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ILLUSTRATED



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Hotter Pan, Juicier Chops

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Deep Flavor in Less Time


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We Looked Under the Hood
and Guess What We Found

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Cast-Iron Skillets
How to Choose, Season, and
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French Butter Cake


Basque Scrambled Eggs
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Cooking in—and Caring for—Cast Iron

Game for any recipe from seared steak to fried eggs to apple pie, a cast-iron skillet can be the most versatile piece of cookware in the kitchen. BY ELIZABETH BOMZE

A CHEMICAL-FREE, DURABLE, AFFORDABLE WORKHORSE

Since its inception in fifth-century BCE China, cast iron has been a favorite cookware material across the globe. In the United States, early settlers took advantage of its high-heat compatibility for open-fire cooking. Though it fell out of favor in the mid-20th century when Teflon became widely available, it's recently regained popularity as an alternative to both traditional and nonstick cookware. Here's what it offers.

➤ **EXCEPTIONAL HEAT RETENTION** Though it transfers heat very slowly compared with aluminum or stainless steel, cast iron retains heat much more effectively than these materials, making it ideal for browning, searing, and shallow frying.

➤ **NATURALLY NONSTICK SURFACE** Whereas most chemically coated cookware deteriorates over time, cast iron only gets better, gradually developing a slick patina, or "seasoning," which releases food easily—and with no harmful chemicals involved.

➤ **UNBEATABLE DURABILITY AND VALUE** Cast iron is virtually indestructible and is easily restored if mistreated. Plus, a good skillet can be had for well under \$50 and should last for generations.

A 10-inch cooking surface provides plenty of room for good browning.

A helper handle makes the heavyweight frame easy to lift.

The preseasoned interior is smooth right out of the box.



TRADITIONAL FAVORITE
Lodge Classic Cast-Iron Skillet, 12" (\$33.31)

The Other Cast Iron: Enameled

Enameled cast-iron skillets are coated inside and out with the same kind of porcelain finish found on enameled cast-iron Dutch ovens. They cost more than traditional cast-iron skillets, but they have certain advantages: They never have to be seasoned, their coating prevents rust and doesn't interact with acid, and they can be cleaned much like other pots and pans.



ENAMELED FAVORITE
Le Creuset Signature 11 3/4" Iron Handle Skillet (\$179.95)

TWO USEFUL ACCESSORIES

➤ LIDS

Lodge 12-Inch Tempered Glass Cover (\$25.81)

Why We Like It: Lightweight, stay-cool handle; good visibility; oven-safe to 400 degrees

RSVP Endurance Stainless-Steel Universal Lid with Glass Insert (\$19.99)

Why We Like It: Vent to release steam, heat-resistant handle, usable with other pans

➤ CHAIN-MAIL SCRUBBER

Knapp Made Small Ring CM Scrubber (\$19.98)

Why We Like It: Fine rings scour grooves with ease, won't damage pan's finish (don't use on enameled cast iron), doesn't rust

COMMON MYTHS, BUSTED

After testing dozens of skillets, we upended these common misconceptions about cast iron.

MYTH: You should never wash cast iron with soap.
REALITY: A few drops of dish soap are not enough to interfere with the polymerized oil bonds that comprise the surface of a well-seasoned pan. In fact, a little soap can help rid the pan of excess greasiness.

MYTH: It's bad to cook with acidic ingredients in cast iron.
REALITY: It's OK to cook with acidic ingredients, but keep the cooking time to 30 minutes and remove the food immediately after cooking. Longer exposure can damage the seasoning and cause trace amounts of metal to leach into the food, imparting metallic flavors.

MYTH: Metal utensils will scratch the seasoning.
REALITY: The seasoning on a cast-iron pan is chemically bonded to the surface, and it will not scratch off. When we slashed the surface of our favorite Lodge skillet with a chef's knife and scraped it repeatedly with a metal spatula, it survived with nary a mark.

MYTH: If a cast-iron pan rusts, it's ruined.
REALITY: It takes a lot to kill a cast-iron skillet. If yours does rust, first try scrubbing with a nonabrasive pad. If this doesn't work, strip and reseason the pan (see "Servicing Your Skillet"). Only if the pan has literally rusted through is it time to throw it out.

MYTH: Cooking fatty meats, such as bacon, in cast iron is the best way to season it.
REALITY: Fat from animal proteins will lubricate the pan's surface but won't season it. These highly saturated fats don't polymerize as well as highly unsaturated oils like sunflower, soybean, and corn. (For more information, see "The Science of Seasoning.")

ILLUSTRATION: JOHN BURGONNE

THE SCIENCE OF SEASONING

When fat or cooking oil is heated to its smoke point in cast iron, its fatty acids oxidize and reorganize (or "polymerize") into a new plastic-like layer of molecules. This layer becomes trapped within the pitted surface of the pan and bonds to the metal itself, creating the slick coating known as seasoning. Repeated exposure to smoking hot oil continues to build on this coating, making it more slippery and durable. That's why even though most skillets these days come with a factory seasoning, the surface will become even more nonstick with repeated use.

WHAT DOES "WELL SEASONED" MEAN? FRY AN EGG TO FIND OUT

A well-seasoned skillet will have a dark, semiglossy finish and won't be sticky or greasy to the touch. It won't have any rust or any dull or dry patches.

➤ An easy way to test a skillet's seasoning is to fry an egg (heat 1 tablespoon vegetable oil in skillet over medium heat for 3 minutes, then add egg). If your pan is well seasoned, you should not experience any major sticking.

USE THE RIGHT OIL

The more polyunsaturated the fat, the more readily it will oxidize and polymerize. We have found that flaxseed oil, which oxidizes and polymerizes faster than other vegetable oils, forms a particularly durable seasoning. But cheaper oils such as sunflower and soybean also work fine.

OIL	BEST			GOOD, LOWER-COST CHOICES			WORST
	Flaxseed	Sunflower	Soybean	Corn	Canola	Bacon Fat	
% SATURATED	9%	10%	16%	13%	7%	39%	
% MONOUNSATURATED	18%	20%	23%	28%	63%	45%	
% POLYUNSATURATED	68%	66%	58%	55%	28%	11%	

SERVICING YOUR SKILLET

Caring for a cast-iron skillet is like caring for a car: Service it regularly and it will last a long time; use it hard (or neglect it) and it will need more heavy-duty repair work. These care guidelines will bring your skillet back to life, no matter what condition it's in. Use the fried egg test (above) to test your skillet's seasoning.

➤ LEVEL 1: ROUTINE MAINTENANCE

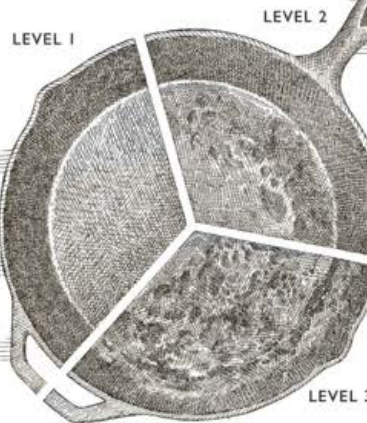
1. Clean after every use: Wipe interior surface of still-warm skillet with paper towels to remove any excess food and oil. Rinse under hot running water, scrubbing with nonmetal brush or nonabrasive scrub pad to remove any traces of food. (Use small amount of soap if you like; rinse well.) Go to CookIllustrated.com/cleaning for more cleaning tips.

2. Lightly oil after each cleaning: Dry skillet thoroughly (do not drip-dry), then heat over medium-low heat until all traces of moisture have evaporated. Add ½ teaspoon oil to pan and use paper towels to lightly coat interior surface with oil. Continue to wipe surface with oiled paper towels until it looks dark and smooth and no oil residue remains. Let pan cool completely.

➤ LEVEL 2: MINOR SERVICE

Stovetop repair: Heat skillet over medium-high heat. Using paper towels dipped in 2 tablespoons oil and held with tongs, wipe surface until oil smokes and there is no remaining oil residue. Repeat oil application 3 to 5 times, making sure oil smokes and letting skillet cool slightly after each application.

Oven repair: Heat oven to 500 degrees. Using paper towels, rub 1 tablespoon (for 12-inch skillet) or 2 teaspoons (for 10-inch skillet) oil over surface. Using clean paper towels, thoroughly wipe out excess oil (surface should look dark and smooth). Place skillet in oven for 1 hour. Using potholders, remove skillet from oven and let cool completely.



➤ LEVEL 3: MAJOR SERVICE

Over the lifetime of a cast-iron skillet, you'll usually just need to maintain or touch up its seasoning. But if the seasoning becomes very dull or damaged or if the pan badly rusts (it can't be scrubbed away), you'll need to give it an overhaul by stripping and reseasoning the surface. (Go to CookIllustrated.com/striping for detailed instructions.) Once the skillet's seasoning has been stripped away, follow the oven repair directions, repeating the process six times or until the skillet has a dark, smooth finish.

HACK YOUR SKILLET



MAKESHIFT FLAME TAMER

Place skillet over low flame and place your pot or saucepan in skillet. Skillet will moderate heat.



PANINI WITHOUT A PANINI PRESS

Set cast-iron skillet over medium-high heat and place assembled sandwiches in middle. Place smaller cast-iron skillet on top of sandwiches to press. (If you have only 1 cast-iron pan, place sandwiches in traditional skillet and weigh them down with cast-iron skillet.) Cook until bottoms of sandwiches are golden brown; flip and repeat on other side.

IN-A-PINCH PIE PLATE

A seasoned cast-iron skillet can be a handy pie plate alternative as long as your skillet is 9 or 10 inches in diameter to keep the volume and baking times consistent.



TROUBLESHOOTING

PROBLEM: Lingering fishy odors

SOLUTION: Bake in 400-degree oven for 10 minutes. High heat eliminates fishy-smelling compounds called trialkylamines and oxidized fatty acids.

PROBLEM: Stuck-on food

SOLUTION: Rub skillet with nonabrasive scrub pad; wipe clean. Heat ¼ inch oil over medium-low flame for 5 minutes. Off heat, add ¼ cup kosher salt. Using potholder to grip handle, scrub skillet with paper towels (held with tongs). Rinse with hot water; dry well. Repeat if necessary (no need to lightly reseason).