



An Extended Guide · No. 1603

Sizing for Medical Devices: CPAP, Oxygen, and Concentrators

Sizing conservatively and
planning with your supplier

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! Read this first — size for safety, not just comfort

Getting the size right is not only about comfort — it is about safety, too. An undersized unit gets overloaded and pushed harder than it should be: it runs hot, it strains, and a motor that can't get the surge it needs can hum, overheat, and be damaged. So take the size seriously and always leave yourself a margin — a little extra room — rather than sizing right to the edge. And one safety rule never changes: any fuel-burning generator gives off carbon monoxide, an invisible, deadly gas, so it runs **OUTDOORS ONLY**, well away from the house (the safety agencies say at least 20 feet), never in a garage or on a porch even with the door open. A battery or power station makes no exhaust and is safe to use indoors. That care matters even more here — if someone at home relies on powered medical equipment, size conservatively, lean on more than one backup, and treat a generator as a single layer of a larger plan you make with your supplier and doctor.

Let's build a careful, unhurried plan

If you or someone you love depends on a CPAP, oxygen, a concentrator, or any equipment that has to stay plugged in, an outage is a different kind of worry. This guide is here to turn that worry into a calm, workable plan.

I'm Bill, and I want to say something plainly right at the start: I'm a tech helper, not a doctor or a nurse, and nothing in this guide is medical advice. What I can help with is the power side — sizing conservatively, setting up a safe hookup, and testing it — and that's genuinely a big part of the puzzle.

The most important idea here is simple: backup power is one layer of a good plan, not the whole plan. We'll size gently, with room to spare, and lean on batteries, backup tanks, and a plan made with your supplier and doctor — so nothing rides on any single machine.

★ You're not doing this alone

This is exactly the kind of planning I love helping families with — calm, practical, and unhurried. Call or text me at (330) 200-8042 whenever you're ready to talk it through.

The whole guide, on one page

If you remember only these things, you already have the shape of a solid plan.

- ❑ Size conservatively — pick more capacity and more runtime than you think you need, with room to spare.
- ❑ Backup power is one layer, never the whole plan by itself.
- ❑ Read each device's label for its watts — the oxygen concentrator especially, since it's a real motor load.
- ❑ Prefer clean inverter power, or a UPS, for sensitive electronics like a CPAP.
- ❑ Keep manufacturer-approved battery backups and car adapters charged and ready.
- ❑ Oxygen users keep supplier backup tanks — they need no power at all — and spare concentrator batteries charged.
- ❑ Register with your utility's medical or priority list, and make the plan with your equipment supplier and doctor.
- ❑ Know the signs that mean call 911, and have somewhere to go with power if you need it.

✓ One idea to hold onto

You don't have to solve this with one perfect machine. A few smaller, reliable layers, working together, are a stronger plan than betting everything on one device.

Size conservatively — and treat it as one layer

This is the single most important idea in the guide, so we're starting with it.

With most appliances, sizing right to your calculated number is fine. With medical equipment, lean the other way on purpose: give yourself extra capacity so a device never sits at the edge, and extra runtime so you're not counting minutes. A comfortable cushion here buys peace of mind, which is worth a great deal.

And remember the layers. A generator is wonderful, but it's still a machine that has to be started and fueled. Battery backups, supplier tanks, a utility registration, and a place to go all sit behind it — so no single thing carries the whole weight.

★ We'll build every layer together

You don't have to figure this out today, or alone. Call or text me at (330) 200-8042 and we'll work through it one calm piece at a time.

CPAP and BiPAP — watch the heated parts

The machine itself is a small draw. The surprise is what the heating adds.

A CPAP or BiPAP on its own sips power. But turn on the heated humidifier and the heated hose, and the draw climbs a lot — because making heat is watt-hungry. That heating is often the biggest part of the machine's appetite on backup power.

So a gentle trick, if your equipment allows it: running with the heat off, or lower, stretches a battery much further overnight. Whether that's right for you is a question for your supplier or doctor, never for me — but it's worth asking them about.

✓ The heat is the hidden draw

If you're planning a battery to get through the night, ask your supplier how much turning the humidifier and heated hose down changes the runtime. It can be the difference between covering the night and not.

Oxygen concentrators — a real motor load

This is the device most likely to drive your sizing, so it gets its own careful look.

An oxygen concentrator pulls oxygen from the air with a compressor — which means it's a genuine motor load, larger than a CPAP, and it runs continuously rather than just at night. Because it's a motor, it has a starting jolt as well as a steady draw; our [running-watts-versus-starting guide](#) explains that two-number idea.

Running around the clock, the concentrator adds up over a long outage, so it tends to size your plan upward. Read its label carefully for the watts, and give it conservative, generous headroom — this is not the device to size thin.

★ I can help with the power side

I'm glad to help make sure a concentrator has reliable, well-sized backup power when you want that layer — while your flow settings and how many backup tanks you keep always stay your supplier's and doctor's call, never mine.

Other devices, briefly and gently

A few other pieces of equipment show up on these plans. Here's the shape of each, in plain terms.

- **Nebulizer:** usually a brief, occasional draw for a treatment, rather than an all-day load.
- **Ventilator:** critical equipment that must never lose power — size very conservatively and lean hard on batteries and a plan with your supplier.
- **Powered wheelchair or scooter:** a battery you recharge, so the goal is keeping it topped up rather than running it live.
- **Medication refrigerator:** a small, steady load; a cooler with ice can bridge a short outage while you get power going.

✓ Every plan is different

Your exact devices, and how long each must run, shape the whole plan. Write them down — it's the first step, and it makes every other decision clearer.

Read the label for the real numbers

As with any sizing, the real figures live on the device, not in a guess.

Each device has a small label listing its power needs. Look for watts; if only volts and amps are shown, multiply them for the running watts. The oxygen concentrator is the one to read most carefully, since it's the largest and runs continuously.

Photograph each label before you shop for any backup. If a number is unclear or missing, your equipment supplier can tell you the device's draw — and confirm what kind of backup power it's approved to use.

★ Send me the labels

Snap a photo of each device's label and text it to me at (330) 200-8042. I'll help you read the numbers and size a conservative backup — free, and with no medical advice, just the power side.

Clean power and a UPS for sensitive devices

For delicate electronics, the kind of power matters as much as the amount.

An inverter's power is smoother and steadier than a conventional generator's, which many sensitive medical devices handle better. If you're choosing a generator with equipment like this in mind, that's a real point in an inverter's favor.

A UPS — a small battery that sits between the wall and the device — takes over instantly when the power cuts out, bridging the seconds it takes a generator to start and smoothing brief dips. Our guide on sizing for a home office covers clean power and a UPS in more depth, since a desk has the same needs.

✓ Ask what your device prefers

Some manuals note a power-quality preference directly. When in doubt, a quick call to your equipment supplier beats guessing — they'll tell you whether clean inverter power or a UPS is worth it for your device.

A battery for overnight CPAP — watts and watt-hours

If your goal is getting a CPAP through the night, there are two different numbers to think about.

A battery or power station has a **watts** rating — how much it can deliver at once — which must clear the device's draw. And it has a **watt-hours** rating — how much energy it stores — which decides how many hours it lasts. A CPAP needs modest watts but enough watt-hours to cover the whole night.

This is exactly where running the heated humidifier and hose off, if your doctor agrees, stretches the watt-hours much further. Our guide on watts versus watt-hours is devoted to this two-number idea for batteries.

✓ Two numbers, both matter

Plenty of watts but too few watt-hours, and a battery quits before morning. Size for both — enough power to run the device, and enough stored energy to last the night with room to spare.

Battery backups and car adapters

The fastest layer to lean on, because there's nothing to start up.

Many medical devices offer a manufacturer-approved battery backup, and some can run from a car adapter using your vehicle as a power source for a while. These need no setup in the moment — they're already there, already charged, the instant the power goes out.

- Keep any battery backup charged as a standing habit, not something you check only when a storm's coming.
- Confirm with the manufacturer that a car adapter is an approved way to power the device before you rely on it.
- Know roughly how long each backup lasts, and ask your supplier if the manual doesn't say plainly.

✓ Little habits, checked often

A charged battery does no good if it quietly drained months ago. Fold a quick check into a routine you already have, like paying bills or watering the plants.

Two kinds of homes, two sets of needs

Where you live shapes how quickly help can reach you — and how conservatively you'll want to size and layer your plan.

If you live in town or the suburbs

In town or a close-in suburb, help tends to be closer and outages tend to run shorter. That doesn't remove the need to plan, but it can shorten the stretch your backups have to cover.

- A supplier, pharmacy, or hospital is often a short drive if you ever need to relocate.
- Utility crews often reach in-town areas sooner, which supports — but never replaces — your own layers.
- City water keeps flowing, so a well pump isn't competing with your medical equipment for a generator's capacity.
- Even so, size conservatively — a shorter outage is not a guaranteed one.

If you are out in the country on a well

Out in the country, that same drive is longer and outages often run longer too — so lean toward MORE conservative sizing and more backup layers, not fewer.

- Plan for a longer stretch before you could realistically reach your supplier or relocate.
- On a private well, the 240-volt well pump competes with your medical equipment for a generator's capacity — size for both, generously.
- Keep extra spare batteries and backup tanks on hand, since a supply run is a bigger undertaking out here.
- Our guide on sizing for a well pump covers that competing load; give your medical devices priority when you plan.

★ Let's talk through your specific setup

Every household's plan looks a little different. Tell me about your equipment, your home, and how far you are from help, and I'll help you size the power side conservatively, at your pace. Call (330) 200-8042.

Oxygen backup tanks and spare batteries — no power needed

For oxygen users, the steadiest layer of all needs no electricity whatsoever.

A powered concentrator is wonderful, but it's powered — so an outage takes it offline unless something steps in. Backup tanks from your oxygen supplier need no power at all, which makes them the steadiest anchor in your whole plan. Keep spare concentrator batteries charged and rotated for the portable side.

- Ask your supplier how many backup tanks they recommend, and keep that number current — that count is their call, not mine.
- Keep your prescribed settings written down somewhere you'll find in a hurry.
- Ask your supplier to show you how to switch to a tank calmly, before you ever need to under stress.
- Keep at least one spare portable battery charged, and rotate spares so they stay healthy.

★ The power side is mine; the tanks are theirs

I'll help make sure your concentrator has reliable backup power when you want it — but how many tanks you keep and your settings are always your supplier's and doctor's call.

Register with your utility's medical priority list

A short phone call now, worth having made long before you need it.

Many utilities keep a list of customers with medical equipment or other critical needs, sometimes called a medical priority or critical-care list. Being on it doesn't guarantee anything specific, but it's a free step that puts your household on their radar — often meaning advance notice of planned outages and a flag for restoration crews.

✓ Call and ask

Your utility's customer service line can tell you exactly what their program involves and what they need — usually just a form, sometimes with your doctor's confirmation. It costs you a phone call and nothing more.

Make the plan with your supplier and doctor

They know your specific equipment and your specific health far better than any guide ever could.

Tell your doctor and your equipment supplier that you're building an outage plan, and ask for their guidance — how many backup tanks or batteries they recommend, whether your settings should ever change on backup power, and which warning signs matter most for you. Bring it up again if your equipment or your health changes; it isn't a one-time conversation.

★ Where my help stops, on purpose

I help with the equipment's power supply — sizing and setting up a generator or battery, the safe hookup, and testing it all together. I never weigh in on settings, flow rates, or anything medical. That's always your doctor's and your supplier's call, and it should be.

Know when to call 911

This page exists so you never have to wonder, in the moment, whether it's serious enough to call.

If equipment fails and your backups are running low, or if someone is having trouble breathing, has chest pain, seems confused, or has bluish lips or skin — call 911. Don't wait to see if it passes, and don't feel you need to be certain first. That's exactly what 911 is there for.

! When in doubt, call 911

You will never be faulted for calling 911 and having it turn out less serious than it seemed. You may deeply regret waiting when it wasn't. Trust that instinct, and keep your supplier's after-hours number close too.

Put the plan on paper

A plan that lives only in your head is hard to hand to someone else in a hurry.

- ❑ A list of every device that needs power, and how each one is backed up.
- ❑ The settings your doctor prescribed, written plainly.
- ❑ Phone numbers for your equipment supplier, your doctor, and your utility.
- ❑ Where backup tanks, spare batteries, and chargers are kept.
- ❑ Simple steps for starting the generator and connecting each device to it.
- ❑ Where you'd go, and how you'd get there, if you needed to relocate.

★ I'll help you put it on paper

On a visit, I can help turn this into a simple written plan — clear enough that a neighbor or family member could follow it too, not just you. Call (330) 200-8042.

Test the whole setup on a calm day

A plan you've practiced is a plan you can trust when it actually matters.

Pick a quiet day and walk through it for real, with everyone comfortable and nothing urgent happening: start the generator, run each device on it briefly, check how long the UPS actually bridges the gap, and confirm the spare batteries hold their charge. Small gaps show up in a practice run, not in the middle of an outage.

★ Let's test it together

I'm glad to be there for this — setting it up, running through it with you, and fixing anything that doesn't work quite right before it matters. Call or text (330) 200-8042 to schedule a visit.

What I help with — and what I don't

Being clear about this boundary is part of doing right by you.

Bill helps with	Always your doctor or supplier's call
Sizing and setting up a generator or battery	Your prescribed settings
Setting up and testing a UPS or battery bridge	Oxygen flow rates or CPAP pressures
Coordinating a licensed electrician for a safe hookup	Medical guidance of any kind
Testing the whole plan with you on a visit	When to seek emergency care

★ **A boundary I take seriously**

I care about your family's safety, which is exactly why I stay firmly on my side of this line. For anything medical, always call your doctor or equipment supplier first.

Common Questions

The questions families ask me most about this, answered as honestly and warmly as I can.

Q: How big a backup do we need for an oxygen concentrator?

Read its label for the watts, then size conservatively — it's a motor that runs continuously, so give it generous capacity and runtime. And keep supplier backup tanks, which need no power at all.

Q: Is a generator alone enough if someone depends on oxygen?

No, and please don't rely on it alone. Backup tanks or batteries that need no power, plus a tested plan, matter just as much as the generator itself.

Q: How do I get a CPAP through the night on a battery?

Size for both numbers — enough watts to run it and enough watt-hours to last the night. Ask your doctor whether running the heated humidifier and hose lower is right for you; it stretches the battery a lot.

Q: Can you tell me what oxygen setting or CPAP pressure to use?

No — that's always your doctor's or supplier's call, never mine. I make sure the power reaching the device is safe and reliable; the settings stay with them.

★ However far along you are, I'm glad to help

Whether you're just starting to think about this or fine-tuning a plan you already have, call or text me at (330) 200-8042. We'll take it one calm step at a time.

A caring checklist

Work through this at whatever pace feels right — there's no deadline except the one you set yourself.

- ☐ I've read each device's label and sized my backup conservatively.
- ☐ I have a manufacturer-approved battery backup or car adapter, charged and ready.
- ☐ If oxygen is involved, I have supplier backup tanks and know how to switch to them.
- ☐ I have spare batteries charged and rotated, if my equipment uses them.
- ☐ I've planned clean inverter power or a UPS for sensitive devices.
- ☐ I'm registered with my utility's medical or priority list.
- ☐ My doctor and equipment supplier both know my outage plan.
- ☐ I know the signs that mean call 911, and I have somewhere to go if I need to leave.

★ Even three checked boxes is progress

You don't have to complete this list today. Every box you check is a real layer of protection added to your plan.

Bringing it all together

Backup power is a genuinely valuable piece of a medical-equipment plan — as one conservatively sized layer among several, not the whole answer by itself.

Read each device's label, size gently with room to spare, prefer clean power for sensitive electronics, and keep batteries, backup tanks, a utility registration, and a plan made with your doctor and supplier behind the generator. A place to go is there if you ever need it.

Our guide on watts versus watt-hours helps you size a battery for an overnight CPAP, our running-watts-versus-starting guide covers the concentrator's motor jolt, and our home-office guide goes deeper on clean power and a UPS.

★ Let's build yours together, one piece at a time

There's no need to solve all of this in one sitting. Call or text me at (330) 200-8042, and we'll work through the power side at whatever pace feels right for your family — with nothing to sell you and no medical advice given.

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 sizing backup power for 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 or gas 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

Common Devices and Their Backup

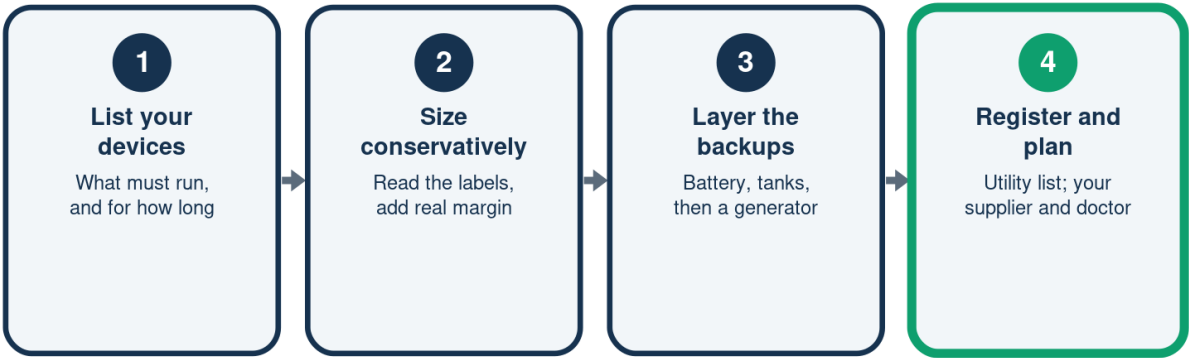
What each needs, and the first layer to lean on

	Power need	First backup layer
CPAP / BiPAP	Small -- heat adds a lot	A battery overnight
Oxygen concentrator	Larger, runs nonstop	Supplier backup tanks
Nebulizer	Brief bursts	Battery or car adapter
Medication fridge	Small and steady	A cooler, then power

Read each label -- size conservatively, and lean on more than one layer.

Building the Plan, Layer by Layer

Calm, complete, and made with your supplier



Backup power is one layer -- never the whole plan by itself.

CPAP vs. Oxygen Concentrator

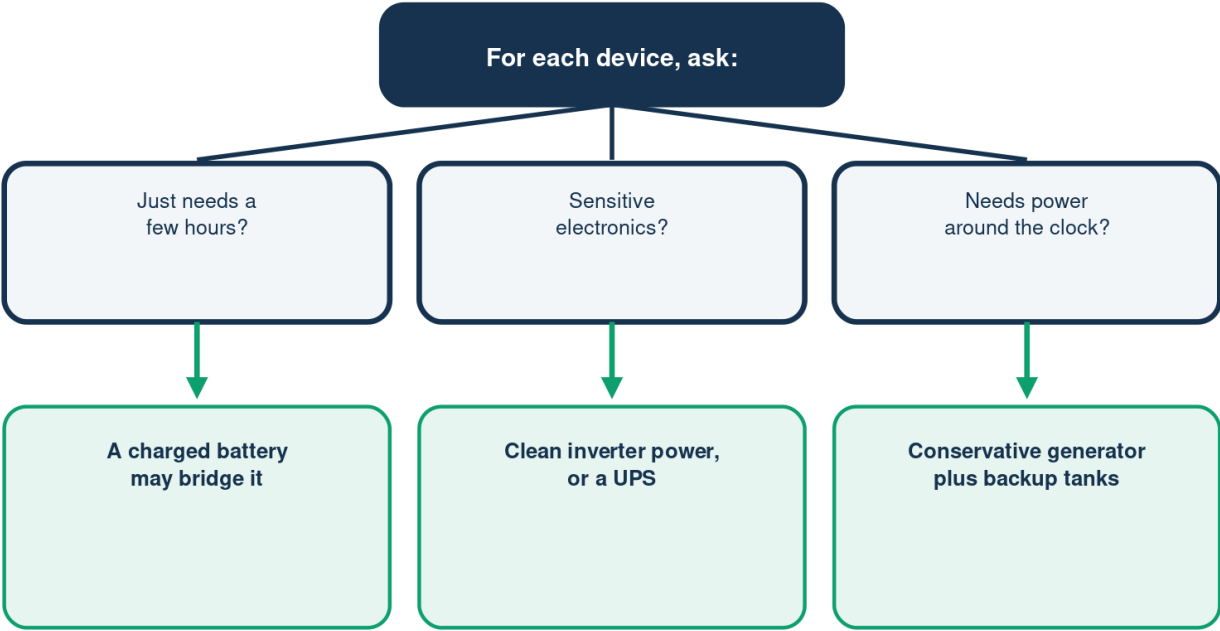
A small draw versus a larger, around-the-clock one

	CPAP / BiPAP	Oxygen concentrator
Power draw	Small on its own	Larger -- a motor
Runs how long?	Mostly at night	Around the clock
Clean power?	Nice to have	Often preferred
Anchor backup	A battery	Supplier tanks

The concentrator usually drives your sizing -- give it generous headroom.

How Will This Device Ride Out an Outage?

For each device, ask a calm question



This is not medical advice -- plan with your supplier and doctor, and call 911 in an emergency.

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



Need a Real Person?

You do not have to remember all of it.
You just have to remember you can call.
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If you are not 100% happy with a visit, I will make it right -- or refund it. No awkwardness, no fine print. That is how I would want to be treated.

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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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