



Dad Knows™

Cookouts

The cooking you do in a backyard
on a Saturday, with kids running around
and somebody's dog under the table.



Fire, food, and the people you feed.

Aaron Byers

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The cooking you do in a backyard on a Saturday, with kids running around and somebody's dog under the table.

Plain language, real numbers — every temperature and safety rule checked against a government source.

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A Dad Knows™ Guide

What this book is

This is a book about cooking outside for people you love.

Not fancy cooking. Not competition cooking. This is the cooking you do in a backyard on a Saturday, with kids running around and somebody's dog under the table.

Here's what this book is not: a pile of rules meant to make you nervous. Nobody's born knowing how to run a grill. Most of us learned by burning a few burgers. That's the normal path — you're not behind.

There's a real difference, though, between a dad who owns a grill and a dad who can feed a crowd. The difference is knowledge: where to put it, how to light it, what temperature the food needs to hit, how much to plan for, and what to do after.

Sixteen short chapters, plain language, real numbers. Every temperature, time window, and safety rule comes from a government food-safety or fire-safety source. Where an authoritative guide doesn't publish a number, this book says so instead of making one up.

One more thing. A cookout is fire, food, and people, and two of those need respect. Nobody's ever gotten hurt at a cookout because the food was a little dry. People do get hurt because the grill sat too close to the siding, or a kid walked up to a hot grate, or somebody poured lighter fluid on live coals.

Read a chapter. Then go light something. You'll be better at this by next weekend.

What you'll find inside: the gear, safe setup, gas and charcoal start-up, heat zones, thermometer rules, meat by

meat, low-and-slow, marinades, feeding a crowd, leftovers and cleanup — plus a printable one-page checklist at the end.

Foreword

A word from a dad who's been there — from one burger on a family grill to a full yard of people

My earliest cookout memory isn't one of mine. It's my uncle Terry's. He was grilling hamburgers while the whole family had a party. That's still the picture I get when somebody says the word cookout — family in the yard, hamburgers on the grill, somebody's uncle doing the cooking.

My own first try at cooking outside was in Boy Scouts: chicken on a wooden spit I made myself. It came out undercooked. What a mess. That's the honest starting point for a lot of us — a kid, some food, and no idea what you're doing yet. If that's where you are, you're in good company.

I made one mistake for years. Too much heat too soon. It looks like cooking, and it isn't. That's part of why this book leans so hard on temperatures — real numbers instead of guesses, checked against the food-safety sources. Learn the numbers and you stop burning the good stuff.

When we cook out at our house, it's T-bone steaks. The sides are easy — potato salad, and any kind of vegetable somebody brings. It doesn't have to be fancy. It has to be people.

When one of my kids wanted to help, I handed them the patties. Press them by hand, I'd say, and then I'll show you the timing — burger, steak, chicken. That's how it gets learned. Somebody who knows standing right next to you, your hands in the food. A kid who's helping is a kid who's learning something real.

I let them feel the heat for themselves. Not by walking up to the grate — never that. I mean standing beside me on the safe side of the line, close enough that the warmth rolls off the grill and they understand for themselves why I'm careful with it. The rule that keeps them safe is in this book, and it comes straight from fire-safety guidance: keep children and pets at least three feet back, and have a grown-up present the entire time there's fire in the grill. Teach respect for the heat. Keep the distance.

Here's what feeding people means to me as a dad. It makes them happy. That's it, and that's plenty. They're with people who care about each other, and they get a full belly. What I want my kids to carry is how patient my dad and my uncles were. Patient with the food. Patient with the kid who wants to help.

If a brand-new dad asked me for one piece of advice, I'd give him this: have fun with it.

That's my part. The rest of the book is the part we checked. Every temperature and safety rule in here comes from a government food-safety or fire-safety source, and where the experts don't publish a number, the book says so instead of making one up. Read a chapter, then go light something.

— A Dad Knows™ — AB

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Dad Knows™ is a practical guide brand created to help fathers and families solve everyday problems with confidence.

Contents

- Foreword 5**
- Chapter 1 — Why Cookouts Are a Dad Skill . . 13**
- Chapter 2 — The Gear: Grills, Tools & Fuel . . . 16**
 - The tools that actually earn their space 17
 - Fuel: the differences that matter 18
 - About "budget" gear 19
- Chapter 3 — Setting Up Safe (Where & How) . 21**
 - Where the grill goes 21
 - The 3-foot kid-free zone 23
 - Never leave it unattended 24
 - Clean the thing — grease is fuel 24
 - What to have within arm's reach 25
- Chapter 4 — Firing It Up: Gas 28**
 - Step one: lid open before you light it 28
 - Step two: the soapy-water leak test 28
 - Step three: the lighting sequence 30
 - Step four: preheat 31
 - Step five: cook 31
 - When you're done: shut it down right 31
 - Winter and cold-weather grilling 32
- Chapter 5 — Firing It Up: Charcoal 34**
 - The chimney starter method 34
 - If you do use starter fluid 35

Where the coals go, and how much	36
Ash handling and disposal — the rule people get wrong	37
Cold weather and windy days	38
Chapter 6 — Heat Zones: Direct vs Indirect . .	39
How to build two zones	39
The move that saves cookouts	40
Air temperature vs. food temperature, again	41
A note on lids	42
The one-tool version of this chapter	42
Chapter 7 — The Thermometer Rules (Temps) .	43
The chart — the whole thing	43
The rest time	45
Where to put the probe	46
Working a burger with a thermometer	47
The "it's probably fine" trap	47
Two more temperature facts worth carrying	48
Fahrenheit, and the metric numbers	48
The one sentence version	48
Chapter 8 — Burgers, Dogs & Ground Meat . .	50
The number: 160°F	50
Buying and holding the meat	51
Patty prep	52
Cooking them	52
Flare-ups, and why they're worse than they look	53
Hot dogs and other pre-cooked meats	53

Sausages and brats (the raw ones)	54
Chapter 9 — Chicken & Poultry	56
The number: 165°F	56
The leak rule nobody knows	56
Clean platters, clean utensils	57
Pre-cooking: do it right or don't do it	58
Marinades and chicken	58
Skin-on chicken, and why it burns	59
Frozen chicken and the grill	60
Storage reminders	60
Chapter 10 — Steaks, Chops & Roasts	62
Where the meat comes from, briefly	62
Pork, and the old rules	63
The rest time, and why it's not just about juice	63
Thick cuts need two zones	64
Marinades for whole cuts	64
Checking each cut	65
Storage, so you don't lose money	65
Cutting boards and platters	66
Chapter 11 — Fish, Shrimp & Veggies	67
The number: 145°F	67
Cooking fish on a grate	67
Shellfish	68
Shellfish and the at-risk guest	69
Veggies	69

Marinades, cold food, and vegetarians at the table . . .	70
Chapter 12 — Ribs & Low-and-Slow Smoking . . .	72
What smoking actually is, per the USDA	72
The rule that catches people: thaw it first	72
Two thermometers, no exceptions	73
Ribs, specifically	74
Big cuts and poultry in the smoker	75
Running the fire safely all day	76
Cold weather smoking	77
Chapter 13 — Marinades, Rubs & Sauces . . .	78
The marinade rules	78
Basting without cross-contaminating	79
Rubs	80
Sauces and finishing	80
What marinades can and can't do	81
Chapter 14 — Feeding the Crew (Host Planning) 83	
About "how much per person"	83
Rule one: put somebody in charge	84
Rule two: set up the gear and the water	85
Rule three: shop and transport by the clock	85
Rule four: build a serving line that holds temperature	86
Rule five: handle what guests bring	87
Rule six: build your own numbers	88
Chapter 15 — Serving, Leftovers & Cleanup . . .	91
The clock: 2 hours, or 1 hour in the heat	91

Chill it right: shallow containers, not one big pot 92

How long it keeps 93

Reheating the leftovers 93

The grill cleanup 94

Cleaning the kitchen side 95

If somebody does get sick 96

Chapter 16 — The Dad Knows Cookout Checklist98

Before you light 98

While you're cooking 99

Holding and serving 100

Before you walk away 100

One last thing — the 3-foot rule, and how to teach it . 101

Chapter 1 — Why Cookouts Are a Dad Skill

If you can run a grill, you can feed anybody who shows up. That's not a small thing.

Cooking outside is one of the few skills that pays you back in every direction at once.

It feeds people. It teaches kids something real — fire, food, patience, and how to hand somebody a plate. It gives you a reason to be the guy with the yard that everybody ends up at. And it's one of the rare things you can get genuinely good at without a class, a license, or an app.

There's also this: standing over a grill is quiet time. You get to think. You get to listen to the kids playing behind you. You get to be the person doing something useful while eight conversations happen around you and nobody needs anything from you for twenty minutes. Dads need that. Cookouts hand it to you.

So let's start with where you probably are.

Maybe you've had a grill for years and you've never once used a thermometer, because your dad didn't, and his dad didn't, and the burgers always came out fine. Maybe you're brand new and the whole thing feels like a chore you're supposed to already understand. Maybe you've got a charcoal grill you love and a gas grill you tolerate, or the other way around.

All three of those are fine starting points. This book doesn't assume you know anything, and it doesn't talk down to you either.

Here's the honest framing. Grilling is not hard. It is, however, easy to get wrong in a small number of ways that matter:

- You put the grill somewhere it can catch something on fire.
- You leave it alone for a minute too long.
- You guess at whether the food is done instead of checking.
- You let the food sit out while people get their second plate.
- You put the coals in the trash.

Five things. That's the whole list of ways a cookout goes from good to bad. Fix those five and everything else is just flavor.

Is grilling popular? It is. The fire-safety folks at NFPA note that seven out of every ten adults in the U.S. have a grill or smoker. That's a lot of backyards doing the same thing you're doing. And the food-safety folks at USDA note that more than half of Americans say they cook outdoors year-round. So this isn't a summer hobby — it's a regular part of how families eat. Which is exactly why it's worth learning to do right.

One number worth knowing, because it's the reason this book takes fire seriously: grills are involved in thousands of home fires every year and send more than twenty thousand people to emergency rooms every year. Almost all of that is preventable with ordinary care. You don't need to be afraid of your grill. You need to know four or five things about it, and then you can relax and cook.

That's the deal this book makes with you: learn the few rules that actually matter, and then enjoy the rest. No fear,

no lectures, no twelve-step marinade doctrine. Just the stuff that could burn your house down or make somebody sick, handled so it never comes up again.

And here's the part that surprised me when I started paying attention to it: kids watch how you handle this. They watch whether you check the food or just guess. They watch whether you keep them back from the hot part or let them wander. They watch whether you feed the people who showed up. A cookout is a small, repeatable lesson in competence and care, and you're teaching it whether you mean to or not.

Dad Knows quick check — Chapter 1

- Pick one thing from this book you already do wrong. Just one. Fix that this weekend.
- Decide right now where the kids' line is around the grill.
- Plan to feed somebody on purpose this month — not a holiday, just a Saturday.

Chapter 2 — The Gear: Grills, Tools & Fuel

You don't need much. You need less than the store wants to sell you.

Walk into a grill aisle and it feels like you're buying a car. Let's cut it down.

There are four kinds of cooking setups most dads end up with, and each one is legitimately good at something:

Kettle charcoal. A round charcoal grill. Cheap to buy, simple, and it can do almost everything — sear, indirect, smoke a little. It takes longer to start and you have to pay attention. This is the one that teaches you the most, and a lot of guys never leave it.

Gas. Turn a knob, press a button, cook in ten minutes. Great for weeknights and for when people show up and you weren't planning on cooking. Needs a fuel tank and a leak check before you light it. Excellent for volume and speed, less good at real smoke flavor.

Pellet. An electric grill that feeds wood pellets into a fire pot and holds a temperature for you. It's the closest thing to "set it and forget it" that still involves real fire and real smoke. Costs more and needs power and dry pellets.

Flat-top / griddle. A big hot steel surface. Not a grill in the smoky sense, but fantastic for a pile of burgers, onions, eggs, and anything you'd cook on a diner line. Great for feeding a crowd fast.

Which one first? Honest answer: the one that fits your money and your weeknights. A kettle teaches you fire. A gas grill teaches you volume. If you're feeding kids on a

schedule, gas. If you want the slow Saturday thing, kettle. You can own more than one eventually, and most guys do.

The tools that actually earn their space

You don't need a drawer full of gadgets. You need these:

- **Long-handled tongs.** Long handles are a fire-safety item, not a preference. Fire-safety guidance for grilling specifically calls for long-handled tools so your hands and forearms stay back from the heat.
- **A food thermometer.** This is the single most important tool in the book. Digital instant-read ones read in about ten seconds. Dial instant-read ones take about fifteen to twenty seconds. Either is fine. Get one and keep it clean.
- **A second thermometer if you're smoking.** One for the meat, one to know the temperature of the air inside the smoker. Both matter for a long cook — more on that in Chapter 12.
- **A grill brush or scraper and a putty knife for the trays.** Cleaning is a fire-safety item too: NFPA reports that in about one-fifth of grill fires, the grill had not been cleaned. Grease is fuel.
- **A chimney starter (charcoal).** Newspaper in the bottom, coals on top, a long match or lighter underneath. No lighter-fluid guessing games.
- **Two cutting boards.** One for raw meat, one for everything else. The USDA volunteer food-safety guide is blunt about this: use one cutting board for fresh produce and a separate one for raw meat, poultry, and seafood. Replace boards once they get deep, hard-to-clean grooves.

- **Shallow containers with lids.** For cooling leftovers fast. This isn't an optional nice-to-have — shallow containers are how you get food out of the temperature danger zone quickly.
- **A cooler and plenty of ice or frozen gel packs.** For raw meat going out, and for cold food sitting on the table.
- **Soap, paper towels, and a source of clean water.** If you're cooking somewhere without a tap — a park, a tailgate, a campsite — bring water for washing hands, utensils, and your thermometer.

That's the kit. Notice there's nothing on that list that costs real money except the grill itself.

Fuel: the differences that matter

Propane. Comes in a tank. The fuel is under pressure. That means one thing and one thing only: check the connections before you light it. Fire-safety guidance says to check the tank, hose, regulator, and burner connections for leaks before you use the grill — brush or spray a soapy solution (kids' bubbles work great) on the connections with the cylinder turned on. If you see bubbles, you have a leak. Turn the cylinder off and fix it before you cook. Chapter 4 walks the whole test.

Charcoal briquettes vs. lump. Briquettes are uniform and burn steady. Lump burns hotter and faster and leaves less ash. Both are fine. Pick one and learn it. What matters more than which one you buy is how you start it and what you do with the ashes.

Starter fluid. If you use it, use only charcoal starter fluid, and only on cold, unlit coals. Fire-safety guidance is explicit: never add charcoal fluid or any other flammable

liquid to an already-lit fire. And never, ever use gasoline. Not once, not "just a splash," not because you're out of starter fluid. Gasoline is not a grilling product.

Pellets. Keep them dry. Wet pellets turn to sawdust and won't feed.

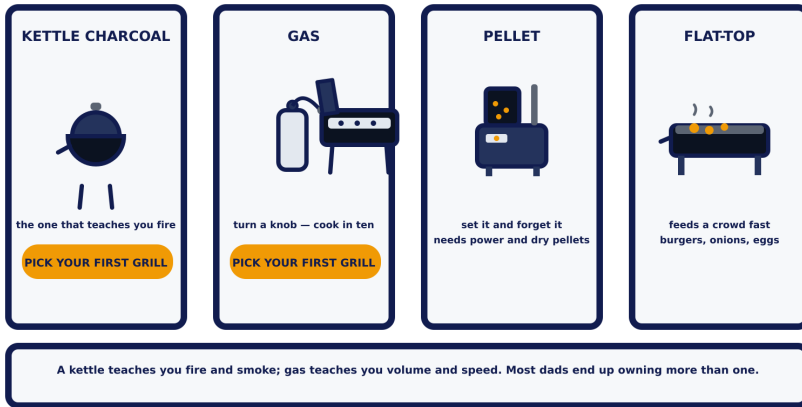
Where you store things matters too. Starter fluid should be stored out of the reach of children and away from heat. That's a fire-safety guideline and it makes obvious sense.

About "budget" gear

A cheap kettle with a good thermometer will beat an expensive gas grill with no thermometer every single time. Spend your money in this order: thermometer first, grill brush second, everything else after. If you're deciding between a bigger grill and a better thermometer, buy the thermometer.

FOUR WAYS TO COOK OUTSIDE

pick the one that fits your weeknights



The four grill types side by side — kettle charcoal, gas, pellet, and flat-top — each with a one-line label and a pick-your-first-grill callout under the kettle and the gas grill.

Dad Knows quick check — Chapter 2

- Do you own a food thermometer? If not, that's your next purchase.
- Do you have long-handled tongs and a separate board for raw meat?
- Is your starter fluid out of reach of kids and away from heat?
- Is your grill brush in decent shape, or is it a bald nub?

Chapter 3 — Setting Up Safe (Where & How)

The most dangerous thing about a grill is where you put it.

Most guys never think about placement. They wheel the grill out to the same spot it's always been and light it. That spot might be perfect. It might also be under the eaves, up against the siding, with a deck railing on one side and dry leaves on the ground.

Placement is the number one thing in this book, because it's the thing that turns a cookout into a house fire. Fire-safety guidance is specific about it, so let's be specific back.

Where the grill goes

Put the grill **well away from the home, away from deck railings, and out from under eaves and overhanging branches**. That's the rule, straight from NFPA's grilling guidance. Read it again and picture your yard. Then answer honestly: are you clear on all four counts — the house, the railings, the eaves, and the branches?

This matters more than it sounds. Nearly one-quarter of grill structure fires started on an exterior balcony or open porch. Eight percent began when an outside wall caught fire. Three percent started with some type of structural member or framing. That's the house catching fire because a grill was too close to it. A balcony or porch is not "outside" in the way you think — it's attached to the thing you're trying to keep.

So the scale of the mistake is straightforward: the closer the grill sits to something that can burn, the more a flare-up, a tipped grill, or a hot grease fire becomes a building fire instead of an annoyance.

A practical way to think about it: stand at your grill. Now imagine a gust of wind, a kid bumping it, or a grease flare that shoots up a foot. If any of those would put flame against the siding, the railing, the eaves, or a branch, you're in the wrong spot. Move the grill.

Other placement basics that come from the same guidance and from the U.S. Fire Administration's grilling flyer:

- **Only use your grill outside.** Not in a garage. Not on a screened porch. Not in a breezeway or under a carport roof. Outdoors, in the open. Carbon monoxide and fire both live on the other side of that line.
- **Keep it away from siding, deck rails, and eaves.** The USFA names all three.
- **Keep it off a path where people walk.** Fire-safety guidance for portable grills says to keep the grill away from overhanging branches, lawn games, play areas, and foot traffic. Your aunt carrying a casserole should not have to dodge your grill.
- **On a windy day, be pickier about the spot.** A grill that's fine in still air can throw sparks a long way in wind.
- **On a balcony, check your rules first.** Many apartment buildings and HOAs ban grills on balconies outright, and given the fire numbers above, it's easy to see why. Know your rules before you buy the fuel.

- **At a park or campground, check fire restrictions and the fire danger rating before you light anything.** That's straight out of the portable-grill guidance. Restrictions get posted for a reason.

The 3-foot kid-free zone

This is the rule that matters most if you have kids, grandkids, nieces, nephews, or a neighborhood full of children who all somehow end up in your yard.

Keep children and pets at least three feet away from the grill. NFPA calls it a "kid-free zone" of at least 3 feet (about 1 meter) around hot things. The USFA flyer says the same: keep a 3-foot safe zone around the grill to keep kids and pets safe.

Three feet is a floor, not a target. If you have a toddler, make it wider. If you have a kid who does not yet understand "hot," make it much wider. If you've got a golden retriever who thinks the smell of burgers is a personal invitation, wider still.

How do you make the zone real? Make it visible. A ring of chairs. A length of rope. A line of sidewalk chalk. A cooler parked as a barrier. Kids respect a boundary they can see a lot more than a boundary you just described out loud while turning your back.

And here's the part that actually works: give them a job on the safe side of the line. The kid who's holding the plate of buns, or carrying the empty platter back to the table, or running the roll of paper towels out, is a kid who is not drifting toward the grate. A job keeps a kid out of the danger zone better than a warning does.

One more thing about kids and fire. Fire-safety guidance says to have an adult present at all times when a grill is in use. Not "nearby." Present. Somebody watching. You do not step inside to catch the end of a ballgame while a grill is lit and kids are in the yard. If you have to leave, the fire goes out first or somebody else takes over watching it.

Never leave it unattended

Never leave the grill unattended when it's in use.

That's the fire-safety guidance in plain language. It doesn't mean you can't step two feet away to grab the tongs. It means the grill gets a grown-up's attention the entire time there's fire in it or heat in it.

Two reasons, both real:

1. A flare-up can go from impressive to dangerous in the time it takes you to walk inside and come back out.
2. A kid or pet can cross three feet in about one second when nobody's looking.

Standing there is not a chore. It's the job. Bring a chair if you need one. Bring a beverage. Bring the neighbor who talks too much. Just stay with the fire.

Clean the thing — grease is fuel

This is the least glamorous rule in the book and one of the most important. NFPA reports that the grill had not been cleaned in roughly one-fifth of grill fires. Twenty percent. One in five.

Translation: a whole lot of people are cooking on a grill that's got a layer of old grease sitting in the trays and on the grates, and then they light a fire underneath it.

Cleaning is not about being a neat person. It's about removing fuel from a place where you're about to make fire. Scrape the grates while they're warm. Empty and wipe the grease tray. Clean out ash from the bottom of a charcoal kettle once it's completely cold. If grease has built up on the inside of the lid, clean it.

A quick routine:

- After the food comes off and while the grill is still warm, scrape the grates with a brush.
- Once it's cool, pull the grease tray, dump it, and wipe it out.
- Empty the ash catcher into a metal container — never into the trash, and only after everything is cold.
- Once or twice a season, do a deeper clean of the lid and fire box.

What to have within arm's reach

Before you light anything, set yourself up so you never have to walk away:

- Long-handled tongs and a spatula.
- Your thermometer.
- A platter or sheet pan for cooked food — and know that cooked food goes on a clean surface, never back on the plate that held raw meat.
- Oven mitts or a heavy glove.
- A spray bottle of water for small flare-ups, or a plan to move food to the cooler side of the grill.
- A fire extinguisher or a bucket of sand nearby for a bigger problem. Never water on a grease fire.

That last one deserves its own line. **Never put water on a grease fire.** Water turns hot grease into a steam explosion that throws burning grease at you. If a grease fire starts, cut the heat if you can safely, cover it if you can cover it, and use an extinguisher made for it. If it's out of hand, back away and call for help.

THE 3-FOOT KID-FREE ZONE

kids and pets stay outside the amber ring



The 3-foot kid-free zone, top-down: the grill at center, an amber 3-foot radius ring, kids and pets kept outside the ring, and no-go areas marked at the house wall, deck railing, eaves, and overhanging branch.

Dad Knows quick check — Chapter 3

- Is the grill clear of the house, deck railings, eaves, and overhanging branches?
- Can you point to the 3-foot line, and can your kids see it?
- Is there always a grown-up within arm's reach while the fire is lit?
- Are the grates and grease tray clean from the last cookout?

- Do you know what you'd do about a grease fire — and is there a plan besides water?

Chapter 4 — Firing It Up: Gas

Gas is the easy one — right up until it isn't. Two checks make it easy again.

A gas grill is the most convenient cooking appliance you own. It's also a pressurized fuel system sitting in your yard, which is why the two most important things in this chapter are a lid and a soapy sponge.

Let's do it in order.

Step one: lid open before you light it

Always make sure the gas grill lid is open before lighting it. That's an NFPA safety tip and it's not a small one.

Here's why. If the lid is closed and gas has been flowing or accumulated inside, you've built a box of fuel-air mixture. Light it and you get a sudden burst of flame — a flash — with your hand and face right in the neighborhood. With the lid open, any accumulated gas can't trap that way.

So: lid up, then light. Every time. Even when you're in a hurry. Especially when you're in a hurry.

Step two: the soapy-water leak test

Fire-safety guidance says to check the gas tank, hose, regulator, and burner connections for leaks before using the grill. The method is simple:

1. **Turn the gas cylinder on.** Leave the burner knobs off.
2. **Make soapy water.** A few drops of dish soap in water, or grab the kids' bubble solution — that's

literally what NFPA suggests.

3. **Brush or spray it on the connections** — where the hose meets the tank, at the regulator, and at the burner connections.
4. **Watch.** Bubbles that grow or keep coming means gas is escaping.
5. **If you see bubbles, turn the cylinder off immediately.** Don't cook. Fix the connection, tighten it, replace the hose or regulator if it's cracked, and test again. If you can't stop the leak, that tank doesn't get used today.

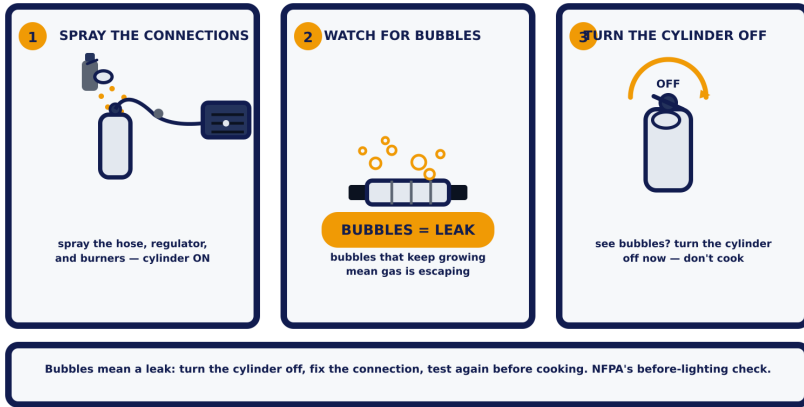
Now here's why this test isn't optional. NFPA's fire data shows that leaks or breaks were primarily a problem with gas grills: six percent of gas grill structure fires and thirteen percent of outside gas grill fires were caused by leaks or breaks. That's the exact failure the soapy-water test catches, and it catches it in about thirty seconds at the start of the cookout.

Do this test at the start of the season, and any time you've swapped tanks, moved the grill, or bumped the hose. It costs you almost no time.

Also worth knowing: gas grills were involved in an average of about 9,235 home fires per year, split between structure fires and outdoor fires. Leaks and breaks are a big piece of that. A soapy sponge is a cheap insurance policy.

THE SOAPY-WATER LEAK TEST

three steps before you light it



The soapy-water leak test in three steps: brush or spray soapy water on the hose, regulator, and burner connections with the cylinder on; watch for bubbles growing at a connection; turn the cylinder off — bubbles equal a leak.

Step three: the lighting sequence

Different grills have different ignition — a push-button igniter, a battery igniter, or a match in a holder through a lighting hole. Follow your manual for your grill. The universal sequence is:

1. Lid open.
2. Leak test done and clean.
3. Turn the burner knobs to the light position, or the one burner you're lighting.
4. Push the igniter, or use the match holder in the lighting hole as your manual directs.
5. Once it's lit, set the burners where you want them and close the lid to preheat.

If it doesn't light right away, **turn the gas off and wait before trying again.** Gas that keeps flowing without

ignition is how you get the flash you avoided by opening the lid. Give it a minute to clear, then try again.

Step four: preheat

Let the grill come up to heat with the lid closed before the food goes on. A preheated grate gives you better marks and less sticking. Do you need to know exactly how hot? Here's the honest answer: the thermometer in your lid, if you have one, tells you about the air inside the grill — the same way an oven thermometer tells you about the air in your oven. It is not telling you the temperature of your burger.

That's the distinction this whole book keeps coming back to: **air temperature is a cooking setting; food temperature is a safety fact.** You tune the first one by feel and by looking at the food. You check the second one with a thermometer in the meat. The lid gauge is a nice convenience. It is not a substitute.

Step five: cook

Set up the two-zone layout if you can (Chapter 6 covers it) — one side hot for searing, one side cooler for moving food back when it flares or when it's nearly done. A flare-up is fat hitting flame; the fix is to move the food off the hot spot and let the fire calm down, not to spray things at it.

Keep the lid closed when you're not actively moving food. It holds heat, evens out the cook, and cuts down on flare-ups from drippings.

When you're done: shut it down right

Turn off the burner knobs, then turn off the cylinder valve. The order matters over time: if you leave the cylinder on,

gas sits in the hose and regulator, which is where a small leak can slowly do its work.

Give the grill time to cool before you close it up and cover it. Never cover a warm grill — you're trapping heat against the metal and, worse, putting a cover over a still-hot surface you might later forget about.

And clean the grates while they're warm enough to scrape, then let everything cool the rest of the way before you touch the grease tray.

Winter and cold-weather grilling

More than half of Americans say they cook outdoors year-round, according to the USDA — so yes, you can grill in January. Some adjustments:

- The grill takes longer to come up to temperature in cold air, and wind steals heat.
- Keep the lid closed more.
- Never, ever move a lit grill indoors for shelter from the weather. Not into the garage, not into a shed with the door closed, not onto a screened porch. Carbon monoxide does not care that it's cold outside.
- Check the tank connections again after any cold-weather move. Cold makes rubber hoses stiff and brittle.

Dad Knows quick check — Chapter 4

- Lid open before lighting — every single time?
- Soapy-water test done at the start of the season and after any tank swap?
- Bubbles mean cylinder off. Do you know where your shut-off is without looking?

- Burnt-off grill, knobs off, then cylinder off when you finish?
- Have you stopped calling the lid thermometer a meat thermometer?

Chapter 5 — Firing It Up: Charcoal

A chimney, a newspaper, and a long match. That's the whole trick.

Charcoal is slower than gas and better for it. You've got time to talk to people while the coals get ready, and you've got real fire under your food. The only part that goes wrong is how guys start it.

The chimney starter method

This is the safe, boring, reliable way and it's the one you should use almost every time.

1. **Take the top grate off the grill** and set it somewhere safe.
2. **Stuff the bottom chamber of the chimney with newspaper.** Loosely — not packed tight. You want air to move through it. (Some guys use fire-starting cubes. Those work too.)
3. **Fill the top of the chimney with charcoal.** A full chimney is the usual measure for a hot two-zone cook; a half chimney if you're cooking something small.
4. **Set the chimney on the charcoal grate inside the grill.**
5. **Light the newspaper from below with a long match or a long lighter.** Long is the point. Fire-safety guidance for chimney starters specifically says newspaper for fuel and a long match to light it, so your hand stays back from the flame.
6. **Wait.** Coals are ready when they're ashed over — gray on the outside with a glow underneath. You'll

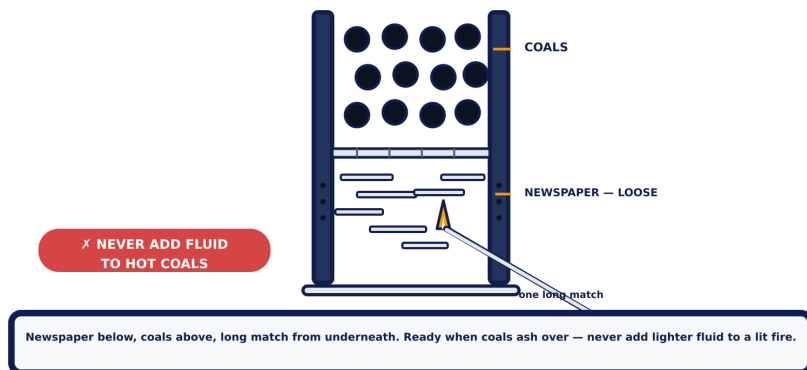
hear it and smell it before you see it. How long that takes depends on how many coals you're lighting, how windy it is, and how cold it is outside.

Then dump the coals where you want them. Spread them in a single layer for a hot direct fire. Bank them to one side for a two-zone setup (Chapter 6). Add the grate, let it heat for a few minutes, scrape it, and cook.

Why is the chimney better than lighter fluid? Two reasons. First, there's no fluid to add later, so the rule "never add fluid to a lit fire" is easy to keep. Second, the food tastes like food. Lighter fluid flavor is real and it is not a flavor anybody asks for.

THE CHIMNEY STARTER

newspaper below — coals above — long match from under



The charcoal chimney starter: newspaper in the bottom chamber, coals in the top, a long match lighting from below, and the warning never add lighter fluid to hot coals.

If you do use starter fluid

Plenty of guys do, and there's nothing wrong with it as long as you follow two rules that fire-safety guidance is very clear about:

- **Use only charcoal starter fluid.** Not gasoline. Not paint thinner. Not kerosene. Not "whatever's in the garage." Gasoline is not a grilling product and this is not a style preference — it's how people get burned and blow up backyards.
- **Never add charcoal fluid or any other flammable liquid to an already-lit fire.** Ever. Not when the coals are "going out." Not when you want it hotter. Not to "help it along." A lit bed of coals plus a flammable liquid equals a flame that travels up the stream to the container in your hand, which is a sentence that has ended badly for a lot of people.

The safe way if you're using fluid: pour it on cold, unlit coals, wait for the fluid to soak in per the container's directions, then light. Or better — just use the chimney. It's not more work once you've done it twice.

Where the coals go, and how much

- **Direct, single layer of coals spread under the grate** for burgers, dogs, thin steaks, veggies, anything you want fast.
- **Two-zone: pile all the coals on one half of the grill** for a sear side and a no-fire side. This is the single most useful layout in charcoal cooking. Big flare-up? Move the food to the empty half. Nearly done and the guests are late? Move the food to the empty half.
- **A few coals aside in a starter basket** if you're doing a long cook and want to replenish. Only add cold coals to the fire, never coals drenched in fluid.

Vent control: bottom vents feed the fire, top vents let heat out. More open means hotter. Closing both and walking away with a fire still going is how people come back to a

surprise, so don't do that. Close the vents only on a fire you're prepared to have go out slowly, and only after the coals have stopped being a cooking fire.

Ash handling and disposal — the rule people get wrong

This is the part that causes fires after the cookout is over, when everybody's inside and nobody's watching.

Fire-safety guidance, in two places, says the same things:

- **Let coals cool completely before you dispose of them.** Completely. Not mostly. Not "looks gray." Coals hold heat for a startlingly long time, buried in ash, looking done.
- **Put cooled coals in a metal container with a tight-fitting lid.** The USFA flyer says "a metal can with a lid." NFPA says a metal container, kept outside and away from anything that can burn.
- **Never empty coals directly into a trash can.** This is explicit in the guidance and it's one of the most common causes of a fire that starts an hour after you come inside.
- **If you're leaving the spot or turning in for the night, douse the fire with water first and make sure the area is cool to the touch.** Also explicit — douse with water before going to sleep or leaving.

So the ritual at the end of a charcoal cookout is: douse, wait, check that it's cold, then into the metal can with a lid, stored outside away from anything that can burn. That's four steps. Skipping them is how a good afternoon turns into a fire call.

An old metal garbage can with a lid, or a steel ash bucket, lives next to the grill and does this job for years. Keep it outside. Keep it away from the house, the deck, and the fence.

Cold weather and windy days

Charcoal in October is charcoal in April — you just need more of it and a windbreak. Put your body between the wind and the chimney while it's lighting. If it's gusty, keep a lid nearby. And check for fire restrictions if you're cooking somewhere away from home; guidance for portable grills says to check local fire restrictions and the fire danger rating before you light.

Dad Knows quick check — Chapter 5

- Newspaper and long match in the house, or a lighter that reaches?
- Do you know what "ashed over" looks like, or are you still guessing?
- Is there a lidded metal can outside for the coals?
- Have you ever been tempted to add fluid to a live fire? Decide now that you won't.
- When you go to bed, is the fire doused and cold to the touch?

Chapter 6 — Heat Zones: Direct vs Indirect

Two zones. One hot, one not. That one layout fixes half your cookout problems.

If you take one practical thing from this book besides a thermometer, take this: set your grill up in two zones.

Most guys cook in one zone — all the heat, all the time, under all the food. That works right up until it doesn't. It's the reason burgers burn on the outside while staying pink in the middle, the reason chicken skin turns black before the meat cooks through, and the reason a flare-up turns into a panic.

Two zones solve all of it.

How to build two zones

On a charcoal grill: bank all your lit coals on one half of the grill, and leave the other half empty. Grate goes back on. Hot side = direct heat. Empty side = indirect.

On a gas grill: light the burners on one side only, or the middle burners for a ring-style setup. Hot side over the lit burners. The unlit side is your indirect area. You can also keep one burner on low as your "keep warm" zone.

That's it. Hot half, cool half.

Direct cooking means the food sits right over the fire. You use it for:

- Searing steaks and chops.
- Burgers and dogs.
- Thin cuts that cook fast.

- Anything you want browned and marked.

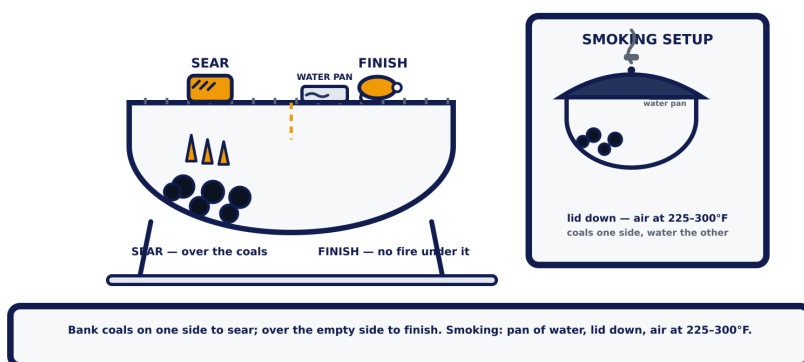
Indirect cooking means the food sits over the part with no fire under it, with the lid closed. The grill becomes an oven and the heat circulates around the food. You use it for:

- Thick cuts that need to cook through without scorching.
- Whole chickens, big roasts, ribs.
- Anything that's already browned and just needs to finish.
- Anything that flares up.

The USDA's grilling guidance draws the same line for smoking: cooking indirectly in a covered grill with a pan of water — or in a dedicated smoker — at a low temperature for a long time. Same idea, longer clock.

TWO ZONES: DIRECT AND INDIRECT

sear over the coals — finish over nothing



Direct vs. indirect heat zones: a kettle cutaway with coals banked on one half, an empty grate on the other, food labeled sear over the coals and finish over the empty side, and a water pan inset for smoking.

The move that saves cookouts

Here's the habit to build: **when something goes wrong on the grill, your first move is to move the food, not to spray something at it.**

Flare-up? Slide the food to the cool side and close the lid. The fire starves for the fat that was feeding it and settles down in a minute. Your food stops burning while it waits.

Getting dark too fast? Cool side. Lid down. It finishes cooking through at the lower heat.

Everyone's plate is full but the last two steaks are done? Cool side, lid down, and they hold while people sit. The USDA's guidance for keeping cooked food hot names the side of the grill rack away from direct heat as one of the places you can hold food until serving — right next to a 200°F oven, a chafing dish, a slow cooker, or a warming tray. That's the same list the volunteer food-safety guide gives for keeping hot food hot, and all of them keep food at or above 140°F.

Which brings us to the number that matters when food waits: **hot food holds at or above 140°F.** If your cool side can't keep it there — and on a small grill after a big cook, it often can't — then the food goes to the oven or the warming tray, or it goes to the table right now. It does not sit on a plate in the shade for an hour.

Air temperature vs. food temperature, again

Two-zone cooking lets you control the air temperature in the grill by where you put the food and how much the lid is on. That's your cooking dial. It is still not a safety reading.

If you're doing a long indirect cook, this is where a second thermometer earns its keep. Fire-safety folks care about

the fire; food-safety folks care about two temperatures at once: the air inside the unit and the meat itself. The USDA says to monitor the air temperature inside the smoker or covered grill and hold it between **225°F and 300°F**. We'll go deeper on that in Chapter 12.

A note on lids

Keep the lid down. Guys leave lids up out of habit, and it's the single biggest inefficiency in backyard cooking — you lose heat, you get flare-ups from dripping fat sitting on hot coals, and your cook times stretch out. Lid down for indirect, lid down between flips for direct. Lid up only when you're actually working the food.

The one-tool version of this chapter

If you're cooking on a tiny grill and can't build a real two-zone setup, do this instead: keep a folded sheet of heavy foil or a small sheet pan on hand. When the food needs to slow down, slide the foil under it. Instant cooler spot. It's not elegant. It works.

Dad Knows quick check — Chapter 6

- Can you describe which half of your grill is the hot half right now?
- When something flares, is your reflex to move the food — not spray it?
- Do you know where food waits if the plates aren't ready yet?
- Lid down unless you're working the food?
- For long cooks: do you have an air thermometer and a meat thermometer both?

Chapter 7 — The Thermometer Rules (Temps)

Color lies. Juice lies. The thermometer tells the truth.

If you only remember one thing from this book, remember this: **you cannot tell whether food is done by looking at it.**

The USDA is direct about it. Appearance — the color of the meat, whether the juices run clear — cannot tell you whether food is safe. Only a food thermometer shows you the internal temperature the food actually reached. There's a whole USDA publication dedicated to this exact point, titled "Doneness Versus Safety." Pink burgers and brown burgers can both be unsafe. Clear juices can come out of meat that hasn't hit the number.

So the fix isn't being more careful with your eyes. The fix is a \$15 tool and a chart.

The chart — the whole thing

Here's the USDA's safe minimum internal temperature chart. These are the numbers. No rounding, no "close enough."

Food	Minimum internal temperature	Rest time
Beef, pork, veal, and lamb — steaks, chops, roasts	145°F	At least 3 minutes
Ground meats (beef, pork, veal, lamb)	160°F	—
Ground poultry	165°F	—

Food	Minimum internal temperature	Rest time
All poultry — breasts, whole bird, legs, thighs, wings, including ground	165°F	—
Fish and shellfish	145°F	—
Eggs, cooked	160°F	—
Leftovers and casseroles (reheating)	165°F	—
Reheat cooked ham from a USDA-inspected plant	140°F	—

SAFE MINIMUM COOK TEMPS

USDA numbers — a thermometer tells the truth



The safe minimum internal temperature chart — 145°F plus a 3-minute rest for steaks, chops, and roasts and for fish; 160°F for ground meats; 165°F for all poultry, leftovers, and casseroles; 140°F for reheated ham from a USDA-inspected plant — measure in the thickest part, away from bone.

Reheat cooked ham, all others	165°F	—
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Four numbers cover almost everything you'll cook outside: **145** for whole cuts of beef, pork, veal, and lamb, plus fish. **160** for ground meat. **165** for poultry and for anything you're reheating. **140** for holding hot food — and for that one specific case of ham from a USDA-inspected plant.

The USDA's wording matters too: cook all food to these minimum internal temperatures, measured with a food thermometer, **before removing the food from the heat source**. And: for personal preference, you may choose to cook food to higher temperatures. That last line is your permission slip. If your family likes a burger cooked past 160°F, cook it past 160°F. Higher is allowed. Lower is not.

The rest time

Steaks, chops, and roasts get **at least 3 minutes of rest** after they come off the heat. This isn't about juiciness — although it helps there too. The rest time is part of the safety instruction, which is why it's in the same row on the chart as the temperature.

What does "rest" mean? Take it off the heat. Put it on a clean platter or board. Leave it alone for three minutes. Then slice and serve.

While it rests, the internal temperature can keep climbing a little — that's what people mean by carryover cooking. That's another reason not to panic if you pull something at 145°F and it reads 148°F three minutes later. Both numbers are safe. 145°F plus the rest is the target; a few degrees above is just fine.

Note that ground meats don't have a rest requirement on the chart. 160°F and it's done.

Where to put the probe

Measure in the **thickest part of the food, away from bone**. That's from the chart itself.

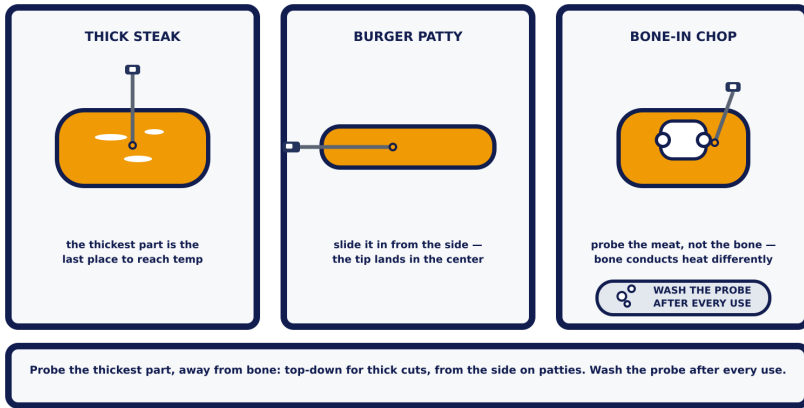
Away from bone matters because bone conducts heat differently and can give you a reading that isn't the meat's. Thickest part matters because that's the last place to reach temperature — if the middle of the middle is at 160°F, the edges are way past it.

A few practical notes on technique, drawn from the USDA's volunteer food-safety guide:

- **Digital instant-read:** the sensor is in the tip. Put the tip in the center of the thickest part, at least ½ inch deep. Give it about 10 seconds to read.
- **Dial instant-read:** insert the probe its full sensing length, usually 2 to 2½ inches. It takes about 15 to 20 seconds to display accurately. For thin food like a hamburger patty or a boneless chicken breast, insert the probe from the side so the sensor sits in the center.
- **Oven-safe thermometers** stay in the food the whole time and go in 2 to 2½ inches at the start. They're not appropriate for thin food.
- **Check more than one spot** on anything thick — the guide says check the temperature in several places to make sure the food is evenly heated.
- **Wash the probe with hot soapy water after every use.** Every use. A probe that touched raw chicken and then goes into cooked food is just a contaminated utensil.

WHERE THE PROBE GOES

thickest part, and away from bone



Where to probe: a thick steak, a burger patty with the probe in from the side, and a bone-in chop — the probe tip in the thickest part, away from bone, with a wash-the-probe-after-use note.

Working a burger with a thermometer

A thin patty is the hardest thing to read, so here's the method:

1. Slide the probe in from the side, parallel to the patty, so the tip sits in the center.
2. Aim for 160°F.
3. Check a second patty, and a third. Patties cook unevenly depending on where they sat on the grate.
4. If one's at 155°F and another's at 165°F, the cool one goes back on the hot side. Don't average. Don't serve the low one.

The "it's probably fine" trap

Most foodborne illness doesn't come from a restaurant. It comes from home kitchens and backyard cookouts where somebody guessed. The USDA's guide points out that

foodborne illness often looks like the flu — nausea, vomiting, diarrhea, fever — so people often don't connect it to the food at all. That's the trap: you can be wrong and never know it, except that somebody's kid spends two days feeling terrible.

The thermometer takes the guess out of it. That's the whole point. Once you have it, you stop needing to be lucky.

Two more temperature facts worth carrying

Reheating is a different number. Food you cooked ahead and cooled, and leftovers, get reheated to at least **165°F** — higher than the temperature the food was originally cooked to. That's because reheating has to take the food through the danger zone and past it, and 165°F is the number the guidance sets. The exception is precooked, commercially vacuum-sealed ready-to-eat food like hams and roasts from a USDA-inspected plant, which get reheated to 140°F. When in doubt, aim for 165°F.

Holding is a different thing again. Once food is cooked or reheated, keeping it hot means holding it **at or above 140°F** — an oven, a warming tray, a chafing dish, a slow cooker, or the cool side of the grill. Below 140°F, you're in what the guides call the danger zone.

Fahrenheit, and the metric numbers

If you read foreign recipes or buy an imported thermometer, the chart gives you metric equivalents where they exist: 145°F is 62.8°C and 160°F is 71.1°C. The chart lists those on the beef and ground meat rows. For everything else, stick with the Fahrenheit numbers above.

The one sentence version

Buy a thermometer. Check the thickest part, away from bone. Cook to the chart. Rest the steaks three minutes. Wash the probe. You will never again serve a burger you're guessing about.

Dad Knows quick check — Chapter 7

- Thermometer within arm's reach of the grill, not in a drawer inside?
- Do you know your four numbers without looking — 145, 160, 165, 140?
- Resting steaks, chops, and roasts for at least 3 minutes?
- Checking several places on thick cuts?
- Probe washed after every use?

Chapter 8 — Burgers, Dogs & Ground Meat

The most common cookout food is also the most commonly undercooked. That stops today.

Burgers are the heart of the whole thing. A cookout without burgers is a picnic. So let's get this chapter right, because the backyard burger is where most people's "I've done this a thousand times" confidence runs ahead of the facts.

The number: 160°F

Ground meat — beef, pork, veal, lamb — cooks to a minimum internal temperature of 160°F. No rest time on the chart. That's the number.

Why is ground meat different from a steak? Because of where the bacteria are. On a whole cut like a steak, the contamination is on the outside surfaces, so searing the outside takes care of it. When meat is ground, that outside gets mixed all the way through the middle of the patty. Now the middle is where the outside used to be. Which is exactly why you can't judge ground beef the way you judge a steak, and why 160°F has no exceptions for personal preference, no matter how much you liked your burgers in college.

The good news: 160°F ground beef is a juicy burger if you cook it right. Get it there, take it off, don't smash it flat and leave it on the fire for another five minutes. The dryness guys complain about isn't caused by the temperature. It's caused by overcooking past it.

Buying and holding the meat

A few USDA habits that cost you nothing:

- **Buy cold food last.** Plan to drive straight home from the store.
- **Separate it in the cart.** Raw meat, poultry, and seafood stay separate from everything else, in your cart and in your fridge.
- **Bag it and box it.** Raw meat goes in sealed packages at the **bottom** of the cooler so juices can't drip down onto food that won't be cooked.
- **Keep it cold until it hits the grill.** Refrigerator temperature, about 40°F or cooler. If you're transporting it, that's a cooler with plenty of ice or frozen gel packs and an appliance thermometer to prove the cold food is at 40°F or below.
- **Refrigerate perishables within 2 hours** — 1 hour if it's above 90°F outside.
- **Frozen? Thaw it the safe way.** Not on the counter. In the refrigerator, or in the microwave if you're cooking it immediately, or in cold water with the airtight package fully submerged and the water changed every 30 minutes — and cook it immediately after thawing.

Also worth knowing: don't partially cook a burger to finish later. The USDA spells out the risk — partially cooking food and finishing it later gives bacteria time to grow. Same rule for chicken, which is why it's in two chapters. If you pre-cook for a party, cook it all the way through, chill it fast and properly, then reheat to 165°F. Don't half-cook and park it.

Patty prep

No invented rules here — just technique that works.

- **Portion evenly.** Uneven patties mean uneven cooking, which means your thermometer readings are all over the map and you're standing there deciding which one to trust.
- **Make them a little wider than the bun.** They shrink.
- **Don't overwork the meat.** A loose, lightly packed patty is a more tender patty. Compacted ground beef turns into a hockey puck.
- **A dimple in the middle** keeps the patty from turning into a dome as it cooks and makes your thermometer's job easier.
- **Keep them cold until they go on.** Cold meat, hot grate.
- **Salt the outside, not the inside** — the outside is where it'll do its best work and where it won't change the texture of the whole patty. Season right before they hit the fire.

Cooking them

Two-zone setup, like Chapter 6. Sear over the hot side to get your crust, then move them to the cool side to finish through if they need it. Lid down between flips.

Check each patty with the probe from the side, tip in the center, and don't stop checking until they read 160°F. The rule for the whole cookout: **no guessing, no serving, no exceptions.** A burger at 155°F goes back on the fire. It doesn't matter how good it looks.

Flare-ups, and why they're worse than they look

Ground beef has fat, and fat drips, and dripping fat on hot coals makes flame. When flames lick up around the patties:

- **Move the food to the cool side.** Off the fire, the flare starves and dies down. Your burgers stop blackening.
- **Close the lid.** Less oxygen, less flame.
- **Don't spray water on grease.** Water plus hot grease equals a steam explosion that throws burning fat. That's how cookouts send people to the ER.
- Keep the grate scraped and the grease tray emptied so old fat isn't feeding the fire.

Hot dogs and other pre-cooked meats

Here's the honest version. Hot dogs and most packaged sausages are already cooked or cured when you buy them. They're not raw meat. But "already cooked" is not a license to serve them cold off a warm grill, and it's not a license to leave them sitting out.

What the guidance gives you: **leftovers and casseroles reheat to 165°F**, and once food is cooked or reheated it's held **at or above 140°F** until it's served. So the practical rule for a dog: **heat it until it's steaming hot all the way through**, then keep it above 140°F until it's in a bun in somebody's hand. If you're putting dogs out on a platter for people to grab over the next hour, that platter is a hot-holding problem, not a decoration. Keep it near the fire, or on a warming tray, or bring out fewer at a time and cook more when the first batch is gone.

Also important for dogs: they're on the same raw-juice caution as everything else in the cooler. If a package of hot dogs has been sitting in the same bag as raw chicken, that package gets handled like raw chicken.

And store them right afterward: the USDA's cold storage chart gives open packages of hot dogs about 1 week in the refrigerator, unopened about 2 weeks. Luncheon meats are 3 to 5 days opened, 2 weeks unopened.

Sausages and brats (the raw ones)

Raw sausages are raw meat, so cook them to the same standard as the meat they came from:

- **Raw pork, beef, veal, or lamb sausage:** 160°F, same as ground meat.
- **Raw chicken or turkey sausage:** 165°F — that's the ground poultry number, and it's the same number as all poultry.
- Poach-then-grill is a legit technique for thick brats: cook them through in liquid, then finish them over the fire for color. But keep the poaching liquid hot, keep the brat above 140°F in between, and probe each one before it goes out.

One more storage note from the same chart, since it surprises people: raw sausage from chicken, turkey, pork, or beef keeps only **1 to 2 days** in the fridge. Buy it close to the day you're cooking.

Dad Knows quick check — Chapter 8

- Burgers probed to 160°F — every patty, not just the first one?
- Raw meat at the bottom of the cooler, in sealed packages?

- Flare-up plan is "move the food," not "spray water"?
- Dogs and brats heated steaming hot and kept at or above 140°F until served?
- Nothing half-cooked to be "finished later"?

Chapter 9 — Chicken & Poultry

One number, no exceptions: 165°F. Chicken is the least forgiving thing on your grill.

Poultry is where cookout mistakes hurt the most. Undercooked chicken is the classic foodborne-illness story, and the reason isn't a mystery: chicken carries bacteria on and in it, and it has to be cooked all the way through.

Good news — the rule is the simplest one in the book.

The number: 165°F

All poultry cooks to a minimum internal temperature of 165°F. The USDA's chart lists it as all poultry — breasts, whole bird, legs, thighs, wings — and it explicitly includes ground poultry, giblets, and stuffing. Ground chicken or turkey sausage is 165°F. A whole bird is 165°F in the thickest part of the thigh. Giblets are 165°F. Stuffing, whether it's cooked alone or in the bird, is 165°F.

There is no pink-is-fine exception for poultry. There's no "if it's a thigh" exception. There's no rest-time credit — 165°F is a straight number, no rest required on the chart.

That's it. Everything below is just how you get there without drying the thing out.

The leak rule nobody knows

Here's a fact from the USDA's grilling guidance that most guys have never heard, and it's worth the price of the book:

Put raw meat and poultry in sealed packages at the bottom of the cooler, under everything else. If poultry juice leaks onto other foods, that's cross-contamination. And specifically: **if poultry juice leaks onto other meats, that meat now needs to be cooked to 165°F.**

Read that again. If chicken juice drips onto your burgers in the cooler, those burgers are no longer 160°F burgers. They're 165°F. The juice is the problem, and the fix is cooking it away.

That's a big deal at a cookout, because coolers get packed in a hurry and chicken packages are the ones most likely to leak. Two habits prevent the whole situation:

- Everything raw goes in sealed packages, poultry double-bagged, all of it on the bottom.
- If a leak happens, you know what to do — cook the affected meat to 165°F — or throw it out.

Clean platters, clean utensils

The USDA's guidance is blunt: don't use the same platter and utensils for raw and cooked meat and poultry. Harmful bacteria in raw juices can contaminate safely cooked food.

This is the single most common cross-contamination mistake in backyard cooking. The tray that carried raw chicken out to the grill cannot be the tray the cooked chicken comes back on. Not after a quick rinse. Not after a wipe with a paper towel. It has to be washed in hot soapy water, or it has to be a different tray.

Practical setup: have one platter for raw, one for cooked, and put them at opposite ends of the table so you can't grab the wrong one. And when you take food off the grill,

use a clean platter — every time, for every meat, not just chicken.

Same rule for tongs, spatulas, and the probe you just stuck in raw chicken. Wash the probe in hot soapy water before you probe anything else.

Pre-cooking: do it right or don't do it

Guys pre-cook chicken for parties all the time, and there's a right way and a wrong one.

The right way: cook it fully to 165°F ahead of time. Then chill it properly — shallow containers, into the refrigerator, covered and labeled, cooled quickly. Then reheat it to at least 165°F on the day. Cooked poultry keeps 3 to 4 days in the refrigerator, and reheat is 165°F.

The other right way: partially cook chicken in the microwave, oven, or on the stove to shorten grill time — but only if it goes **immediately** onto the preheated grill to finish. The USDA's guidance allows this explicitly, with that condition attached. No gap in between. Not "prep it in the morning and grill it at four."

The wrong way: partially grill chicken and finish it later. The guidance says this in capital letters, and so does the volunteer food-safety guide: never partially cook food for finishing later, because you give bacteria time to grow. Fully cook it or don't start.

Marinades and chicken

Chicken is the most-marinated thing in backyard cooking, and marinade handling is a food-safety subject all on its own — Chapter 13 covers it in full. The three rules you need right here:

- **Marinate in the refrigerator.** Never on the counter.
- **If you want to use the marinade as a sauce, reserve a portion before the raw chicken goes in.** That reserved cup never touches raw meat.
- **If the marinade has already had raw chicken in it, boil it before you use it on cooked food.** Boiling is what makes used marinade safe again. Otherwise, pour it out.

Nobody wants to hear it, but: the guy brushing used chicken marinade onto cooked chicken at the table is serving raw-chicken juice. Boil it or skip it.

Skin-on chicken, and why it burns

Skin-on pieces are the tastiest and the most annoying. The fat in the skin drips, the drips flare, and the outside blackens long before the inside is anywhere near 165°F.

The two-zone setup from Chapter 6 is the answer:

1. Start skin-side down over the hot side to render fat and get color. Watch it — this is the flare-up window, so keep the lid handy and be ready to move.
2. Move the pieces to the cool side, lid down, and let them cook through at the gentler heat. This is essentially indirect cooking, the same method the USDA describes for smoking: indirect heat in a covered grill at low temperature for a long time.
3. Check the thickest part of each piece — the breast at its thickest, the thigh next to the bone but **away from the bone** — and keep going until every piece reads 165°F.
4. If the skin is getting too dark while the meat is still low, move the pieces back and forth or lay a piece of

foil loosely over the top.

One warning: don't fall for the "the juices ran clear so it's done" test. The USDA has a whole publication explaining why appearance and juice color can't tell you the internal temperature. Only the thermometer can. Chicken is the food where that mistake does the most damage.

Frozen chicken and the grill

You can grill from frozen, but it's a fight — the outside overcooks while the middle stays cold, and the middle is the part that matters. The honest approach: thaw it properly first. In the refrigerator, or in the microwave if it's going straight to the heat, or in cold water with the airtight package fully submerged and the water changed every 30 minutes. Then cook it immediately after thawing.

And if you smoke poultry, thawing is mandatory — the USDA says do not smoke frozen meat, because the meat spends too long in the moist, low-heat environment before it warms up. That's Chapter 12's territory, but it starts here.

Storage reminders

Straight from the cold storage chart, because this is the stuff you re-check later:

- **Raw chicken or turkey, whole or in pieces:** 1 to 2 days in the refrigerator. Freeze poultry you won't use in 1 or 2 days.
- **Giblets:** 1 to 2 days.
- **Cooked poultry, plain pieces:** 3 to 4 days in the fridge.
- **Fried chicken:** 3 to 4 days.

- **Cooked poultry casseroles:** 3 to 4 days.
- **Pieces covered with broth or gravy:** 3 to 4 days.
- **Chicken nuggets and patties:** 3 to 4 days.

If you're buying chicken on Thursday for a Saturday cookout, it should go in the freezer or you should change your plan.

Dad Knows quick check — Chapter 9

- Every piece of poultry probed to 165°F, including the thigh next to the bone?
- Raw chicken double-bagged, at the bottom of the cooler?
- A separate platter for cooked — the raw one never comes back to the table?
- Marinade in the fridge, and any used marinade boiled before it touches cooked food?
- Nothing partially grilled to be "finished later"?

Chapter 10 — Steaks, Chops & Roasts

145°F and three minutes of patience. That's the whole chapter, and it changes everything.

This is the chapter that makes guys argue, so let's be clear about what's a fact and what's a preference.

The fact: beef, pork, veal, and lamb — steaks, chops, and roasts — have a safe minimum internal temperature of **145°F, with at least a 3-minute rest after you take it off the heat.** That's the USDA chart. Same number for fresh or smoked uncooked ham, by the way: 145°F plus the 3-minute rest.

The preference: everything above 145°F. The USDA says plainly that for reasons of personal preference, you may choose to cook food to higher temperatures. If your house likes a medium steak, cook it past 145°F. If your father-in-law wants his pork chop gray all the way through, cook it that way. Higher is allowed. Lower than 145°F is not.

So the argument isn't "is 145°F medium-rare?" The argument is "am I guessing, or am I measuring?" Measure, and then do whatever you and your people like.

Where the meat comes from, briefly

A whole cut of meat — a steak, a chop, a roast — carries its bacteria on the outside surface. That's why a sear does so much work here, and why a whole cut can be safely cooked to a lower internal temperature than ground meat. When meat is ground, the outside gets mixed through the middle, which is why ground beef becomes a 160°F food

and a steak doesn't. Same animal, different geometry, different number.

Pork, and the old rules

The current USDA chart gives fresh pork — steaks, roasts, chops — 145°F with the 3-minute rest. That's not a typo, and it's not a fad. Pork held a higher temperature recommendation decades ago when the advice was written around a parasite risk that isn't the concern it once was. The chart in 2025 says 145°F. If somebody's grandmother's recipe says to cook pork until it's shoe leather, thank her for the recipe and use the current number.

The rest time, and why it's not just about juice

Three minutes minimum off the heat, on a clean platter, before you cut into it. Here's what that does:

- **It's part of the safety instruction** — the chart pairs 145°F with the rest, which is why you can't skip to "pull it at 140°F and let it coast."
- **Carryover:** the interior can keep rising a few degrees as heat moves from the outside in. That's normal, and it's another reason a steak that reads 145°F at pull and 148°F at slicing is completely fine.
- **Texture:** the muscle fibers relax and the juices redistribute instead of running out onto the board. A rested steak is a better steak.

Three minutes goes fast if you use it: move the meat, cover it loosely, hand out plates, pour something. Just don't cut into it the second it comes off the fire.

Thick cuts need two zones

A two-inch steak straight over a hot fire gives you a burnt crust and a cool center. The two-zone setup fixes it:

1. **Sear over the hot side** for color and crust.
2. **Move to the cool side, lid down**, and let the middle come up to temperature gently.
3. **Probe the thickest part, away from bone**, until it reads 145°F.
4. **Rest at least 3 minutes.**
5. Slice and serve.

A thinner steak might go straight through on the hot side. That's fine — same temperature target, same rest.

For a big roast, this is an indirect cook, lid down, with the probe staying in it if you have an oven-safe thermometer. If your grill has a way to hold steady heat at a moderate temperature, a roast is easy. If it doesn't, a roast on the grill is a lot of babysitting, and the oven on a rainy day is a completely honorable choice. The temperature rules are identical. The grill doesn't have a monopoly on 145°F.

Marinades for whole cuts

The USDA's guidance: most recipes suggest marinating for **6 to 24 hours**. Longer is safe, but more than about 2 days can turn the meat mushy. Always in the refrigerator, never on the counter. Chapter 13 has the full detail, including how to reuse marinade safely (reserve a portion before the meat goes in, or boil the used marinade).

A marinade won't fix a bad cut of meat, and it doesn't make anything safer. It's flavor and a little tenderizing. That's it.

Checking each cut

- **Steaks:** probe from the side into the thickest part, away from any bone, aiming for the center. Two steaks from the same package can be 10 degrees apart — check both.
- **Pork chops:** bone-in chops are the tricky one. The bone is hot and reads differently, so stay away from it. Aim for the meat's center.
- **Roasts:** probe the thickest part, and check a second spot, since a roast can have hot and cool regions.
- **Fresh or smoked uncooked ham:** 145°F plus 3 minutes rest, same as the steaks and roasts.
- **Fully cooked ham you're just reheating:** 140°F if it was packaged in a USDA-inspected plant, and 165°F for all others. Read your label.

Storage, so you don't lose money

From the cold storage chart, in the refrigerator at 40°F or below:

- **Steaks:** 3 to 5 days. Freezer: 6 to 12 months.
- **Chops:** 3 to 5 days. Freezer: 4 to 6 months.
- **Roasts:** 3 to 5 days. Freezer: 4 to 12 months.
- **Hamburger and stew meat:** only 1 to 2 days. Freezer: 3 to 4 months.
- **Variety meats** like liver, heart, tongue: 1 to 2 days. Freezer: 3 to 4 months.
- **Fully cooked ham, whole:** 7 days. Half: 3 to 5 days. Slices: 3 to 5 days.
- **Corned beef in a pouch with pickling juice:** 5 to 7 days; drained, about a month.

And the USDA's shopping rule that saves a lot of cookouts: freeze poultry and ground meat you won't use in 1 or 2 days, and other meat within 4 to 5 days.

Cutting boards and platters

Same as the whole book: one board for raw meat, a separate one for anything that's ready to eat. A clean platter for cooked food — never the one that carried the raw steaks out. And wash the probe before it goes into the next steak, especially if it's been in raw meat.

If you're making a sauce or a board sauce to go on the sliced meat, it goes on after the meat is sliced, in a clean bowl, with a clean spoon. Don't pour sauce over raw meat and then serve from that bowl.

Dad Knows quick check — Chapter 10

- Steaks, chops, and roasts probed to 145°F in the thickest part, away from bone?
- Rested 3 minutes minimum, on a clean platter?
- Thick cuts finished on the cool side with the lid down?
- Do you know your ham reheating number — 140°F vs. 165°F — from the label?
- Raw board and cooked platter kept separate the whole night?

Chapter 11 — Fish, Shrimp & Veggies

A quick cook, a fast cook, and a number that's the same for all of it.

Fish on the grill scares people, and it shouldn't. It's the fastest cook in this book, and it's the easiest to overcook.

The number: 145°F

Fish and shellfish: 145°F minimum internal temperature. Same number as whole cuts of beef and pork, no rest requirement on the chart.

The chart does give you some visual cues to look for, and it's fine to use them as a guide to *when to start checking* — just not as your proof:

- **Fin fish:** cook until opaque and it flakes easily with a fork.
- **Shrimp, lobster, crab:** should turn red and the flesh should become pearly opaque.
- **Scallops:** should turn milky white or opaque and firm.
- **Clams, mussels, oysters:** cook until the shells open.

But here's the thing this whole book keeps saying, and the USDA has a publication named for it: appearance can't tell you whether food is safe. Flaking easily is a fine hint. It's not a temperature. If you're cooking fish for a pregnant guest or somebody with a weakened immune system, the thermometer isn't optional.

Cooking fish on a grate

The practical problem with fish is structural, not bacteriological. It falls apart. Solutions, all simple:

- **A fish basket or grill topper** holds the whole thing together.
- **A cedar plank** or a piece of heavy foil turns your grill into an oven and lets you cook with zero risk of the fish falling through.
- **Keep it skin-side down** most of the time, and flip once. One flip, using a wide spatula.
- **Oil the grate** before the fish goes on. A clean, hot, oiled grate is the difference between releasing and shredding.
- **Cook thinner pieces over the hot side** and thicker pieces over the cool side.
- **Season simply.** Lemon, salt, a little pepper, butter at the end. Fish doesn't want twelve things on it.

Shellfish

- **Fresh shrimp** are the easiest grill item in the world: skewer them, give them a short turn over high heat, and pull them as soon as they're pearly and opaque. Then — check them. 145°F.
- **Scallops** need a hot, clean, oiled grate and one flip. Milky white or opaque and firm is the visual cue; 145°F is the proof.
- **Clams and mussels** go on the cool side with a lid until they open. Any that don't open, discard. That's a cue the chart itself gives you.
- **Oysters** can be eaten raw, but that's a decision for healthy adults, not for a cookout guest list with kids, older adults, and pregnant women on it. If you're grilling them, treat them like the rest of the shellfish.

Shellfish and the at-risk guest

The USDA's volunteer food-safety guide lists who's most at risk from foodborne illness: infants and young children, pregnant women and their unborn babies, older adults, and people with weakened immune systems — including people with conditions like HIV/AIDS, cancer, diabetes, or kidney disease, and transplant patients.

If your cookout has any of those people at it, two things:

- **Keep raw and undercooked seafood off the menu**, or at least off their plate.
- **Watch the temperature and holding rules like a hawk.** The guide makes the point that the consequences of mishandled food are more serious for these guests, which is why careful prep and serving matter more, not less, at a family gathering.

That's not a scare. It's just being the guy who thinks about his guests.

Veggies

Vegetables aren't on the internal temperature chart, so there's no safe minimum to hit. That doesn't mean they're exempt from everything else.

What the guides do say about produce:

- **Rinse fresh fruits and vegetables under running tap water before use.** Thick-skinned produce can be scrubbed with a brush. **Do not use soap.**
- **Use a separate board** for fresh produce and raw meat, poultry, and seafood. That's the USDA's own instruction, and it's the single easiest habit to build at a cookout.

- **Cut veggies count as perishable** once they're out on the table and picked over. The discard rule applies: perishable food goes back in the refrigerator within 2 hours, and within 1 hour when the air temperature is above 90°F — and anything left out past that gets thrown out, with the guide's named exceptions being things like cookies, crackers, bread, and whole fruit.

Grilling vegetables well is mostly about matching the heat to the plant:

- **Hard veggies** — peppers, onions, zucchini, and whole corn — go over the hot side, tossed in oil, seasoned, turned a couple of times.
- **Soft or small things** — cherry tomatoes, thin asparagus, mushroom slices — go in a basket or on a skewer so they don't disappear into the coals.
- **Whole ears of corn** can go on with the husk on or off; either way they're done when a kernel pierces easily.
- **Corn on the cob, potatoes, and onions** love the cool side with the lid down, where they get some smoke without burning.

The nice thing about vegetables is that they don't have a thermometer reading waiting to go wrong. Cook them as long as you like. Just don't leave them out on a hot afternoon and then put them back in the fridge to serve again tomorrow.

Marinades, cold food, and vegetarians at the table

If you're marinating fish, shrimp, or veggie skewers, they all follow the same rule as everything else: **in the refrigerator, never on the counter**, and any marinade that touched raw fish gets boiled before it touches cooked

food. If you keep a veggie-only tray for a vegetarian guest, use separate tongs and keep it away from the meat side of the grill so it's genuinely vegetarian — that's a courtesy, not a safety rule, but it's the kind of thing people remember.

Dad Knows quick check — Chapter 11

- Fish and shellfish probed to 145°F — flaking is a hint, not proof?
- Shells that don't open thrown out?
- Produce rinsed in running water and never soaped?
- Separate cutting board for veggies?
- At-risk guests kept off raw or undercooked seafood?

Chapter 12 — Ribs & Low-and-Slow Smoking

Long cooks are about patience, thawing, and two thermometers. Not about a magic timer.

Low-and-slow is where backyard grilling turns into craft. It's also where more people get into trouble without knowing it, because a long cook at a low temperature is exactly the environment where bacteria do well if the food isn't handled right on the way in.

Let's get the safety frame down first, then talk about ribs.

What smoking actually is, per the USDA

The USDA's grilling guidance defines smoking plainly: cooking indirectly in a covered grill with a pan of water — or in a dedicated smoker — at a low temperature for a long time.

Two details in that definition matter: **indirect** and **covered**. You're not laying meat over coals. You're building a low, even heat around it and letting time do the work. And the water pan isn't decoration — it's how you keep the environment inside the cooker moist and steady.

The rule that catches people: thaw it first

Thaw meat completely before you smoke it. Do not smoke frozen meat.

That's straight from the USDA's smoking guidance, and the reason is the whole ballgame:

A smoker runs at a low temperature on purpose. A frozen roast going into a 225°F cook spends hours creeping

through the range where bacteria multiply. The USDA's guidance notes that bacteria can survive in the moist, low-heat environment until the meat warms. Low and slow with a frozen center isn't slow cooking — it's a long stay in the danger zone.

So thaw it properly, in the refrigerator, or in cold water with the airtight package fully submerged and the water changed every 30 minutes, and then smoke it. If you're planning a Saturday smoke, the thaw starts days earlier. Frozen Friday is Thursday's problem.

And the same rule from Chapter 9 applies: never partially cook meat and plan to finish it later. If you pre-cook, cook it fully, chill it fast, and reheat it to 165°F.

Two thermometers, no exceptions

The USDA's smoking guidance says to use **two thermometers**: one for the air temperature inside the smoker, and one for the meat's internal temperature.

Own both. Use both.

Thermometer one — the air. The USDA's grilling guidance says to monitor the air temperature inside the unit and hold it **between 225°F and 300°F**. The guide's point is to keep the meat in the 40°F to 140°F danger zone for as short a time as possible. That range is your target for the cook chamber, not a preference. If the smoker's running at 200°F or at 350°F, you've left the proven range and you're improvising.

Thermometer two — the meat. This is the same internal temperature chart from Chapter 7:

- **Ribs and other pork cuts:** 145°F minimum, with a 3-minute rest, for beef, pork, veal, and lamb steaks,

chops, and roasts.

- **Whole chicken or turkey:** 165°F in the thickest part of the thigh.
- **Ground meat in the smoker:** 160°F. Ground poultry: 165°F.
- **Anything you cooked ahead and are reheating:** 165°F. Precooked, commercially vacuum-sealed ready-to-eat items from a USDA-inspected plant: 140°F.

Many pitmasters take ribs and pork shoulders well past the minimum for texture, and that's allowed — the USDA says personal preference may take you higher than the minimum. Higher is always allowed. Under the minimum never is.

Ribs, specifically

Ribs are the most-requested low-and-slow cook and the one guys worry about most. Here's the honest version, without the folklore.

Start with the membrane. The thin silvery membrane on the back of a rack of ribs is tough and chewy. Peel it off, or score it. This is a texture decision, not a safety one.

Apply a rub. Simple is fine: salt, black pepper, garlic powder, and a little paprika. Put it on and let the rack sit in the refrigerator while the smoker comes up to temperature.

Get the cooker steady between 225°F and 300°F air temperature before the ribs go in. Then put them in, indirect, lid closed, water pan in place. Bone side down is the common approach for the first stretch.

Then leave them alone. The single most common low-and-slow mistake is opening the lid every fifteen minutes to look. Every time you open it, you dump heat and stretch the cook.

Watch the air temperature — that's the variable you control. Check the meat's internal temperature near the end, in the thickest part, away from bone: **145°F plus a 3-minute rest** is the pork minimum. Many cooks go past that for the pull-back-from-the-bone texture people expect. Again, past is a preference. Under is not an option.

Wrapping partway through — wrapping the rack in foil or butcher paper for the middle of the cook — is a common technique for tenderness. If you wrap, keep your thermometer in the meat or check it again after unwrapping. Wrapping slows everything down and it's easy to lose track of where the meat's temperature actually is.

Sauce at the end, not the beginning. Sugary sauces burn over a long cook. If you're glazing, do it in the last stretch and move the ribs over the hotter part of the fire briefly, watching them the whole time.

How long? The USDA's guidance notes that large items can take **10 to 12 hours or more** in a smoker. Ribs aren't a large item, so they don't take that long — but this book isn't going to hand you a made-up hour count for your ribs, because it depends on your cooker, your rack thickness, the wind, and the outside temperature. Your thermometer tells you. The clock is a guess; the thermometer isn't.

Big cuts and poultry in the smoker

- **Pork shoulder, brisket, whole birds:** these are the 10-to-12-hour-and-more items. Start early, or start

overnight. Overnight cooks require some way to monitor temperature without standing in the yard — and they absolutely require a grown-up paying attention, because fire-safety guidance says an adult should be present at all times when a grill or smoker is in use, and it says douse the fire with water and make sure the area is cool to the touch before you go to sleep or leave.

- **Poultry:** 165°F, and the thigh is the place to check. Skin will get dark; that's normal. Don't pull it because the skin looks done.
- **Never smoke a partially frozen bird.** It will sit in the danger zone for hours.
- **Keep the meat dry before it goes in** — pat it down. Wet meat steams instead of smokes.

Running the fire safely all day

A long cook is a long fire, so the fire rules don't get a day off:

- **Never leave the grill unattended while it's in use.** Somebody's watching it. That's true for a six-hour cook as much as a six-minute one.
- **Keep the 3-foot kid-free zone** the entire time. A smoker is hot for hours — longer than a grill — and it's exactly the kind of thing a kid wanders toward because it smells good.
- **Keep the grill well away from the house, railings, eaves, and overhanging branches.** A smoker runs for hours; anything too close has hours to get hot.
- **Empty ash only when it's cold,** into a metal container with a lid, stored outside and away from

anything that can burn. Never into the trash.

- **Clean out grease** before a long cook, not after. In roughly one-fifth of grill fires, the grill hadn't been cleaned.

Cold weather smoking

Smokers lose a lot of heat to wind and cold. An insulative blanket sold for your cooker, or a windbreak made of a couple of sheets of plywood standing off the grill (not touching it), helps hold temperature. What you do not do, ever, is move the smoker into a garage, a shed, or any enclosed space to protect it from the weather. The fire and the carbon monoxide both need open air.

Dad Knows quick check — Chapter 12

- Meat fully thawed before it hits the smoker?
- Air temperature held between 225°F and 300°F, measured by a thermometer?
- Meat temperature checked with a second thermometer?
- Water pan in place, lid closed, and does somebody stay with the fire?
- Coals and ash handled cold, into a lidded metal can, outside?

Chapter 13 — Marinades, Rubs & Sauces

Flavor is easy. Keeping raw juice out of the finished food takes a plan.

Marinades are how a lot of guys first get serious about cooking outside. They're also the most common place where raw meat juice quietly ends up on food that's already cooked. Let's fix that in one chapter.

The marinade rules

Straight from the USDA's grilling guidance and the volunteer food-safety guide:

Always marinate in the refrigerator. Never on the counter. Not for an hour. Not "just to get it started." A bowl of meat sitting on the counter in marinade is a bowl of meat sitting in the danger zone, which the guides define as between 40°F and 140°F, where bacteria multiply rapidly.

How long? Most recipes suggest **6 to 24 hours**. Marinating longer is safe, but more than about 2 days can make the meat mushy. So overnight is the sweet spot for most cuts, and there's no benefit to a three-day soak.

Use the right container. The volunteer food-safety guide says food-grade plastic, stainless steel, or glass. Not a random bucket from the garage. And cover it — a lidded container or a covered bowl keeps other things in your refrigerator from getting dripped on.

Reserve a portion of the marinade before the raw meat goes in. That's the clean way to have marinade for sauce or basting: a separate cup that never touched raw

meat. This is the single best habit in the chapter, and it takes ten seconds.

If the marinade has already touched raw meat and you want to use it, boil it first. The guidance is explicit: sauce used to marinate raw meat, poultry, fish, or seafood should not be used on cooked foods unless it's boiled before applying. And never reuse a marinade for other foods unless you boil it first.

Sauces, soups, gravies, and marinades used with raw meat, poultry, or fish get brought to a boil — that's the chart's instruction for that category, and it's the reason boiling is the fix.

Discard leftover batter or breading after it has come in contact with raw food. The bowl of flour you dredged raw chicken in is now raw-chicken flour. Throw it out. Don't dip a second batch in it.

One more, from the same guide: **don't use recipes in which eggs remain raw or partially cooked.** If you're making a sauce that calls for raw egg, either find a cooked version or use pasteurized eggs. Egg dishes cook to 160°F. That's the number for anything egg-based you're serving.

Basting without cross-contaminating

The classic cookout mistake: the brush goes from a raw chicken thigh into the jar of sauce, then back onto the chicken that's nearly done, then back into the jar.

The fix is dead simple. Two containers:

- **One "raw only" cup** for anything that touches meat before it's cooked.
- **One "clean" cup** of sauce, with its own brush, that only ever touches food that's already at temperature.

Even better: don't baste raw meat at all. Marinate in the fridge, cook, and sauce at the end. Less to think about, and you never have to wonder which brush is which.

Rubs

Dry rubs are the safest flavor tool you have, because there's no liquid involved and nothing to spill onto other food. A basic rub is salt, coarse black pepper, garlic powder, and paprika. Go easy and adjust next time; rubs are easy to over-salt, and you can't take it back.

A few practical notes:

- **Sugar burns.** A sweet rub or sauce over direct high heat goes from caramelized to bitter fast. Use sweet rubs over the cooler side, and save the sugary glaze for the end.
- **Pat the meat dry first** so the rub sticks.
- **Let a rubbed piece sit in the fridge for a while** if you have time. It won't hurt anything as long as it's cold.
- **Keep your rub containers up out of reach** of small hands, same as anything else in the pantry. And keep them dry — a damp rub clumps. (Fire-safety guidance is specific about one thing in this neighborhood: store starter fluid out of the reach of children and away from heat. Good rule for the whole shelf.)
- **Don't reuse rub that has touched raw meat.** If you poured some out onto a plate to dredge with, that portion's done.

Sauces and finishing

- **Sauce at the end.** Sugary sauces burn; the fire is hot; you want the glaze on for the last few minutes, not the whole cook.
- **Use a clean utensil every time you taste.** The guide says a clean utensil each time you taste food, otherwise you contaminate it. Sounds fussy until you picture the spoon going from your mouth back into the pot you're serving to guests.
- **Serve sauce in a clean bowl, with a clean spoon,** at the table — not out of the pan you used on the grill.
- **Homemade sauces from cooked ingredients** get reheated like anything else: leftovers reheat to 165°F, and sauces, soups, and gravies get brought to a boil.
- **Watch the clock on sauce sitting out.** Sauces with dairy, egg, or meat drippings are perishable. Two hours out, one hour above 90°F, then it's done. The guide's named exceptions are shelf-stable things like cookies, crackers, bread, and whole fruit — a cream sauce is not on that list.

What marinades can and can't do

A marinade will add flavor. It can tenderize a little, mostly on the surface. What it can't do is make an unsafe piece of meat safe, extend how long food can sit out, or substitute for a thermometer. If somebody tells you the acid "cooks" the meat, tell them there's a difference between ceviche and a cookout, and this book is about the second one.

Dad Knows quick check — Chapter 13

- Marinade always in the refrigerator, never on the counter?

- A reserved cup of clean marinade set aside before the raw meat went in?
- Used marinade boiled before it touches cooked food — or thrown out?
- Two brushes: one for raw, one for cooked. Do you know which is which?
- Breading and batter that touched raw meat thrown out, not saved?

Chapter 14 — Feeding the Crew (Host Planning)

The cooking isn't the hard part. The hard part is everybody showing up hungry at the same time.

Cooking a few burgers for your kids is one thing. Hosting twenty people is a different job, and most of the work happens before anybody arrives.

Let's start with the honest part, because it's the reason this chapter looks different from the rest.

About "how much per person"

There's a piece of advice every cookout conversation eventually reaches: *how much do I buy per guest?*

This book isn't going to give you a number, and here's exactly why. The government's own guide for this job — USDA's "Cooking for Groups: A Volunteer's Guide to Food Safety," written for people feeding large groups like family reunions and church dinners — **does not publish a per-person food quantity table**. Its own instruction, when you get to questions about quantity cooking times for large amounts of food, is to contact your local health department, and to check your library or bookstore for books on quantity cooking. That's the authoritative guidance, and it says: ask your health department, and measure your own events.

So instead of inventing a chart and dressing it up as science, here's what this book will actually give you: the verified methods for planning, holding, transporting, and serving food safely for a crowd, plus a simple way to build your own quantity numbers from the cookouts you've

already done.

Rule one: put somebody in charge

This is the very first thing the USDA's volunteer guide says to do when you're feeding a group: **select a reliable person to be in charge.**

That person:

- Contacts the local health department for information about the rules and regulations governing preparing and serving food for groups.
- Gives instructions to everybody helping.
- Answers questions.
- Oversees the preparation, the service, and the cleanup.

That's you, most of the time. Which means at your cookout, you're not just the guy at the grill — you're the person-in-charge, and the grill is where you're least useful for supervising everything else.

The fix is a co-host. Pick one adult who is genuinely in charge of the food table while you're on the fire. That one decision prevents almost every hosting problem, because somebody is always watching the temperatures while you're watching the meat.

And if you're cooking for something that looks more like a community event than a family cookout — a fundraiser, a church dinner, a block party with a serving line — the guide is clear that consumer guidance may not be the whole story. Its own advice is to contact your local or state health department, because state regulations and food codes may apply. That's a phone call worth making before you promise to feed a hundred people.

Rule two: set up the gear and the water

Before you shop, make sure you have:

- Cutting boards, utensils, food thermometers, cookware, and shallow containers for storage.
- Soap and paper towels.
- A source of clean water.

For outdoor events, if there's no water at the site, bring water for cleaning hands, utensils, and food thermometers. And plan how you'll transport the cleanup equipment home afterward — the guide calls this out because a bunch of greasy sheet pans in the back of the truck is a problem nobody thinks about until it's dark.

Also: **plan ahead for refrigerator and freezer space.** You need somewhere for the food before it's cooked and somewhere for the leftovers after. This sounds obvious until you've got six foil pans and no shelf to put them on. Clear space the night before. Don't overfill the refrigerator — cold air has to circulate to keep food safe.

Rule three: shop and transport by the clock

- **Buy cold food like meat and poultry last,** right before you check out.
- **Separate raw meat and poultry from other food** in the cart, and bag the packages so juices can't drip.
- **Bring a cooler with ice or frozen gel packs** and drive straight home.
- **Refrigerate perishable food within 2 hours** — 1 hour when the temperature is above 90°F.
- **Don't buy canned goods that are dented, leaking, bulging, or rusted.** Those are warning signs that

bacteria may be growing in the can.

When you're transporting food to the site:

- **Cold food** goes in a cooler with a cold source — plenty of ice or frozen gel packs — and an appliance thermometer in the cooler so you know it's holding. Cold food should stay at **40°F or below**.
- **Hot food** gets wrapped well and goes in an insulated container, holding at **140°F or above**.

That's the whole transport rule: cold stays cold, hot stays hot, and you can prove it with a thermometer. If you can't prove it, you're guessing, and a cookout is a bad place to guess.

Rule four: build a serving line that holds temperature

Here's where most home cookouts quietly go wrong. The food comes off the fire, gets piled on a platter, and sits on the table while people eat, talk, and go back for more. Over the next hour and a half, everything drifts into the danger zone.

The guide's methods, straight:

Keep it cold. Hold cold food **at or below 40°F**. Put the food in a **shallow container**, then set that container inside a deeper pan filled partway with ice. For things like chicken salad and desserts, individual serving dishes can sit directly on ice. Drain off the water as the ice melts and replace the ice frequently.

Keep it hot. Once food is thoroughly heated on the stovetop, in the oven, or in the microwave, keep it hot with a heat source: chafing dishes, preheated steam tables, warming trays, or slow cookers. **Check the temperature**

frequently to be sure food stays at or above 140°F.

Two more from the guide that matter at a real cookout:

- **Reheating leftovers in a slow cooker, steam table, or chafing dish is not recommended,** because food can stay in the danger zone too long while it climbs back up. Reheat on the stove, in the oven at no lower than 325°F, or in the microwave — then transfer it to the hot-holding setup.
- **Don't refill a nearly empty dish.** When a dish is empty or nearly empty, replace it with a fresh container of food and take the old container away. Topping off a warm, half-eaten dish is how you end up with a pan of food that's been sitting at 100°F for two hours.
- **Serving utensils and containers stay clean.** Use clean containers and utensils to serve food, and never use a plate that held raw meat, poultry, or seafood unless it's been washed in hot soapy water.

Rule five: handle what guests bring

People show up with food. That's part of the deal, and it's a good part. Here's how to handle it without being a jerk about it.

Hot food that arrives hot goes straight onto a heat source — the oven on warm, a warming tray, a slow cooker set to hold — and you check that it's at or above 140°F.

Hot food that arrived lukewarm is the awkward one. It's been in a car. You don't know how long. If it needs to be served hot, **reheat it to at least 165°F** on the stove, in the oven, or in the microwave before it goes to the table. That's the number for food that's been cooked

ahead and cooled, and for leftovers. If it can't be reheated, eat it cold (if it's a food that's safe cold) or let it go.

Cold food that arrives cold goes into the cooler or onto ice at 40°F or below.

Anything that's been sitting out follows the same clock for everybody: perishable food goes back in the refrigerator within 2 hours, or within 1 hour when the air temperature is above 90°F. Past that, it's thrown out. The guide names the exceptions — things like cookies, crackers, bread, and whole fruit — and everything else, including that beautiful potato salad, is on the clock.

There's also a grace note here that isn't in any guide: nobody at your cookout needs a lecture about their casserole. You quietly move it to the right place, quietly reheat what needs it, and if something has to go in the trash, that's your business, not an announcement.

Rule six: build your own numbers

Since there's no authoritative per-person chart, do what a careful host does: **measure your own events.**

After the cookout, write down three things:

1. **How many people actually ate** — not how many were invited.
2. **What you cooked** and roughly how much of it went: how many patties, how many pounds of meat, how many sides.
3. **What was left over** and what you threw away.

Do that twice and you've got a better planning tool than anybody's internet chart, because it's built on your food, your crowd, and your grill. Most guys find the same thing: the meat goes faster than they expect, the sides go

slower, and the dish everybody praised is the one that came home half full.

A couple of host-planning habits that make the numbers easier:

- **Stagger the waves.** Cook a first batch, put it out, start a second batch while people are eating the first. Nothing sits out as long, and you're never overwhelmed with forty burgers on one grate.
- **Cook less than you think, then cook more.** It's easier to put another round of burgers on for the late arrivals than to deal with a platter of food that's been hovering at 120°F for an hour.
- **Plan for the leftovers on purpose** — and if you plan for them, refrigerate them fast, in shallow containers, because that's the next chapter.
- **Keep the at-risk guests in mind.** Infants and young children, pregnant women, older adults, and anyone with a weakened immune system are more vulnerable to foodborne illness. The guide makes that point directly and says volunteers be especially careful when preparing and serving food to large groups. It's not about being fussy with your guests. It's about being the guy who thought ahead.

Dad Knows quick check — Chapter 14

- Is there a designated person in charge of the food table, separate from the grill?
- Do you have coolers, ice, and a way to hold hot food at or above 140°F?
- Did you clear refrigerator space before the food arrived instead of after?

- Is there a plan for guest food — where hot goes, where cold goes, what gets reheated to 165°F?
- Did you write down what you cooked and what was left, so next time is easier?

Chapter 15 — Serving, Leftovers & Cleanup

What you do in the two hours after the last plate is what separates a good host from a lucky one.

The cookout isn't over when the food comes off. There's a clock running, and this chapter is about what to do before it runs out.

The clock: 2 hours, or 1 hour in the heat

Refrigerate or freeze perishables, prepared foods, and leftovers within 2 hours of shopping or preparing them — and within **1 hour when the temperature is above 90°F**.

If you miss that window, the food gets discarded. Not "smelled." Not "tasted." Discarded. The guide's rule is: discard all perishable foods, such as meat, poultry, eggs, and casseroles, left at room temperature longer than 2 hours, or 1 hour in temperatures above 90°F. The exceptions it names are shelf-stable things: cookies, crackers, bread, and whole fruit. If it's on that list, it's fine. If it isn't, it's on the clock.

Ninety degrees sounds high until you remember you're standing in a sunny Ohio backyard in July with a grill running. It gets there.

So the practical move: **start the leftover plan before people stop eating**. Pull out the containers, clear the fridge shelf, and put somebody in charge of carrying things in. Leftovers that go in at the two-hour mark are fine. Leftovers that go in at the three-hour mark go in the trash.

Chill it right: shallow containers, not one big pot

Here's the rule that trips up almost everybody:

Divide the food into shallow containers so it cools fast. Most cooked leftovers keep **3 to 4 days in the refrigerator**. Freeze them for longer storage.

A big deep pot of chili in the fridge cools from the outside in, and the middle can sit warm for a long time. Spread it out in a few shallow pans, and it gets cold quickly and evenly. That's why shallow containers appear in the guidance over and over.

More from the same guidance:

- **Don't overfill the refrigerator.** Cold air has to circulate.
- **Cover and label** cooked foods, and include the preparation date on the label.
- **Remove stuffing from the cavity before refrigerating** a stuffed bird.
- **Slice roasts and ham** and layer them in containers in portions you'll actually serve.
- **Break a turkey down** into smaller portions or slices.
- **Soups and stews** go into shallow containers — and to cool them quickly, set the container in an ice water bath and stir.
- **Cool air in a cooler needs to reach the food.** Don't just put leftovers outside in a pan because the evening turned cool. The test is whether the food gets to 40°F or below, and only a refrigerator or a proper cooler does that.

How long it keeps

From the USDA cold storage chart — the same chart the volunteer guide uses — at a refrigerator temperature of 40°F or below:

- **Cooked meat and meat casseroles:** 3 to 4 days.
- **Gravy and meat broth:** 3 to 4 days.
- **Soups and stews:** 3 to 4 days.
- **Cooked poultry, plain pieces:** 3 to 4 days.
- **Cooked poultry casseroles:** 3 to 4 days.
- **Cooked fish:** 3 to 4 days.
- **Cooked shellfish:** 3 to 4 days.
- **Cooked stuffing:** 3 to 4 days.
- **Pizza:** 3 to 4 days.
- **Store-prepared or homemade egg, chicken, ham, tuna, and macaroni salads:** 3 to 5 days.
- **Hard-cooked eggs:** 7 days.

Freezer times are longer and are about quality, not safety: freezing keeps food safe indefinitely, and the recommended times are for quality. So a frozen pork roast from a cookout two months ago is safe — it just may not be as good.

Reheating the leftovers

Reheat leftovers thoroughly to at least 165°F. That's the number. It's higher than the temperature the food was originally cooked to, and it's the one that matters on Tuesday night.

More specifics from the guidance:

- **Sauces, soups, and gravies get brought to a boil.**

- **On the stovetop:** heat thoroughly and check that it reaches at least 165°F.
- **In the oven:** set the oven no lower than 325°F, and check that the food reaches at least 165°F.
- **In the microwave:** stir, cover, and rotate for even heating, allow the standing time the recipe or package calls for, and heat until it's at least 165°F throughout.
- **Precooked, commercially vacuum-sealed ready-to-eat items** like hams and roasts from a USDA-inspected plant get reheated to **140°F**. All others to **165°F**.
- **Don't reheat in a slow cooker, steam table, or chafing dish** — the guidance says not recommended, because the food may stay in the danger zone between 40°F and 140°F too long while it comes up to heat. Warm it up on the stove or in the microwave, then hold it hot.

The grill cleanup

Now the fire part of the evening, and this is where the real risk lives.

Coals: let them cool completely. Then put them in a **metal container with a tight-fitting lid**, kept **outside and away from anything that can burn. Never empty coals directly into a trash can.** If you're leaving the spot or going to bed, douse the fire with water first and **make sure the area is cool to the touch.**

Grease: pull the tray, dump it, and wipe it out. Remember the number: the grill hadn't been cleaned in roughly one-fifth of grill fires. Grease in a tray is fuel sitting under a fire you're going to light next weekend.

Grates: scrape them while they're warm, and give them a proper wash when you're not in a hurry.

Ash: into the metal can, cold, lid on, outside. Never the trash.

Gas: burner knobs off, then the cylinder valve off. Then cover the grill once it's cool.

Thermometers: wash the probe with hot soapy water after use. This is a one-line habit that prevents a lot of cross-contamination.

Cleaning the kitchen side

A few habits from the volunteer food-safety guide that make the morning after a lot easier:

- **Wash hands with soap and warm water for 20 seconds** before and after handling food, and after using the bathroom, changing diapers, or handling pets.
- **Use paper towels or clean cloths** for spills, and wash cloths often in the hot cycle.
- **Wash cutting boards, dishes, utensils, and countertops with hot soapy water** between food items. The guide's sanitizing solution is **1 tablespoon of unscented liquid chlorine bleach in 1 gallon of water** for washed surfaces and utensils.
- **Replace cutting boards** once they're excessively worn or develop hard-to-clean grooves.
- **Rinse fresh produce** under running water — no soap.
- Clean up before you sit down, or make it somebody's job besides yours, because at the end of a long cookout everybody's tired, and tired people put a warm pan in the fridge and call it done.

If somebody does get sick

Most of the time it's nothing. But if you suspect food poisoning from your cookout, the USDA's volunteer guide gives specific steps:

- **Preserve the evidence.** Wrap a portion of the suspect food securely, mark it "DANGER," and freeze it. Save the packaging, write down the food type, the date, the identifying marks on the package, the time it was eaten, and when symptoms started. Save any identical unopened products.
- **Seek treatment as necessary.** If the person is in an at-risk group — infants and young children, pregnant women, older adults, or someone with a weakened immune system — seek medical care immediately. Likewise if symptoms persist or are severe, like bloody diarrhea, excessive nausea and vomiting, or a high fever, call a doctor.
- **Call your local health department** if the suspect food was served at a large gathering.
- **Call the USDA Meat and Poultry Hotline** at 1-888-674-6854 if the suspect food was a USDA-inspected product.

That's the guide's list, and it's worth knowing before you need it.

THE 2-HOUR RULE

the clock starts when food hits the table



Refrigerate perishables within 2 hours, or 1 hour above 90°F. Leftovers go in shallow containers and keep 3-4 days.

The 2-hour rule: leftovers go in the refrigerator within two hours — one hour when the air is above 90°F — with an arrow from the serving table to the fridge, shallow containers, and 3–4 days.

Dad Knows quick check — Chapter 15

- Leftovers in the fridge within 2 hours — 1 hour if it was above 90°F?
- Food spread into shallow containers, covered, labeled with the date?
- Fridge not packed so tight the cold air can't move?
- Reheating to 165°F — not in a slow cooker or chafing dish?
- Coals cold, in a lidded metal can, outside, away from anything that can burn?

Chapter 16 — The Dad Knows Cookout Checklist

Print this. Tape it inside a cabinet door. You'll stop forgetting things.

Everything in this book, on one page, in the order it happens. Work top to bottom.

Before you light

- **Location check.** Grill is well away from the house, deck railings, under-eave areas, and overhanging branches. Nothing flammable within reach.
- **Outdoors only.** No garage. No screened porch. No carport. Open air.
- **3-foot kid-free zone** marked — chairs, rope, chalk, a cooler, whatever makes it visible.
- **Grill is clean.** Grates scraped, grease tray emptied, ash from last time gone.
- **Gas grill, lid open** before lighting. Always.
- **Gas grill, soapy-water leak test** on the tank, hose, regulator, and burner connections. Bubbles mean the cylinder goes off.
- **Charcoal: chimney starter** with newspaper and a long match. Cold coals only if you use starter fluid, and never anything but charcoal starter fluid.
- **Food safety setup:** raw meat in sealed packages at the bottom of the cooler; separate boards for raw meat and produce; a clean platter set aside for cooked food.
- **Thermometer out** and within reach of the grill. Not in a drawer.

- **Kids have a job** on the safe side of the line.
- **A grown-up is with the fire** for the rest of the cookout. No exceptions.

While you're cooking

- **Two zones:** hot side for searing, cool side for finishing and for anything that flares.
- **Lid down** unless you're actively working the food.
- **Flare-up? Move the food** to the cool side and close the lid. Never water on a grease fire.
- **Probe the thickest part, away from bone.** Check more than one spot on thick cuts.
- **The numbers:**
 - **145°F** — beef, pork, veal, lamb steaks, chops, roasts. Plus 3 minutes rest.
 - **160°F** — ground meats (beef, pork, veal, lamb). No rest required.
 - **165°F** — all poultry, including ground; ground poultry; stuffing; leftovers and casseroles.
 - **145°F** — fish and shellfish.
 - **160°F** — eggs and egg dishes.
 - **140°F** — holding hot food, and reheating cooked ham from a USDA-inspected plant.
 - **165°F** — reheating cooked ham from anywhere else.
- **No half-cooked anything.** Never partially grill meat or poultry to finish later.
- **Cooked food goes on a clean platter** — never the one that carried raw meat.
- **Wash the probe** between uses, especially after raw meat.

- **Long-handled tools** so your hands stay back from the heat.
- **Smoking?** Meat fully thawed, air temperature between 225°F and 300°F, second thermometer in the meat, water pan in place, lid closed.

Holding and serving

- **Hot food at or above 140°F** — oven, warming tray, chafing dish, slow cooker, or the cool side of the grill. Check it, don't assume it.
- **Cold food at or below 40°F** — shallow container set in a deep pan of ice; drain the water and replace the ice.
- **Clean utensils and containers** for serving.
- **Never reuse a plate that held raw meat** unless it's been washed in hot soapy water.
- **Replace an empty dish with a fresh container**, rather than topping it off.
- **Reheat guest food** that arrived lukewarm to at least 165°F before serving.

Before you walk away

- **Leftovers in the refrigerator within 2 hours** — 1 hour if it was above 90°F. Past that, they go in the trash.
- **Shallow containers**, covered, labeled with the date. Fridge not overfilled.
- **Fridge keeps leftovers 3 to 4 days.** Freeze for longer.
- **Reheat leftovers to 165°F**; bring sauces, soups, and gravies to a boil.

- **Burner knobs off, then the cylinder valve off** on the gas grill.
- **Coals doused, cold, and into a lidded metal container** outside, away from anything that can burn. Never the trash.
- **Grease tray emptied and wiped.** Your next cookout depends on it.
- **Area around the grill** is cool to the touch and clear.
- **Cover goes on a cold grill**, not a warm one.

One last thing — the 3-foot rule, and how to teach it

Every rule in this book is for you. This last one is for the kid standing next to you, tugging on your shirt, asking the question every dad hears at some point: *can I help?*

Yes. Here's how.

Don't just say "stay back." A kid hears "stay back" and thinks it's about being in trouble. Tell them what the line is and why it exists, in plain words: *"This is the hot zone. Fire lives here. You stand on this side of the line, and that's how you get to help."*

Then give them a real job on the safe side of the line. Let them carry the plate of buns out. Let them hold the tongs while you're not using them. Let them tell you when the fire is ready. Let an older kid learn the thermometer — hand them the probe and let them read the number out loud while you hold the meat. That's how a kid learns that cooking is checking, not guessing, and that feeding people is a thing you do on purpose.

Stand together. Talk about what you're doing. Let them watch you keep the little ones back from the fire, and let

them see you do it without yelling. That's the lesson: fire gets respect, not fear, and the people around the fire get fed.

And one day — sooner than you think — they'll be the one standing where you're standing, telling somebody else where the line is.

Dad Knows quick check — Chapter 16

- Print the three phases and put them where you'll see them.
- Keep the four numbers in your head: 145, 160, 165, and 140 for holding.
- Re-read the "Before you walk away" list once, tonight.
- Teach one kid the 3-foot line this week, with a job attached.
- Cook for somebody this weekend.