troubleshooting the equipment. Get help first.

It also helps to tell your local emergency service, when things are calm, that someone at your address depends on powered medical equipment. And keep that plan from the earlier page handy, so anyone in the house can follow it.

! Health comes before hardware

No piece of equipment is worth more than the person using it. When in doubt, call 911 and let the professionals help. The machine can wait; a person in distress cannot.

Common mistakes to avoid

These are the slip-ups I most want to help families sidestep.

- **Relying on a surge protector alone** — it does nothing during an outage. Add battery backup and power-free backups.
- **Using a plain power strip** and assuming it protects the device. It doesn't; use a real surge protector.
- **Never testing the backup**, then discovering a dead battery at the worst possible moment.
- **Not registering** with the utility's medical list — a free step many people miss.
- **Keeping the plan only in your head.** Write it down where the whole household can find it.

! The daisy-chain and cheater-plug traps

Two quick don'ts: never plug one power strip into another, and never use a 3-to-2-prong adapter to force a protector into an ungrounded outlet. Both quietly defeat the protection your device needs.

A medical-equipment protection checklist

Work down this list at your own pace. Every box you check makes you a little more ready.

- ☐ Each device is on a good surge protector, plugged into a grounded outlet.
- ☐ Anything I truly depend on has an approved battery backup (UPS).
- ☐ I've confirmed with my supplier that the backup is approved for my device.
- ☐ I keep power-free backups charged or filled (oxygen tanks, spare batteries).
- ☐ I'm registered on my utility's medical or priority list.
- ☐ My one-page plan is written and posted, with all the key phone numbers.
- ☐ I've tested the backups and know when to call 911.

★ Want help working through it?

I'm happy to sit with you and go down this list together, setting up the technology parts as we go. Call or text (330) 200-8042 and we'll make a calm plan.

Common Questions

The questions I hear most from families protecting medical equipment, answered plainly and kindly.

Q: Isn't a good surge protector enough?

It's an important layer, but no — it does nothing during an outage. For a device you depend on, add a battery backup and the power-free backups your supplier provides.

Q: What's the difference between a surge protector and a UPS?

A surge protector stops voltage spikes. A UPS is a battery that keeps a device running through an outage and usually includes surge protection too. For medical devices, a UPS is often the better choice.

Q: How long will a battery backup last?

It depends on the device and the battery, so treat it as a bridge to buy you time, not the whole answer. Ask your supplier what to expect for your specific equipment.

Q: Can you set this up and give medical advice?

I can set up and test the surge protection and battery backup, and coordinate an electrician — gladly. I don't give medical advice; that's for your doctor and equipment supplier, who I'm happy to plan around.

★ Still have a question?

Please ask — this is important, and there's no silly question. Call or text me at (330) 200-8042 any time.

How I can help

This is a place where a patient, in-home helper can take real worry off your shoulders.

I'll come to your home and set up the surge protection and battery backups around your devices, neatly and safely, and show you how everything works. I'll help you get on the utility's medical list, put your written plan together, and test that the backups actually do their job.

For a whole-home protector or any wiring, I'll line you up with a trustworthy licensed electrician rather than doing that work myself. And I'll always leave the medical decisions to your doctor and supplier — I handle the technology, so you can focus on what matters.

★ Real help, close to home

A first in-home visit is a flat \$99, and I can often help over a screen-share for \$49. Every visit comes with a 30-day, come-back-free guarantee. Call or text (330) 200-8042, or visit BillsHomeTech.com.

A gentle word to caregivers

If you're the one looking after someone else, this page is for you.

You carry a lot, and you can't hold every detail in your head. That's the whole point of writing the plan down, testing it when things are calm, and building in layers — so that if you're tired, or away, or rattled, the plan still works and someone else can follow it.

Be kind to yourself about it, too. You don't have to set everything up in one weekend or get it perfect. Start with one layer, add the next when you can, and lean on your team — the supplier, the doctor, the utility, family, and yes, me — so you're not carrying it alone.

✓ Small steps count

One surge protector, one phone call to the utility, one charged spare battery — each is a real step toward safety. Progress beats perfection every time.

You don't have to do this alone

You just have to remember that a friendly, patient person is one call away.

I hope this guide made protecting medical equipment feel a little less daunting and a lot more doable. Keep it in a drawer with your other home papers, come back to a page whenever you need it, and don't worry about memorizing anything.

When you'd rather have a hand, that's exactly what I do. I come to your home, work at your pace, and never make you feel rushed or silly for asking. A first visit is a flat \$99, and for the parts that don't need me on-site I can often help right on your screen for \$49. Every visit comes with a 30-day, come-back-free guarantee. I don't do the licensed electrical work myself — for that I'll help you line up a trustworthy local pro.

★ Bill's Home Tech — real help, close to home

Call or text me at (330) 200-8042, or visit BillsHomeTech.com. Serving Atwater and all of Portage County. 30+ years of patient, plain-English tech help — and if you're ever not 100% happy with a visit, I'll make it right or refund it. That's a promise. — Bill

A Good Plan Has Three Parts

Surge protection is only one of them



Surge protection is one part of three -- never the whole plan.

Two Different Jobs

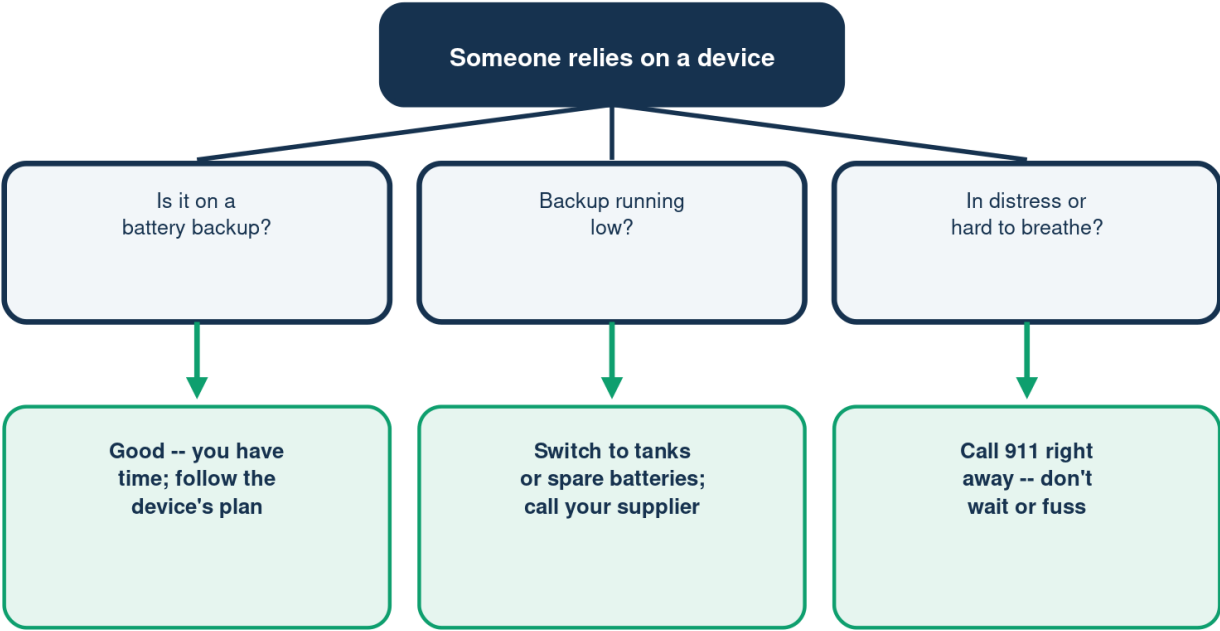
Why a device often needs both

	Surge protector	Battery backup
Stops spikes	Yes	Usually yes
Runs in an outage	No	Yes, a while
Smooths dips	No	Yes
For CPAP / oxygen	Helpful	Often vital

Most battery backups include surge protection built in.

If the Power Goes Out

A calm plan to follow



When in doubt about someone's health, call 911. Gear can be replaced.

Illustration - a schematic, not to scale. Your setup may differ.

Layers for a Medical Home

Who sets up each layer

	Who sets it up	What it does
Whole-home unit	An electrician	Guards the house
Plug-in protectors	You or Bill	Guards devices
Battery backup	You or Bill	Bridges outages
Tanks / spare batts	Your supplier	Need no power

Layered protection plus power-free backups is the safest setup.



Need a Real Person?

You do not have to remember all of it.
You just have to remember you can call.
Friendly, in-home tech help -- I come to you.

BILL'S PROMISE

If you are not 100% happy with a visit, I will
make it right -- or refund it. No awkwardness,
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— Bill

Prefer help without a visit?

Bill can screen-share and fix many things remotely — a flat \$49, free for Support Plan members.



A Note From Bill

A quick note from Bill.

I write these guides to make home tech a little less frustrating, and I do my best to keep every step accurate and up to date. Still, every home, device, and setup is a bit different, so I can't promise a guide will match yours exactly or fix your particular problem. These guides are for general information only — they're not professional, legal, or financial advice, and they don't replace your device's own manual or the manufacturer's instructions. Please go slow, use your own good judgment, and use everything here at your own risk. If a step involves electrical wiring, a gas appliance, a water heater, plumbing, or climbing a ladder — or if anything just doesn't feel safe — please stop and call a licensed professional (or give me a call at 330-200-8042). Bill's Home Tech and Bill Davis can't be responsible for any damage, data loss, or injury that comes from using these guides. Thanks for reading, and stay safe out there.

— *Bill*



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