STRUCTURE SERIES · SEASONAL GUIDE

Metabolic Winter

Why your body is built for a real winter, and how your plan shifts as the days get shorter.

If you've noticed you want to sleep more, eat heavier, and slow down a little this time of year, nothing is wrong with you. That's your body reading the season. It's doing exactly what it was designed to do.

The problem is that most of us never let winter actually happen. Here's the full picture, and what changes for you between now and spring.

01

Your body keeps a calendar

Your body doesn't know what month it is. It knows what the signals around it are telling it. Four of those signals carry the season.

Darkness

Longer nights mean a longer stretch of melatonin every night. That nightly length is how your body reads the season. Short melatonin says summer. Long melatonin says winter.

Cold

Cooler air switches on brown fat, a tissue that burns fuel to make heat. It's one of the most direct ways your environment changes how you use energy.

Less food

Short days used to mean less food and longer stretches between meals. Those gaps are when your body does its cleanup and repair work.

Sleep

More dark means more sleep. Deep sleep is where most of the repair actually happens.

Those signals flip two switches inside your cells. Each one has a sensor that reads how much fuel is available.

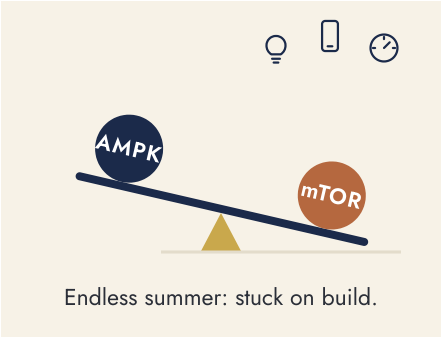
AMPK is the repair sensor. It turns on when fuel runs low, like during an overnight fast, in the cold, or during exercise. It makes you more efficient with energy, builds new mitochondria, and cleans out worn-out parts of your cells. That cleanup is called autophagy.

mTOR is the build sensor. It turns on when fuel is plentiful, especially protein. It grows muscle, stores energy, and gets the body ready for a busy season.

The two work like a seesaw. When one is up, the other is down.

A healthy year swings between the two.





Endless summer: stuck on build.

SIGNAL	CLOCK	SWITCH	RESULT
Light, dark, temperature, food	Melatonin length tells your body the season	AMPK (repair) or mTOR (build)	Cleanup and efficiency, or growth and storage

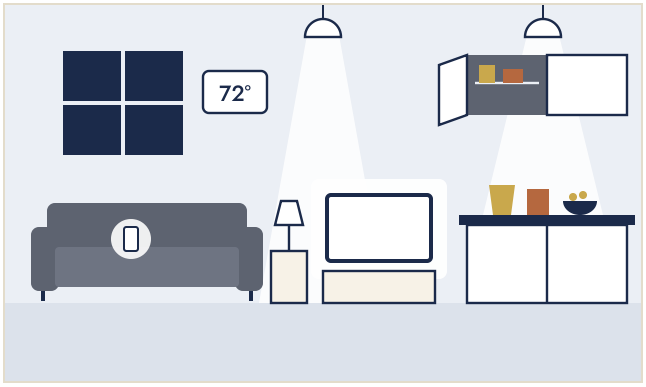
> *The environment flips the switch. The chemistry follows. That's what we mean by biophysics before biochemistry.*

02

We live in an endless summer

Think about what a modern winter looks like. Bright overhead lights until bedtime. Phones in bed. Food available every hour. A house that stays 72 degrees in January.

Every one of those is a summer signal. So the body never gets the message that it's winter. It stays in build and store mode all year, with mTOR running the show and AMPK rarely getting a turn.



ENDLESS SUMMER



A REAL WINTER EVENING

You can see this in the data. Weight, blood sugar, blood pressure, and cholesterol all tend to drift up a little in the colder months. Most of us don't get a metabolic winter anymore. We get summer habits in a dark season, and that's the combination that costs us.

This is about balance

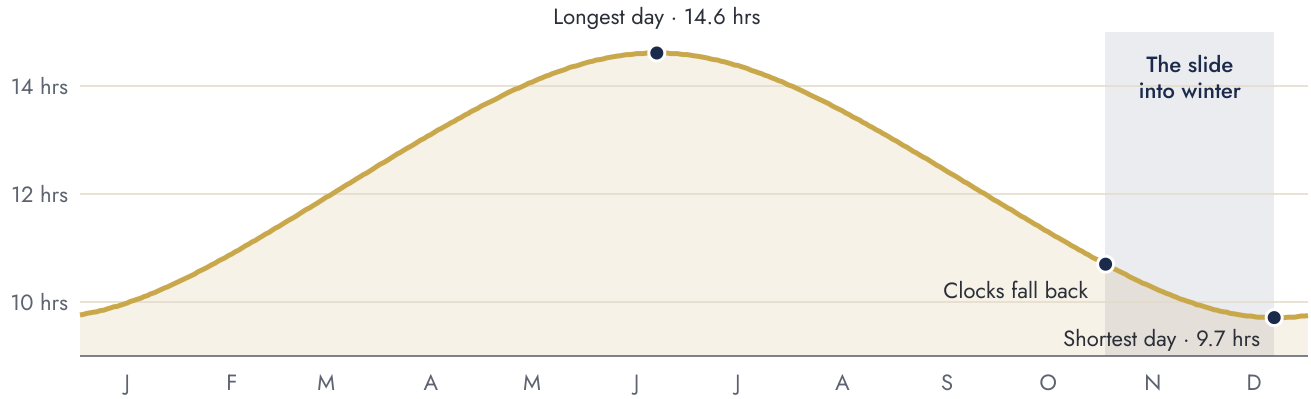
mTOR isn't the bad guy. You need it to hold onto muscle and bone, and muscle is one of the best things you can protect as you get older.

That's why your protein-first breakfast and your strength work aren't going anywhere. Those are build signals we send on purpose. Movement also sends a repair signal, so exercise belongs in winter too. The goal is a healthy swing between AMPK and mTOR. Endless summer is what breaks that swing.

03

What shifts as the days get shorter

Your Signal Ladder Floor stays exactly where it is all year. What moves is the timing around it, because the sun is moving.



Calculated for Brentwood, TN.

LEVER	WHAT CHANGES	WHY IT MATTERS
Morning light	Sunrise comes later, so many of you will be up before it. Use dim or red light until sunrise, then get outside as soon as it's up. Skip the sunglasses.	Morning light still sets the clock. It just shows up later now.
Midday light	Get outside in the middle of the day. A walk after lunch is perfect.	Winter sun is weak, so midday counts most. A bright day also makes you less sensitive to light at night.
Evenings	Dark comes before 5 p.m. Switch to incandescents, In-Rhythm evening modes, or blue blockers earlier than you did in summer. Keep lamps low, not overhead. Cover your skin too, not just your eyes.	Dark evenings are the main winter signal. Bright screens erase it.
Sleep	Start winding down earlier. More sleep this time of year is normal and good.	Your bedtime can move with the season as long as it stays steady day to day.
Eating window	It shrinks with daylight. Dinner moves earlier, and the overnight fast gets longer on its own.	You get the repair window without forcing a fast.
Temperature	Let the house run cooler, especially at night. Spend time outside without bundling up completely.	Cold is free medicine, and winter hands it to you.
Vitamin D	The sun is too low here to make much vitamin D now. A UVB vitamin D lamp takes over, along with time in the cold.	This is how Dr. Cabell approaches winter, instead of a pill.
Heat	Sauna becomes more valuable now that summer heat is gone.	Heat and cold both send strong repair signals.
In the car	Windows down or sunroof open when you can, especially midday.	Glass filters the sun. Open air gives you light and cold together.
Movement	Steps tend to drop. Move Zone 2 indoors if you need to and keep lifting.	Muscle is what we protect through the winter.

Two habits for this season



Open it up in the car. Most of us spend real time driving, and glass filters out part of the sun's light, including the UVB your skin uses to make vitamin D. Roll the windows down or open the sunroof when you can, especially around midday. You get unfiltered light on your face and skin and a little cold at the same time. In the dead of winter the sun is too low here for much vitamin D, but the light still sets your clock and the cold is still free medicine. As the days get longer, the open window starts paying off for vitamin D too.



Cover your skin after sunset, not just your eyes. Blue blockers protect your eyes at night. But your eyes aren't the only part of you that senses light. Your skin carries melanopsin, the same light-sensing protein your eyes use to read the time of day. How much artificial light on your skin affects your clock is still being studied. Covering up costs nothing, though, so we treat it as part of the evening routine. Once the sun goes down and the indoor lights come on, switch to long sleeves and pants or pajamas, along with your blue blockers or evening light modes.

04

Carbs follow the light

Circadian Whole30 stays the foundation for everyone this winter. What changes is how we think about carbs.

The simplest rule I can give you is that carbs follow the light. Here's what that means in practice.

During the day

Your body handles carbs best earlier in the day, and worse after dark. Bright light at night makes it worse still. So keep your carbs in daylight hours, at breakfast and lunch, and keep dinner lighter on them.

Across the season

Shorter days mean a shorter eating window, so total carbs come down without you counting anything. The sources shift too. Summer is fruit season. Winter is sweet potatoes, squash, beets, carrots, and hearty greens, plus the fermented foods you're already eating at every meal. Local and seasonal still comes first.

Why it makes sense

For most of human history, sugar showed up in summer, when the days were long and the sun was strong. The light and the carbs arrived together. There's a good case that the body is built to handle carbs best in that kind of light. That part of the science is still being worked out. But eating with the season and keeping carbs in the daylight is a sound way to live either way.

Some of you will get individual nutrition guidance from the care team this season, including a lower-carb or Circadian Keto approach. If that's you, your plan comes first.

05

Your evening and your bedroom

If you only get two things right this winter, make it these: a low, warm evening, and a bedroom that's actually dark.

Here's why. Ordinary living room light in the hours before bed is enough to push your melatonin later and cut its nightly run short by about an hour and a half. That's a normal lamp-lit room, nothing extreme. The good news is that bright light during the day makes you less sensitive to light at night. So your midday walk is also protecting your evening.

Set up your evening

- **Keep the light low.** Turn off overhead lights after sunset and use lamps at table height or lower. Your eyes are most sensitive to light coming from above, so a ceiling light hits your clock harder than a lamp beside you.
- **Turn your phone red.** Night mode only warms the screen a little. The color filter in your phone's accessibility settings can turn the whole screen red, which cuts far more of the light that tells your brain it's daytime. Turn the brightness all the way down too.
- **Light the path for night wake-ups.** Put a dim red night light low to the floor in the hallway and bathroom, so nobody reaches for a white light switch at 2 a.m.
- **Make it a household thing.** Let sunset be the cue for everyone. Lights down, screens away, dinner done. If your family isn't on board yet, start with the room where you spend your evenings and your own bedroom. Kids usually come around when it feels like an occasion, a game or a book by lamplight, more than a rule.

The hand test

Most bedrooms that feel dark still let in more light than you'd think, and your eyelids let some of it through while you sleep. Here's how to check yours.

1. At bedtime, turn off every light and close the door.
2. Sit on the bed for 10 minutes and let your eyes adjust.
3. Hold your hand out at arm's length.
4. If you can see it, or even its outline, light is getting in. Find it, fix it, and test again the next night.

Where light usually sneaks in

- Around the edges and top of curtains. Go wider than the window, use a rod that wraps to the wall, or add blackout film to the glass.
- Under the door. A draft stopper or a rolled towel does it.
- Chargers, smoke detectors, clocks, and TVs on standby. Unplug what you can and cover the rest with black electrical tape.
- Your phone. Charge it in another room and use a simple alarm clock.

What doesn't change

- Your Floor. Same habits, same minimum, all year.
- Protein first. 50 to 75 grams at your first meal, timed around sunrise.
- Order of eating. Protein, then fat, then carbs.
- Strength training. This is how you keep muscle through the dark months.
- A dark bedroom. If anything it matters more now, so run the hand test.

07

The switch: November 1

Clocks fall back one hour at 2 a.m. on Sunday, November 1. Here's the thing to remember. The clock moves. The sun doesn't.

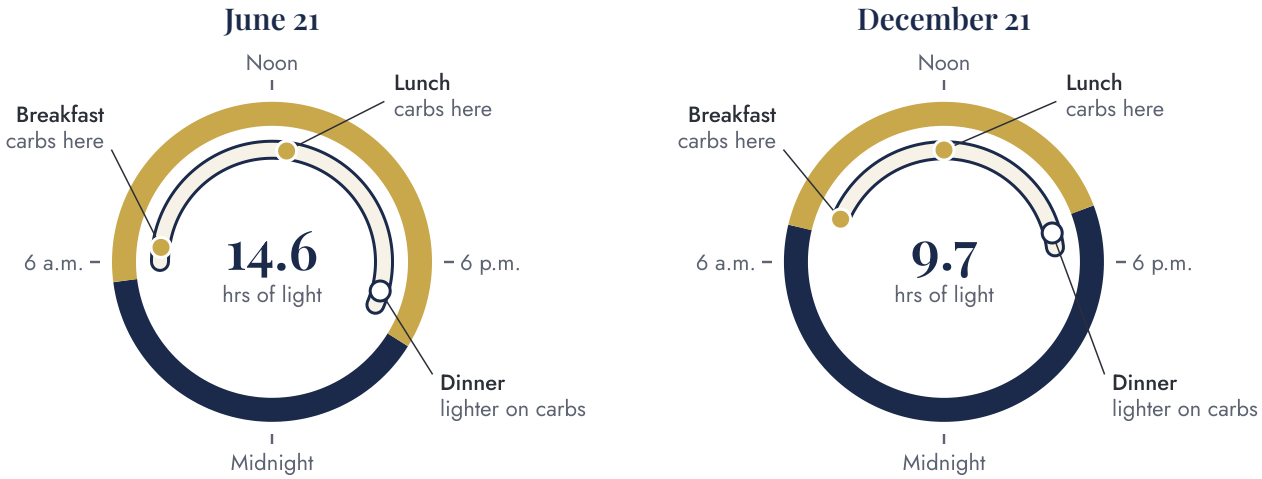
Your body runs on sunrise, not on your phone. That Monday morning, sunrise will show up an hour earlier on the clock. Use that. Get outside for it and get your first meal in around it.

- **The week before:** nothing dramatic. Keep your morning light and meals tied to the sun, not the clock.
- **That weekend:** get outside early Sunday and Monday mornings. It's the fastest way to settle in.
- **The week after:** evenings get dark suddenly. That's your cue to switch lighting earlier and move dinner up.

Most people feel a little off for a few days. That's normal. You're not starting over. Just go back to your Floor and let the light do the work.

A sample December day

In late December here, the sun comes up close to 7 a.m. and goes down a little after 4:30 p.m. This is one way a day can look. Your own plan may differ.



Less light, shorter window. Carbs stay in the daylight.

TIME	WHAT IT LOOKS LIKE
6:15 a.m.	Wake up. Keep lights dim or red. Water.
7:00 a.m.	Outside for sunrise, even 10 minutes on the porch.
7:30 a.m.	First meal. 50 to 75 grams of protein, with some winter carbs like sweet potato.
Midday	Walk outside after lunch, or drive with the windows down. Lunch is your biggest carb window.
Afternoon	Strength or Zone 2. Sauna, or time outside in the cold.
4:30 p.m.	Sunset. Overhead lights off, lamps low, evening light modes on, and change into long sleeves. Vitamin D lamp earlier in the day if it's part of your plan.
5:00 p.m.	Dinner. Protein and vegetables, lighter on carbs. Kitchen closes after.
Evening	House cools down. Skin covered, screens off or filtered. Read, talk, wind down.
9:00 p.m.	Phone charging in another room. Lights out in a bedroom that passes the hand test.

That's a 9 to 10 hour eating window and about 14 hours of overnight fast, and none of it requires willpower. It just follows the sun.

> *Winter is the season your body does its repair work, if we let it.*

Bring your questions to your next integration session. We'll look at where your levers are and adjust anything that needs it.