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CR Consumer Reports®

AUGUST 2018



REVIEWS & RATINGS

- Volvo XC40
- Refrigerators
- Smartwatches
- Washers & Dryers



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VOLVO
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- 🔴 POOR
- 🟡 FAIR
- 🟢 GOOD
- 🟠 VERY GOOD
- 🟩 EXCELLENT

Watch TV Your Way



ALL OF US need to unwind, and for many people that means turning on a favorite show or movie. The choices are seemingly endless: Do I flip through hundreds of cable channels? Subscribe to a streaming service such as Hulu or Netflix? If I want a streaming media player, should I pick an Apple TV or a Roku? The options can be confusing—and what works best for me might not work for my parents or

my nephew, who have different priorities for their news and entertainment. This month, our step-by-step guide will help you to determine which viewing options are right for you—regardless of whether you’re a binge-watcher, a sports nut, a home renovation fan, or anything else. We’ll help you to review your monthly bill, spot sneaky add-on fees, and build a package from the ground up to give you the shows and channels you crave while saving you hundreds over the course of a year on the things you don’t. We have the inside scoop on the latest cable replacement services, ratings of the best streaming media players, and tips on getting the most from your cable company if cutting the cord isn’t right for you. TV should be a relaxing experience, however you choose to watch it—and with CR’s expert guidance, nothing will make it more relaxing than knowing that you’re getting the best possible bang for your buck.

Marta Tellado

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Don't Call Us
Two proposed federal laws aim to stem the flood of billions of robocalls.

Working to End Robocalls

WHAT'S AT STAKE

Fifteen years after the Federal Trade Commission opened the National Do Not Call Registry to reduce unwanted telephone solicitations, our lives are being interrupted with ever more relentless frequency.

About 3.4 billion automated robocalls were placed to U.S. homes this April, according to call-blocking company YouMail—almost a billion more than in 2017. That's more than 10 calls per American per month. And complaints to the FTC for Do Not Call violations rose almost 36 percent from 2016 to 2017, to 7.2 million.

Beyond disrupting our lives and assaulting our privacy, robocalls are also a fiendishly effective vehicle for criminal activity: A quarter of them are made by fraudsters fishing for victims, costing consumers an estimated \$350 million in

2011 in successful scams.

HOW CR HAS YOUR BACK

We believe persistent consumer pressure on phone companies and government officials can make a difference. Our End Robocalls campaign, launched in 2015, demands that phone companies offer free, effective tools for blocking robocalls.

And the 740,930 signatures we collected backing the effort helped convince several phone companies to offer such tools.

More recently, we testified at a U.S. House hearing, urging lawmakers to pass the ROBOCOP Act, which would force phone companies to offer free, effective call-blocking technologies, and the HANGUP Act, which would eliminate a loophole that certain debt collectors could use to skirt robocall regulations. We also endorsed a New York state anti-robocall law.

WHAT YOU CAN DO

Contact your representatives at congress.gov and insist they support the ROBOCOP and the

HANGUP Acts. And learn to protect yourself from robocalls at CR.org/robocall0818.

Keeping Phone Bills Low

WHAT'S AT STAKE

If U.S. regulators approve the proposed \$26 billion Sprint and T-Mobile merger, the ranks of national wireless providers will shrink from four to three.

What's the big deal? Well, the cost of cellular service has fallen in recent years, at least in part because of competitive pricing. When T-Mobile and Sprint announced unlimited data plans in 2016, for example, AT&T and Verizon quickly responded with unlimited options to keep pace. That trend could easily reverse if the number of competitors in the market decreases. In fact, as CR president Marta Tellado noted in a recent USA Today op-ed, the historical record on such mergers is pretty clear: "Competition is slacked, innovation is dampened, and prices go up."

This would be especially painful given the growing importance of mobile communications. American consumers—95 percent of whom own a cell phone—depend on wireless service not just for personal calls and texts but also for business, educational, and emergency purposes, as well as directions and everyday activities like shopping. Smartphones have also become the only link to the internet for many low-income households unable to afford broadband service.

HOW CR HAS YOUR BACK

CR has long been skeptical of any merger that leaves consumers with fewer wireless choices. (Regulators generally agree: Seven years ago, they blocked AT&T's bid for T-Mobile.) So when news of the proposed merger broke, CR spoke out quickly in Washington, D.C., and in USA

Today on the potential harms. We are urging regulators to conduct thorough antitrust hearings and a public interest review—and to block the deal if it appears likely to harm consumers and competition.

WHAT YOU CAN DO

To make sure you have the best wireless plan for your family, read our service and reliability ratings, at CR.org/cell0818.

A Victory for Child Safety

WHAT'S AT STAKE

For years, CR reported and advocated on the thousands of injuries and hundreds of deaths caused each year by vehicles backing into pedestrians (most of them children and seniors).

HOW CR HAS YOUR BACK

Our extensive testing revealed that many autos had massive "blind zones" in the rear—areas the driver can't see when at the wheel. Rearview cameras greatly reduced the risks, but many auto manufacturers offered cameras only as pricey additions.

Working with a coalition of safety groups, CR successfully pressed lawmakers to pass a 2008 law directing the Department of Transportation to require rear-visibility technology in new vehicles. Even then, however, regulators missed deadline after deadline, saying more study was needed.

That's when CR, other consumer groups, and families of children killed in backover incidents sued the DOT. In 2014, one day before the trial was to begin, the DOT issued a rule requiring automakers to install the technology. Backup cameras are now standard in every new car built for sale in the U.S. as of May 2018.

WHAT YOU CAN DO

Check out our latest auto-safety coverage, at CR.org/carsafety, and our auto ratings, which factor in safety data, at CR.org/cars.



In our June 2018 issue we reported on the quickly evolving technology of **self-driving cars**, which fueled a high-octane discussion about safety on our roads. To join the conversation, go to [CR.org/selfdriving0818](https://www.consumerreports.org/self-driving0818).

THE ARTICLE “Safer Self-Driving Cars” says, “this tragedy [of the pedestrian death by an Uber self-driving car] makes clear they have a long way to go.” This implies that self-driving cars shouldn’t be deployed until they achieve perfection. Self-driving cars will never be 100 percent perfect. There will always be unfortunate accidents. What’s important is that self-driving cars will reduce accidents. How many pedestrians were killed last month by cars that did not have self-driving capabilities? The faster self-driving cars are widely available, the faster we will significantly reduce

collisions. One tragic accident is not reason to question or delay self-driving programs.
—Lawrence Cram, Englewood, FL

UNTIL THE AVERAGE performance of self-driving cars regularly exceeds the best performance humans can muster, these cars are not ready to replace human drivers at all. That doesn’t mean we should simply wait until humans drive so ineptly that the self-driving car becomes the better option. Of all the people “teaching” self-driving cars to drive, I wonder how well they drive. It would seem preferable to model the driving style of the best drivers, many of whom would be honored to make the future safer.
—Luis Raymond Rosario, Forest Hills, NY

When we are evaluating whether/when to allow

self-driving cars on our roadways, we should compare their potential safety record against the current “human” safety record and not on an absolute scale. I’d rather be driving with computer-controlled cars than human-controlled cars if I have a lower chance of being killed or seriously injured.
—James Sykora, San Diego

ABOUT SELF-DRIVING CARS and the request by CU to contact my senator on the AV START Act: While the Uber self-driving car pedestrian death is sad, how many other pedestrian deaths occurred on that same day by cars that were driven by regular drivers? Do self-driving cars have to be perfect? They should simply have to be better (where “better” needs to be defined, e.g., miles driven per pedestrian death).
—Jim Boehm, Centerport, NY

I HAVE a 2017 Subaru Forester with EyeSight (driver-assist technology) and feel that such safety devices should be lauded, not dissed as an unnecessary duplication of human effort and an excuse to relax one’s attention to the driving task. The main reason I bought the Forester was to take advantage of any driving-assist mechanism that is available. At age 73 I still enjoy excellent eyesight and have no physical impairments, but I welcome any technology that offers a safer commute.
—Russell Hughes, Travelers Rest, SC

IN YOUR PIECE, your statement that “they have a long way to go” unfairly denigrates the technology. With additional use and investment, self-driving cars will get increasingly safer. Instead of pushing legislation that can only slow down adoption (and dry up funding), shouldn’t we be pushing hard for laws (and enforcement of existing laws) to get bad drivers off the streets? I would think a “punishment” that a repeat offender can only “drive” in a self-driving car would attack both sides of this problem! Or install a device that monitors and reports bad driving behavior for review. Let’s get our priorities straight instead of thwarting the very technologies that could solve the problem.
—Lee Scheffler, West Newton, MA

Scam Savvy

RE: “PROTECT YOURSELF From These 7 Scams” (June 2018). I almost fell for a scam that used the name of a friend I had not been in contact with for a while. The story was they were traveling in the U.K. and had all their money and ID stolen. I was just about to send around \$1,200 U.S. Before sending, I decided to verify that this was for real. I asked a question about a mutual friend. A no-brainer for my friend,



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WRITE

but it exposed the scammers when they failed to supply the right answer.

—Jon Hamblin, via Facebook

MY LATE HUSBAND recorded a message along the lines of “Thank you for calling. All of our family members are busy helping other telemarketers. Please hold and the next available family member will assist you.” I just hold that up to the phone. Oh, and it includes music from a horrible opera.

—Marisa Elston, via Facebook

THE TOWER of my new Dell computer had finally been delivered as we were eating lunch. Then the telephone rang. I answered and a voice said, “We’re calling to inform you that your new Dell computer has been hacked.” I replied, “Great! How can you tell? It’s still in the box.” There was silence. The caller hung up.

—Gilbert Neal, Virginia Beach, VA

MY FAVORITE SCAM STORY happened when I was still living with my parents. One night, I answered the phone. The person said, “Hello, Mr. Timmins? This is Sgt. X of the Lynn Police. We have your son Stephen in custody at the station.” I then replied, “Are you’re sure it’s Stephen? Can you describe him?” So the “Sergeant” then gave me a description. I then replied, “Sorry, but that sounds nothing like me. Goodbye sir.”

—Steve Timmins, via Facebook

Car Privacy Concerns

IN HIS ARTICLE “You’re Never Alone in Your Car” (June 2018), Jeff Plungis did a great job outlining the benefits of connected cars as well as potential car-company privacy invasions. Surprisingly, though, I found no mention of a critical issue that can affect connected cars. Hacking! This is a serious threat because hackers can not only invade your privacy,

they can shut down critical safety systems or even the vehicle itself.

—Elliot Friedman, Jacksonville, FL

ENJOYED YOUR ARTICLE on car connectivity. Should I tape over the driver camera like we do our laptops?

—Eugene Radice, Bloomsburg, PA

EDITOR’S NOTE *We don’t know of any cameras that are recording images—yet. Automakers say they’re currently more like garage-door sensors that detect movements rather than video cameras. General Motors uses its camera to ensure that the driver is paying attention to the road so that hands-free Super Cruise can be engaged. So there’s no need to tape over it for the time being—in fact, doing so could impede a safety feature or other functionality of your car.*

Smartphone Protection

ABOUT YOUR “Is Smartphone Insurance Worth Buying?” in the June 2018 issue: My wife and I stepped into the smartphone world two years ago with a pair of Samsung Galaxy S7 phones. We decided to forgo the purchase of the protection plan offered, but instead we both got OtterBox covers and Zagg glass lifetime-warranty screen protectors. This was much less expensive. The only downside is that the OtterBox makes the phone a bit bulkier.

—David Campbell, South Charleston, OH

IN YOUR ARTICLE about cell-phone insurance, you omitted the best insurance: a case and screen protector. Good cases are available for under \$100, and screen protectors start at \$5. A Ziploc bag when walking on the beach (or boating) provides additional protection.

—Art Turner, Jackson, MI

EDITOR’S NOTE *Similar to your zip-close bag trick for boating and beachgoing, some*

ON SCAM CALLERS

My prerecorded voice message says, “Thank you for calling. All of our family members are busy helping other telemarketers.”

—Marisa Elston, via Facebook

companies now make clear waistband belts specifically designed to hold your phone (similar to an old-school fanny pack). You can find them online for about \$10.

Neutrality Talk

CR HAS PRESENTED the essential problem in the matter of net neutrality in “A Fair and Open Internet” (Building a Better World, Together, June 2018). The contrast and the nonalignment between the public interest and the federal bureaucracy could hardly be more stark: U.S. senators from, and governors of, multiple states—the voices of the people—are acting both in unison and in parallel to undo the work of a board of unelected bureaucrats implementing a whim of the administration that favors big businesses—big donors—at the expense of citizens. Bully for CR in its ongoing effort to further the cause of net neutrality!

—Howard Ritter, Fuquay-Varina, NC

MY FAMILY AND I have been subscribers and supporters for decades. I noticed in the most recent issue that CR again took a prominent stand on net neutrality. I believe you are oversimplifying the issue; advocating for net neutrality is not automatically pro-consumer. The issue is a battle between two major industries over regulation and to where

the profit flows. Distribution players want to be able to manage their networks and have more control to maximize their business. Yes, that means differentiating traffic prioritization. But it’s dishonest to ignore that content companies do the same thing—they also prioritize and select what content is provided. I wish that CR would think through a stronger policy justification for regulating one industry but not the other.

—T. Agoston, Stamford, CT



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What's on Your Mind?



We Want to Know.

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Let's start the conversation:

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CRM88PNL

INTRODUCING OUR NEW OVERALL SCORE

CONSUMER REPORTS evaluates a variety of factors for every product we test—performance, predicted reliability, and owner satisfaction. Now CR is incorporating data from all these assessments into one Overall Score, as we did with auto ratings two years ago.

The result is a single integrated rating that will make it even easier for you to make a well-informed buying decision. Starting with some products reviewed in this issue—refrigerators (page 18) and washers and dryers (page 48)—CR will be applying our consolidated Overall

Score to all major appliances, many small appliances, and most electronics we test. By combining the results of performance tests in our labs with the data we collect through surveys of CR members, our new Overall Score gives a holistic picture of product quality.

One result of this is that models from brands with high reliability scores might cluster at the top of the ratings while brands with poor reliability are penalized. We believe that's a good thing because it more closely reflects your experience with a product. Here's what goes into CR's new Overall Score.

Survey Results

PREDICTED RELIABILITY

Through our surveys, tens of thousands of CR members who purchased large appliances in the past 10 years tell us about their product experiences. Then we crunch the data

to estimate the likelihood that newly purchased models from a given brand, not under a service contract, will break within five years. Products from brands that rate Fair or Poor for reliability can't earn recommended status from CR, regardless of

performance, because consumers also expect their appliances to last. In cases where we have insufficient survey data to provide a brand-level rating, indicated by a gray dash (—), we assume the model has average reliability.

OWNER SATISFACTION The same surveys provide data for this assessment, which asks CR members how likely they'd be to recommend the appliances they purchased. Here, too, a gray dash means insufficient brand data and the model receives the category average.

Recommended	Rank	Brand & Model	Overall Score	Price	Survey Results		Test Results					Features						
					Predicted reliability	Owner satisfaction	Temperature uniformity	Thermostat control	Energy efficiency	Noise	Ease of use	Cabinet-depth model	Exterior height (in.)	Exterior width (in.)	Exterior depth (in.)	Total usable capacity (cu. ft.)	Energy cost/yr.	Ice and water
TOP-FREEZER REFRIGERATORS																		
✓	1	LG LTCS20220S	79	\$1,000	↑	↑	↓	↑	↑	↑	↓	66	30	33	16.7	\$61		
✓	2	LG LTCS24223S	78	\$1,000	↑	↑	↓	↑	↑	↑	↓	68	33	33	19.6	\$65		
✓	3	Samsung RT21M6213SG	76	\$1,080	—	—	↓	↑	↑	↑	↓	68	33	32	20.2	\$51		

Test Results

Our experts test more than 2,000 products a year in 63 laboratories at our

Yonkers, N.Y., headquarters and partner labs, and we currently have nearly 8,000 products in our ratings. A lot goes into testing

each product. For example, it takes 28 hours to evaluate a single dishwasher, and we collect 5.4 million temperature readings to score a single

refrigerator. We also purchase every product we test—a cornerstone of CR's policy to remain independent from manufacturer influence.

What We're Testing in Our Labs ...

In our 63 labs, we continually review and rate products. Here, timely picks for this month.

Smart Speakers

WE TESTED: 19 models
WE TEST FOR: Sound quality of the speaker, ease of setup and controls, a model's versatility (evaluating the presence or lack of features), and more.

ABOUT THE SCORES:
Median: 53
Range: 40-74

Leader of the Pack
Google Home Max with Google's digital assistant
\$400

74
OVERALL SCORE



Excellent Value
Sonos One with Alexa, Amazon's digital assistant
\$200

63
OVERALL SCORE



Easy for Apple Users
Apple HomePod with Siri, Apple's digital assistant
\$350

57
OVERALL SCORE



Large Tablets (9 inches and up)

WE TESTED: 35 models
WE TEST FOR: Overall performance; quality of display; camera image quality; battery life; convenience of buttons, app use, touch screens; and more.

ABOUT THE SCORES:
Median: 75
Range: 62-82

Best Overall
Samsung Galaxy Tab S3 9.7 (4G, 32GB, 4GB RAM)
\$550

82
OVERALL SCORE



Speed Demon
Apple iPad Pro 10.5 (4G, 64GB, 4GB RAM)
\$780

80
OVERALL SCORE



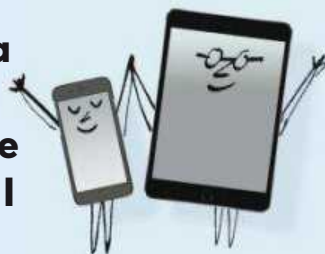
Bargain Buy, but WiFi-Only
Lenovo Tab 4 10 Plus TB-X704F (16GB, 3GB RAM)
\$280

74
OVERALL SCORE



Ask Our Experts

Should I get a data plan for my tablet from my cell-phone carrier—or should I shop around?



THOUGH YOU CAN have different carriers for your phone and tablet, it's more convenient to have one bill instead of two, and beyond that, using a single carrier may save you money. Carriers often offer discounted bundles, so you may want to wait for your next phone upgrade to see whether you can score a combo deal.

"But tablets are typically locked into a specific carrier," says Antonette Asedillo, who leads tablet testing for CR. So if you have your heart set on the 4G Samsung Galaxy Tab S3 (above) but aren't a Verizon customer, you'll have to assess whether you want to switch or keep two separate carrier bills. Also consider WiFi-only options, which are almost always the most affordable choice.

For the latest ratings of these and other product categories, readers with a Digital or All-Access membership can go to [CR.org](https://www.consumerreports.org).

Small and Midsize Countertop Microwaves

WE TESTED: 34 models
WE TEST FOR: Speed and evenness of heating, defrosting evenness, usable capacity, microwaving noise, ease of use, and more.

ABOUT THE SCORES:
 Median: 57
 Range: 45-72

Top-Notch Defroster
 LG LCS1112ST
 (12x20x16 inches)
 \$140



72
 OVERALL SCORE

Fits More Food
 Avanti MO1250TW
 (12x22x17 inches)
 \$130



72
 OVERALL SCORE

Perfectly Petite
 Sharp SMC0710BB/BW
 (10x17x13 inches)
 \$80



60
 OVERALL SCORE

Workout Headphones

WE TESTED: 39 models
WE TEST FOR: Sound quality, including tonal accuracy, clarity, detail, and more; design of the headphones, including how they sit in or around the ear; and more.

ABOUT THE SCORES:
 Median: 66
 Range: 21-80

Winner for Wireless
 Bose SoundSport Wireless
 \$150



76
 OVERALL SCORE

No-Sweat Price
 Scosche SportFlex 3
 \$20



76
 OVERALL SCORE

Long-Lasting Charge (10 hr.)
 Optoma NuForce BE Sport3
 \$70



66
 OVERALL SCORE

Action Camcorders

WE TESTED: 21 models
WE TEST FOR: Picture quality of filmed images; ease of use, including controls and displays; audio quality and accuracy using the built-in microphone; and more.

ABOUT THE SCORES:
 Median: 60
 Range: 36-67

Super-Stable
 Sony HDR-AS50
 \$190



67
 OVERALL SCORE

Hands-Free Functionality
 GoPro Hero5 Black
 \$250



63
 OVERALL SCORE

Budget Buddy
 Vivitar DVR914 4K
 \$125



58
 OVERALL SCORE

Whole Bean Coffee

WE TESTED: 14 Ethiopian products
WE TEST FOR: Intensity of flavor and aroma; plus fruit, floral, and other notes, as well as mouthfeel. We also evaluate cost per cup and per pound.

ABOUT THE SCORES:
 Median: 68
 Range: 50-84

Vibrant and Best Overall
 La Colombe Ethiopia-YirgZ
 \$15 for 12 oz.



84
 OVERALL SCORE

Light and Tangy
 Birch Coffee Ethiopia
 Yirgacheffe
 \$17 for 12 oz.



74
 OVERALL SCORE

Best Value and Darker Roast
 Trader Joe's Organic
 Fair Trade Shade Grown
 Ethiopian
 \$10 for 13 oz.



70
 OVERALL SCORE

Note: We rate different products according to different testing protocols; as a result, Overall Scores of one product category are not comparable with another.

COMING NEXT MONTH Sound Bars & More



Is it important to use mildew-resistant paint in my bathroom?

Mildew is a type of mold that thrives in moist places—so you’re right to be thinking about it when you paint your bathroom. Using a mildew-resistant paint can keep growth at bay—especially on the shower ceiling. “Moisture from showering collects and may soak into a room’s paint,” says Rico de Paz, a chemist and engineer who runs CR’s paint tests. “Paints that are resistant to mildew not only resist water absorption by forming an impenetrable paint film but also contain fungicides that kill mildew spores before they can grow at all.”

You don’t need to spend much more for paint that can fight off those fungi: One of our top scorers is Behr Premium Plus Enamel, \$28 per gallon,

available at Home Depot. Or head to Ace Hardware for a can of Clark+Kensington Enamel, \$32 per gallon, or to Lowe’s for Valspar Reserve, \$44 per gallon. All three leave a smooth surface and stand up to scrubbing. “We also advise a satin or semigloss finish,” says de Paz. “They’re less likely to trap mold and easier to clean than flat or eggshell finishes.”

These paints can also work well elsewhere; see “A Laundry Room You’ll Love,” on page 48.

Do I need to inventory every item I own in the event of a house fire?

The more detail about your belongings that you can relay to an insurance adjuster, the more you stand to recover from your claim, says Tobie Stanger, a CR senior money editor. Focus first on the big and valuable: major appliances, jewelry, furniture, rugs, electronics, and art or collectibles. Using your smartphone’s video feature, sweep the camera around a room, narrating the description

of items you’re filming and—if you remember—what you paid. (Photograph receipts if you have them.) Capture serial numbers and brand names when possible so that the insurer can replace what you had with exact or similar items.

Once you’ve cataloged the pricier items, then open cabinets, drawers, closets, and boxes and do the same. “But don’t sweat the small stuff too much. An adjuster is likely to create a ‘bulk estimate’ of those things—for example, \$200 for everything in your utility closet,” Stanger says.

Store the images and video on a cloud service, such as iCloud or OneDrive, or put it on a thumb drive and stash it in a safe deposit box or fireproof safe. Several insurers even offer free web-based inventory storage tools and apps. American Family Insurance’s DreamVault, for instance, lets anyone create a digital inventory; it’s available online and as an Android and iOS app.

My smartphone battery dies quickly. What can I do to make it last longer?

There are a few strategies you can use to conserve a phone’s battery power, says Rich Fisco,

CR’s head of smartphone testing. To start, go to your phone’s Settings > Battery menu to see whether you have a “low power mode” or “battery saver” that can be activated. What these do—and you can do à la carte if your phone doesn’t have that catchall setting—is lower the screen’s brightness. Also disable notifications from apps, such as Facebook and Spotify, and, if you use an animated wallpaper on your home screen, switch to a static one, such as a photo.

For Android phone owners, Fisco also recommends checking your widgets, which are Android phone features that give you real-time looks at what your various apps are doing. “If they’re live and constantly updating,” he says, “disable or delete them.”

If none of this helps appreciably, check your battery’s capacity. Recent updates to iOS let you monitor your iPhone’s “battery health” in Settings. You can do the same thing with Android phones by downloading an app; Fisco uses one called AccuBattery that shows what percentage of original capacity your battery is currently operating at. If it’s less than 80 percent, you may want to replace the battery.

Keep in mind that Apple is offering \$29 battery replacements through the end of 2018 for models dating back to the iPhone 6. If you own a 6s, you may be eligible for a free replacement, stemming from problems with some models manufactured in 2015.



We have more than 140 in-house experts who research, test, and compare! Submit your questions at CR.org/askourexperts ... and watch for the answers.

CR Insights

In the Know

Is 'Green Juice' Healthy?

SOLD EVERYWHERE FROM Whole Foods to Starbucks, “green juices offer a way to get nutrients from veggies you might not be getting enough of,” says Amy Keating, a registered dietitian at CR. “But they aren’t a substitute for whole vegetables.” Below you’ll find a few worthwhile options. But heed this advice:

Scan for Sugar

Some drinks tout “no sugar added” but have a lot of natural sugars from fruit juice. Naked Juice Boosted Smoothie Green Machine has 53 grams of natural sugars in 15 ounces—more than the added sugars in the same amount of Coke.

Check the Sodium

Many green drinks don’t add salt, but some vegetables, such as beets and celery, have

a surprising amount of natural sodium. Evolution Fresh’s Organic Green Devotion includes celery juice as the first ingredient and has 300 mg of sodium per serving—higher than many of its counterparts.

Don’t Believe Miracle Claims

Be wary of claims with specific benefits, including better sleep and glowing skin, a more balanced body, and cleansed blood. “Don’t take these claims at face value,” Keating says, and check whether companies have the research to back them up.

Spot Tricky Serving Sizes

Some Bolthouse Farms and Suja drinks, for example, list a serving size as only half a bottle. A distracted glance may lull you into thinking you’re consuming half the sodium, sugar, and calories than are in the whole bottle.



PHOTO: TOP: SAM KAPLAN, FOOD STYLING: JAMIE KIMM, PROP STYLING: MIAKO KATOHO, ILLUSTRATION: CHRIS PHILPOT

Evolution Fresh Organic Emerald Greens 11 oz., \$5



14 g SUGARS
90 mg SODIUM
Sold at Starbucks, this juice is low in sodium but also contains apple juice, which increases its sugars count.

Daily Greens Purity 12 oz., \$5



9 g SUGARS
180 mg SODIUM
It’s claimed to pack in 4.5 lb. of produce, including broccoli, kale, and celery, with low sugars. It is also USDA organic.

Suja Twelve Essentials 16 oz., \$8



8 g SUGARS
230 mg SODIUM
Almost all herbs and veggies, this bottle steers clear of fruit (except for a bit of lemon juice), which keeps its sugars low.

BluePrint Organic Motion Potion 12 oz., \$8

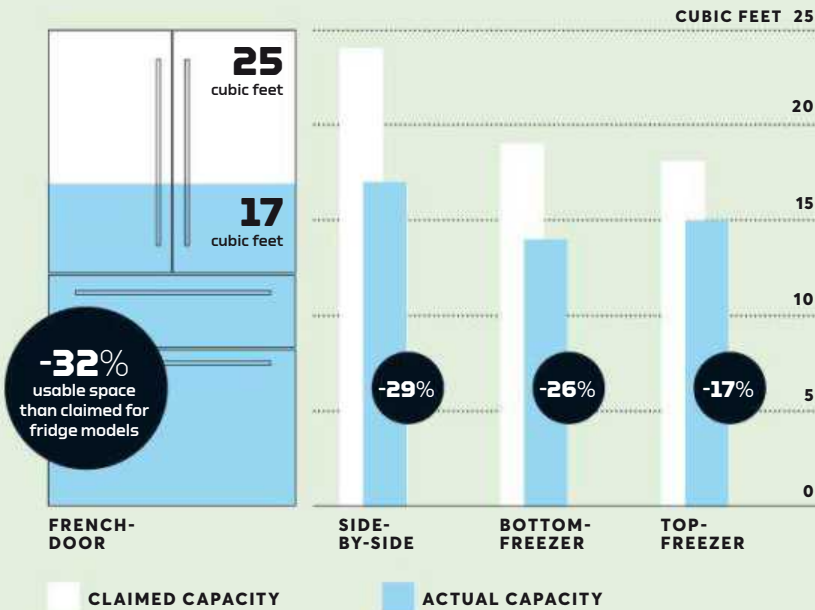


10 g SUGARS
35 mg SODIUM
With four leafy greens and more, this bottle contains a good dose of vitamins A and C, fiber, and potassium.

Food Sleuth

How Full Is Your Fridge?

Your new fridge may have a lot less storage space—some models as much as 32 percent less—than the claimed capacity on its sticker. The industry's capacity calculations don't deduct space taken up by shelves, containers, icemakers, and light housings, according to Joe Pacella, who leads CR's fridge testing. (Picture the refrigerator stripped bare to the walls.) But CR's test engineers calculate each model's usable storage capacity by measuring each shelf, door bin, and drawer, and subtracting the volume taken up by icemakers, water filters, lights, and vents. This leaves behind only the space that foods can occupy, called total usable capacity, which we note in our ratings.



HOW WE TEST Heat Retention in Mattresses

MANY OF THE TESTS we perform on mattresses at CR use human subjects—to help us evaluate, say, how supportive a specific mattress is—but when it comes to testing whether a mattress traps body heat, we rely solely on technology. Testers move the mattress into a temperature-controlled room and place a roughly 12x16-inch copper plate (encased in the insulated metal box, shown above, except for where the plate meets the mattress) on the center of the bed. Then we run an electrical current through the plate, which warms it to 98.6° F, simulating a sleeper's average body temperature. Over the course of 10 hours, testers note how much energy the copper plate uses to maintain that 98.6° F. If a mattress dissipates heat well, more energy is needed to maintain the set temperature of the copper plate. But if the mattress retains heat, less energy is used.

To learn more about our many mattress tests, go to CR.org/mattress0818.

CR Time Traveler LAUNDRY



1943 The state of wartime laundry "is little short of tragic ... many plants have closed down," we report. Laundering at home, we say, saves cash and helps the war effort.

1937 After our first test of washing machines, we warn that ones with wringers to expel water are "very dangerous," often catching users' hands, sleeves, or hair in them.



1950 We test new so-called hands-free models with some automatic features, but many—like this Easy model (above)—still have a separate tub for rinsing and spin-drying clothes, requiring more manual operation.

1960 In our appliance lab, we measure an automatic washing machine's hot- and cold-water consumption at controlled water pressure, using the gauges shown in the photo below.



1966 In our dryer tests, we focus on models with a promising new technology: automatic dryness control and moisture sensors. We report that models with full-width doors and large openings, like those above, are easier to load.



Cool Product Feature of the Month

Chill Out on These Mattresses

THE BEDROOM CAN BE a “hot bed” of arguments, one of which is who is too hot and who is too cold. But picking the right mattress can be part of the solution. Mattresses are built in layers that may include fabric, foam, batting, coils, and gel in different orders and thicknesses—and

some materials trap more heat than others. “You’re more likely to sleep warm on a foam mattress, compared with a hybrid innerspring, which we define as several inches of foam layers over metal springs,” says Chris Regan, who oversees mattress testing at CR. “Despite having a layer of cooling gel

foam, a larger percentage of foam models still retain warmth.” For example, Sleep on Latex’s Pure Green Foam model has two latex foam layers and retains a fair amount of heat. To keep you snoozing comfortably, here are the models that trapped little body heat in our tests—and four that sleep warmer.

PHOTOS, BOTTOM: CONSUMER REPORTS. ILLUSTRATIONS: CHRIS PHILPOT

COOLEST

- 81** **💰 Sleep Number c2 Adjustable Air Mattress**
\$900
- 76** **✔️ Purple the Purple Foam Mattress**
\$1,000
- 73** **✔️ Duxiana Dux 1001 Innerspring Mattress**
\$4,950
- 60** **My Green Mattress Natural Escape**
\$1,200

WARMEST

- 84** **✔️ Sleep Number 360 i8 Smart Bed Adjustable Air Mattress**
\$3,200
- 81** **✔️ Sleep on Latex Pure Green Firm Foam Mattress**
\$1,200
- 77** **✔️ Sleep Innovations Marley Foam Mattress**
\$430
- 75** **💰 Charles P. Rogers St. Regis Pillowtop Innerspring Mattress**
\$1,100



1970 We report that the phosphorus content of many laundry detergents helps turn “the nation’s lakes and streams into reservoirs of stinking slime.” And we call on the government to support research for effective, lower-phosphorous detergents.



1979 As we test new dryers, we factor in laundry basket placement: The Frigidaire, right, leaves room for one, but the GE, left, doesn’t.



1991 Whirlpool makes about half of the washers in the country, and several sit at the top of our ratings. Also, a Whirlpool’s agitator is best at circulating laundry in our tests.

2018 Of the front-loader washers we test, LG, Maytag, and Samsung brands get top marks—and the LG below is the quietest front-loader in our ratings.

✔️ LG SIGNATURE WM9500HKA
\$1,800

85 OVERALL SCORE



Face-Off

Smartwatch Showdown

FITBIT'S NEW VERSA smartwatch looks sharp and has many of the same functions that Apple Watch users love: It will count your steps, track your heart rate, and relay call or text alerts from your phone. Through rigorous testing, we compared the Versa with the Apple Watch Series 3 (38mm), and the results were surprisingly similar. The Apple Watch had a very slight edge in terms of being a bit easier to use and having a more accurate heart rate monitor. But the Versa was able to keep pace with the Apple Watch in almost every other way, is compatible with more devices, and has a much longer claimed battery life—making it a good choice, we think, for more than \$100 less.

✔ **Fitbit Versa** \$200
OVERALL SCORE **90**



✔ **Apple Watch Series 3*** \$330
91 OVERALL SCORE



*38mm with an aluminum case and GPS.

4 DAYS	Claimed Battery Life	18 HOURS
⬆	Heart Rate Monitor Accuracy	⬆
⬆	Step Count Accuracy	⬆
⬆	Scratch Test	⬆
⬆	Ease of Use	⬆
⬆	Ease of Pairing	⬆
⬆	Readability in Bright and Low Light	⬆
⬆ IOS, ANDROID & WINDOWS	Phone Compatibility	IOS ONLY ⬇

August Is THE BEST TIME TO BUY ...



Air Purifiers

As summer allergy season fades, keep an eye out for good prices on air purifiers.



Laptops

Check back-to-school sales for great deals on a new laptop computer.



Headphones

You may see prices drop this month—with the deepest discounts on wired models.

WHAT 100 CALORIES LOOKS LIKE

Salad Fixings

Start with a nutritious base of dark leafy greens, then load up on colorful veggies. “Just be mindful of portion size when it comes to dressing or treats like bacon bits,” says Maxine Siegel, R.D., of CR’s food-testing lab. For more tips, go to CR.org/salad0818.



2 oz.
California Avocado



3 Tbsp.
Bacon Bits



1/2 cup
Edamame



1 1/4 large
Hard-Boiled Eggs



3 Tbsp.
Italian Dressing



1/2 cup
Tuna Fish

PHOTOS, RIGHT: JOHN WALSH/CONSUMER REPORTS



RECALLS



TAKATA AIRBAGS IN FORD AND MAZDA PICKUPS

In an ongoing recall that started more than two years ago, 46 million Takata airbag inflators in 34 million vehicles have been recalled. But the National Highway Traffic Safety Administration issued a fresh warning for some 2006 Ford Ranger and Mazda B-Series vehicles, which contain dangerously defective Takata airbag inflators that show a far higher risk of ruptures during airbag deployment than for other recalled Takata airbags. "I cannot stress strongly enough the urgency of this recall," says Heidi King of NHTSA. **What to do:** Owners should stop driving immediately until their defective Takata airbags—which have caused injuries and deaths—are replaced. Go to nhtsa.gov/recalls; if your vehicle is listed, contact a dealer immediately to arrange a free repair.

FIAT CHRYSLER VEHICLES



Fiat Chrysler Automobiles is recalling an estimated 4.8 million Chrysler, Dodge, Jeep, and Ram vehicles because a driver might be unable to cancel cruise control. However, cruise control acceleration can be overpowered by applying the brakes. The models included are the Chrysler 2015–2017 200 sedan, 2014–2018 300 sedan, and 2017–2018 Pacifica minivan;

Dodge 2015–2018 Challenger coupe and 2014–2018 Charger sedan, Journey CUV, and Durango SUV; Jeep 2014–2018 Cherokee and Grand Cherokee SUVs and 2018 Wrangler; and Ram 2014–2019 1500 pickup and 2014–2018 2500 and 3500 pickups, and 3500 and 4500/5500 cab chassis.

What to do: FCA advises drivers to avoid using cruise control until your vehicle is equipped with free upgraded software. Call 866-220-6747 for details.

JEEP CHEROKEE SUVs



Fiat Chrysler Automobiles is recalling 48,990 2018 Jeep Cherokee SUVs with 2.4-liter inline-four engines because a damaged fuel tube in the engine bay could leak and cause a fire.

What to do: Contact your Jeep dealership for a free replacement of the potentially leaky fuel tube.

ELECTRIC CHAIN SAWS



Harbor Freight Tools is recalling about 1,020,000 Portland, One Stop Gardens, and Chicago Electric chain saws because the power switch can malfunction and the chain saw can continue operating after you move the switch to the Off position, posing a serious injury hazard. The chain saws were sold

at Harbor Freight Tools stores and website from May 2009 through February 2018 for about \$50.

What to do: Stop using it and call Harbor Freight Tools at 800-444-3353 or go to harborfreight.com for details on how to get a free replacement.



CHILDREN'S SWEATERS

Carter's is recalling about 107,200 three-piece penguin cardigan sets because the toggle can detach and pose a choking hazard. The sets were sold at stores and online from July 2017 through March 2018 for about \$40.

What to do: Take the sets away from children. Return them to any Carter's store for a refund gift card, or call Carter's at 800-692-4674 or go to carters.com to get a free shipping label and envelope to return the set by mail in exchange for an e-gift card.

BATH TOYS



Munchkin is recalling about 72,000 Waterpede bath toys because the toys can break into pieces and expose small parts, posing a choking hazard for young children. The toys were sold at stores nationwide and online at munchkin.com from September 2015 through January 2018 for \$5 to \$7.

What to do: Take the toy away from young children and call Munchkin at 877-242-3134 or go to munchkin.com to get a free replacement toy.

COFFEE CANS



Illy is recalling about 65,000 8.8-ounce whole bean coffee cans because the lid can detach suddenly and with force when you open it, due to a missing air valve on the bottom, posing a risk of injury. The cans were sold at stores and online from November 2017 through May 2018 for about \$15. **What to do:** Do not open or use

the coffee can, and call Illy at 855-282-4682 or go to illy.com/caninfo for a free replacement.

MINI DEEP FRYERS



Aldi is recalling about 35,000 Ambiano mini deep fryers because the heating element can overheat, posing fire and burn hazards. The fryers were sold at Aldi stores nationwide from February 2018 through March 2018 for about \$15. **What to do:** Stop using the fryer and return it to any Aldi store for a refund. Call Aldi at 800-366-9967 or go to aldi.us for details.

STROLLERS



Jané is recalling about 800 Muum strollers because they violate the federal Stroller and Carriage standard. An unrestrained infant can slide through the opening between the stroller armrest and seat bottom and entrap his head and neck, posing a strangulation hazard. The strollers were sold at stores and online from July 2016 through August 2017 for \$300 to \$450. **What to do:** Stop using the stroller. Call 844-200-7971 or go to jane-usa.com to get a free replacement armrest. In the meantime, you can use the stroller if you remove the armrest and harness the child properly.

HARD HATS



Honeywell is recalling about 82,500 Fibre-Metal E2 and North Peak A79 hard hats because they can fail to protect you from impact, posing a risk of head injury. The hats were sold by industrial protective equipment distributor stores and online from April 2016 through January 2018 for \$7 to \$21. **What to do:** Stop using it and call Honeywell at 888-212-6903 or go to honeywellsafety.com to get a product credit or voucher equal to the purchase price of the hard hat.

Product Update

The latest ratings from our labs

Annual energy cost can vary significantly by refrigerator type*

TOP-FREEZER	\$43	\$71
BOTTOM-FREEZER	\$46	\$77
FRENCH-DOOR	\$71	\$103
SIDE-BY-SIDE	\$78	\$96

What's So Cool About Refrigerators?

Plenty. At CR, we know these kitchen powerhouses inside and out. Follow our guide to new features and tap into our unparalleled testing to make a great pick no matter what your space or budget.

by Daniel Wroclawski



INSIDE
CR'S LABS

CR test engineer Joseph Pacella attaches temperature sensors that monitor for warm and cold spots.

WHEN A REFRIGERATOR goes kaput, most people want to find a replacement before the milk sours. But wading through all the available options can overwhelm, especially if it has been a while since you last bought a fridge. In just the past five years, manufacturers have added new finishes, more doors (certain French-door models have as many as five), WiFi connectivity, built-in touch screens that let you keep calendars and stream TV programming, and compartments that can serve as either a fridge or a freezer.

To help you find the refrigerator that best fits your needs, we'll walk you through the shopping process, highlighting new features worth considering, and tell you how to pick the right size and snag a good deal no matter what time of year you shop.

Determine Your Price Range

As with most purchases, the more you're willing to spend on a refrigerator, the greater the variety of features and models you'll see on offer. But you can still find top-rated models at affordable prices, such as our CR Best Buys.

If you want to spend less than \$1,000, you'll find plenty of great top-freezer models (the most reliable type, per CR's annual survey) to choose from but only a handful of worthwhile side-by-sides and bottom-freezers.

Moving into the \$2,000 range, you'll find a wide selection of CR-recommended side-by-sides,

bottom-freezers, and three-door French-doors but few four-door French-door models. A stainless steel finish will up the price, as will features such as water and ice dispensers. If you're prepared to splurge, you'll find luxury French-door and built-in models that cost more than \$10,000.

For some of our top picks and the pros and cons of the most common refrigerator types, see "Popular Styles and Top Performers," on page 22.

Bear in mind that the expense of a refrigerator doesn't end when you purchase it: There can also be upkeep costs. For instance, most models use an internal water filter for the icemaker and water dispenser to guard against contaminants, such as lead and trace chemicals. These can hit your wallet hard, costing about \$50 each and requiring replacement every six months or so. Third-party filters abound online at lower prices, but our recent research found that, in general, they don't carry the same level of safety and water-quality certification as filters made by the refrigerator manufacturer.

Consider the Features

While it's possible to buy a refrigerator today outfitted with an in-door coffee maker or shelves that raise and lower at the push of a button, there are only a handful of features that we think are well worth considering:

Airtight crisper drawers. If you stock lots of fruits and veggies, these might keep them fresher longer.

Two icemakers. Having a second icemaker will minimize the chances that you'll run out when you entertain. Just know that icemakers are prone to breaking, and having two can increase the odds of a problem down the road.

Door-in-door design. Certain French-door refrigerators come with door-in-door compartments that allow you to easily access snacks and drinks without opening the entire door.

Convertible freezer compartments. Available on French-door and certain top-freezer refrigerators, these can be converted into added fridge space with the flick of a switch, so you can store extra food for holidays and parties.

Speed chilling. Adding hot items to the refrigerator can send the temperature of the entire compartment up into levels that bacteria love. Quick-chill capability cools down warm foods without warming up the rest of the fridge.

"Features like these can add convenience to your kitchen," says CR test engineer Joseph Pacella, who oversees our refrigerator lab. "But people want and expect a new fridge to provide dependable performance for the next 10 years, so our refrigerator ratings now factor in survey data on predicted reliability."

Size It Right

You don't want to buy your dream fridge, only to have it delivered and not fit through doorways and hallways or into the space where you want it to go. Be sure to carefully measure

Product Update

the space—height, width, and depth—where your fridge will live. (You’ll find all three measurements in our refrigerator ratings, beginning on page 24.) “For your depth measurement, add 1 inch of space behind the refrigerator for airflow,” Pacella says.

A fridge that’s too deep can jut out awkwardly from your cabinetry. If you prefer a flush look, consider a counter-depth (or cabinet-depth) model. “Counter-depth refrigerators won’t sit truly flush with standard 25-inch-deep countertops like built-in models do, but many only protrude by the thickness of the door,” Pacella says. They don’t offer as much storage space as their deeper, and thus larger, counterparts, but they also won’t feel oversized in smaller kitchens.

Remember that manufacturers’ capacity claims don’t exclude shelving, icemakers, light housings, and other elements that eat up storage space. CR’s engineers calculate a model’s usable storage capacity by tallying the volume of each shelf, door bin, and drawer, and subtracting that taken up by icemakers, water filters, and the like for a more accurate measure of capacity. (For more on this, see “How Full Is Your Fridge?” on page 14.)

Get the Lowest Price

CR’s yearlong market analysis shows that average refrigerator prices are lowest in November. Still, bargains can be found throughout the year. “Retailers and manufacturers offer deals on appliances every month, with particular focus on holidays, such as July Fourth,” says Debra Mednick, CR’s associate director of market trends and analysis.

Once you select a few models from our ratings, Mednick recommends that you shop around, comparing prices at large retailers such as Home Depot and Sears, as well as at regional store chains and local independent shops. (For a quick look at some of our top-performing refrigerators and where they’re available, see the graphic at right.)

Don’t forget to compare haul-away and delivery costs, which can vary significantly. Finally, it never hurts to haggle with sales associates. Consumer Reports’ Survey Group found that 70 percent of shoppers who haggle over major appliance prices are successful at getting a discount, netting a median savings of \$98.

Where You Can

Home Depot, Lowe’s, and among the largest in-store rated models displayed

FRENCH-DOOR

✓ Samsung
RF23M8070SR
 \$3,550
81

SIDE-BY-SIDE

Whirlpool
WRS588FIHZ
 \$1,200
70

TOP-FREEZER

Ⓢ Frigidaire
FFTR1821TD
 \$745
72

BOTTOM-FREEZER

✓ LG
LDCS24223S
 \$1,650
89

TOP-FREEZER

✓ LG
LTCS24223S
 \$1,000
78

SIDE-BY-SIDE

Whirlpool
WRS571CIDM
 \$1,200
68

HOW WE TEST REFRIGERATORS

It takes more than a month to evaluate each refrigerator we test in the labs at our Yonkers, N.Y., headquarters. CR engineers attach numerous temperature sensors to every model. Then they record the data the sensors collect around the clock while the refrigerators run for several days in sealed chambers with ambient temperatures of 55°, 70°, and 110° F. In all, we collect

more than 5.4 million temperature readings for every model to detect warm and cold spots and determine which refrigerators will keep your food fresh longer.

To test freezer compartments, our engineers pack them with boxes of frozen spinach, several of which have been drilled and outfitted with a thermocouple to monitor their internal temperature.

We also calculate energy efficiency and measure noise levels, ice production, and usable storage capacity (which is always less than what manufacturers claim).

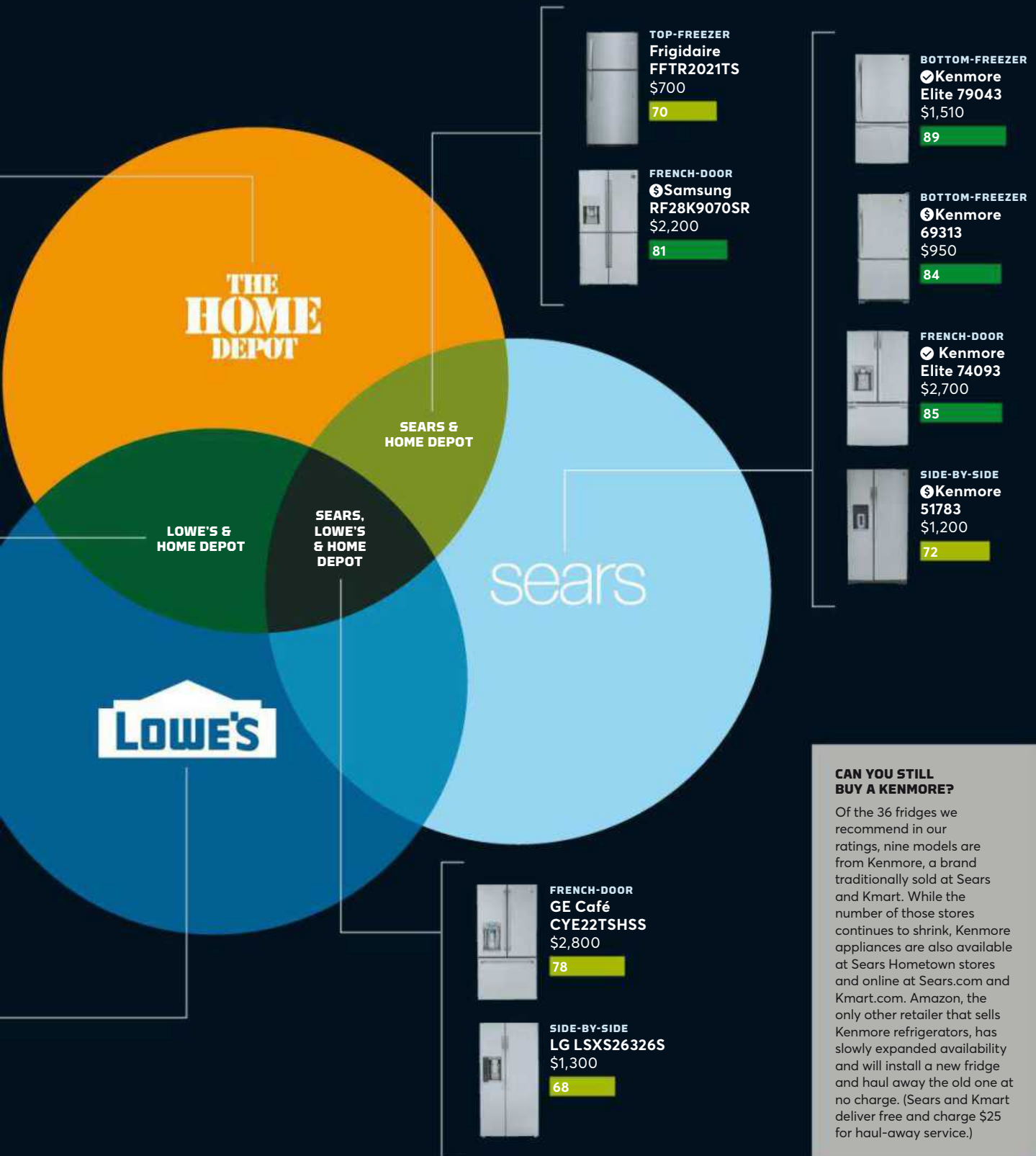
For the results of our testing data, see the refrigerator ratings charts starting on page 24.



CR test engineer
 Joe Pacella

Find Highly Rated Models

Sears account for more than half the refrigerator sales in the U.S. These retailers also have selections of refrigerators. This chart shows which of these stores are likely to have highly on the floor. Always compare delivery and haul-away fees, as well as prices, before you buy.



CAN YOU STILL BUY A KENMORE?

Of the 36 fridges we recommend in our ratings, nine models are from Kenmore, a brand traditionally sold at Sears and Kmart. While the number of those stores continues to shrink, Kenmore appliances are also available at Sears Hometown stores and online at Sears.com and Kmart.com. Amazon, the only other retailer that sells Kenmore refrigerators, has slowly expanded availability and will install a new fridge and haul away the old one at no charge. (Sears and Kmart deliver free and charge \$25 for haul-away service.)

Popular Styles and Top Performers

Top-Freezer

\$450-\$1,350

PROS: Affordable and offers ample storage in a tight footprint. In general, it's also the most reliable style, according to CR's surveys.

CONS: Doors swing wide, and you might need to stoop to access lower shelves and drawers.

SIZES: Widths vary from 28 to 33 inches, and usable capacity ranges from about 12 to 20 cubic feet.



✓ **LG LTCS20220S**
66Hx30Wx33D \$1,000

79

The only one of these four models with spillproof shelving, this stainless steel model also has an icemaker (not a given in this category). The LG earned Excellent scores for energy efficiency and noise—in fact, it's one of the quietest top-freezer refrigerators in our ratings.

✓ **SAMSUNG RT21M6213SG**
68Hx33Wx32D \$1,080

76

This black stainless steel Samsung has a freezer that converts into extra fridge space with the flick of a switch, a pretty neat trick at any price. It's tops for energy efficiency, but its middling temperature-uniformity rating indicates that it's susceptible to having warm and cold spots.

✓ **FRIGIDAIRE FFTR1821TD**
66Hx30Wx31D \$745

72

The black stainless steel finish gives this inexpensive Frigidaire an upscale look. It's a solid performer that scored Excellent in the three most important lab tests. As a brand, Frigidaire scored Very Good for predicted reliability.

✓ **WHIRLPOOL WRT549SZDM**
66Hx30Wx33D \$800

72

This Whirlpool comes with an icemaker, and it earned an Excellent score for energy efficiency in our tests and an Excellent rating for predicted reliability in our survey. It scored Poor in our tests for ease of use, though: You might find its digital controls difficult to adjust.

Bottom-Freezer

\$950-\$2,150

PROS: Refrigerator contents are easy to see and access.

CONS: Less storage space than comparably sized top-freezers; contents of the freezer can be difficult to access.

SIZES: From 24 to 36 inches wide; usable capacity ranges from roughly 8 to 17 cubic feet.



✓ **LG LDCS24223S**
69Hx33Wx33D \$1,650

89

Our top-rated bottom-freezer, this stainless steel LG scored Excellent in all our performance tests except ease of use, for which it earned a Good. Features include pullout shelves and bins in both compartments, spillproof shelves, and an icemaker.

✓ **KENMORE ELITE 79043**
70Hx33Wx33D \$1,510

89

LG makes certain Kenmore models, and this Kenmore is a variant of the high-performing LG at left. It offers identical performance, reliability, and satisfaction ratings, as well as most of the same features, though the Kenmore lacks split shelving.

✓ **KENMORE 69313**
66Hx30Wx31D \$950

84

Earning Excellent scores for thermostat control, temperature uniformity, energy efficiency, and noise, this lower-priced Kenmore got only a Fair score for ease of use. Its features are similar to those of the more expensive Kenmore above, minus spillproof shelving.

✓ **KITCHENAID KRBR109ESS**
67Hx30Wx31D \$1,700

76

With a Very Good rating for predicted reliability, this stainless steel KitchenAid is built to last. As for performance, it scored Excellent in thermostat control and temperature uniformity, and Good in energy efficiency and ease of use, but Poor in icemaking.

French-Door

\$1,350-\$8,000

PROS: Wide shelves accommodate large platters; refrigerator contents are easily accessible.

CONS: Shelves can be closely stacked, making vertical storage space limited.

SIZES: Widths range from 30 to 36 inches; usable space varies from about 11 to 22 cubic feet.



✓ **SAMSUNG RF28HDEDPWW**
69Hx36Wx34D \$2,430

85

This white three-door Samsung earned the same performance, reliability, and satisfaction ratings as the Kenmore at right. With the Samsung, you get the added feature of door-in-door fridge design—though its total usable capacity is slightly less than the Kenmore's.

✓ **KENMORE ELITE 74093**
69Hx36Wx36D \$2,700

85

Tied for the top spot in our ratings, this stainless steel three-door Kenmore earned Excellent scores for thermostat control, temperature uniformity, and noise. Its dual evaporators help keep food fresher longer, and spillproof shelves make for easier cleaning.

💰 **LG LFC22770ST**
68Hx30Wx33D \$1,620

81

With stellar performance at a lower price, this three-door French-door earned Excellent performance scores almost across the board. The exception? In our ease of use test, it earned just a Good. Also worth noting: It has the smallest usable capacity of these French-door picks.

💰 **SAMSUNG RF28K9070SR**
71Hx36Wx35D \$2,200

81

One of the highest-rated (and least expensive) four-door models in our ratings, this Samsung offers a wide range of features, including a freezer compartment that can convert to extra fridge space. Based on our calculations, it's slightly more expensive to run than the other three.

Side-by-Side

\$900-\$2,700

PROS: Narrow doors are a plus for cramped kitchens; many have in-door ice and water dispensers.

CONS: Overall, not as energy- or space-efficient as other types; many brands get dinged for owner satisfaction in CR's surveys.

SIZES: Widths range from 33 to 36 inches; usable capacity spans roughly 13 to 22 cubic feet.



✓ **WHIRLPOOL WRS975SIDM**
69Hx36Wx34D \$1,775

74

Our top-ranking side-by-side dispenses precise amounts of water for recipes, has pull-out bins, and features dual evaporators to keep food fresher. Its test scores ranged from an Excellent for energy efficiency to a Good for temperature uniformity.

💰 **KENMORE 51783**
69Hx36Wx29D \$1,200

72

Though the Kenmore is the noisiest of these four picks, it combines value with solid overall performance. It offers the same features as the top-rated Whirlpool at left (minus the measured fill), and boasts a price that's almost \$600 lower.

LG **LSXS26366S**
69Hx36Wx34D \$1,500

71

This LG side-by-side comes with a door-in-door design and many of the features of our top two picks (but no spillproof shelving). It earned an Excellent score for noise (the best of these four picks), and Excellent or Very Good scores in our other performance tests.

WHIRLPOOL WRS586FIEM
69Hx36Wx33D \$1,700

71

This Whirlpool side-by-side has digital controls, an ice and water dispenser, an air filter, and a door-open alarm. Its performance, reliability, and satisfaction ratings are identical to the top-scoring model in this category, although it scored only a Good in ease of use.

Ratings > **Cool Under Pressure** We test and rate hundreds of refrigerators in five configurations: top-freezer, bottom-freezer, French-door, side-by-side, and built-in.

Recommended	Rank	Brand & Model	Overall Score	Price	Survey Results		Test Results					Features							
					Predicted reliability	Owner satisfaction	Temperature uniformity	Thermostat control	Energy efficiency	Noise	Ease of use	Cabinet depth model	Exterior height (in.)	Exterior width (in.)	Exterior depth (in.)	Total usable capacity (cu. ft.)	Energy cost/yr.	Ice and water	Stainless/SS-look option
TOP-FREEZER REFRIGERATORS																			
✓	1	LG LTCS20220S	79	\$1,000	↑	↑	↑	↑	↑	↑	↓		66	30	33	16.7	\$61		
✓	2	LG LTCS24223S	78	\$1,000	↑	↑	↑	↑	↑	↓		68	33	33	19.6	\$65			
✓	3	Samsung RT21M6213SG	76	\$1,080	—	—	↑	↑	↑	↓		68	33	32	20.2	\$51			
✓	4	Samsung RT21M6215SG	76	\$1,080	—	—	↑	↑	↑	↓		68	33	32	20.2	\$62			
✓	5	Blomberg BRFT1522SS	75	\$1,000	—	—	↑	↑	↑	↓	●	68	28	26	12.0	\$52			
✓	6	Samsung RT18M6215SG	75	\$855	—	—	↑	↑	↑	↓	●	67	29	29	13.6	\$58			
✓	7	Maytag MRT311FFFM	74	\$950	↑	↓	↑	↑	↑	↓		66	33	31	17.5	\$56			
✓	8	Whirlpool WRT549SZDM	72	\$800	↑	↓	↑	↑	↑	↓		66	30	33	16.0	\$49			
Ⓢ	9	Frigidaire FFTR1821TD	72	\$745	↑	↓	↑	↑	↑	↓		66	30	31	15.3	\$52			
	10	Frigidaire FFTR2021TS	70	\$700	↑	↓	↑	↑	↑	↓		69	30	33	16.7	\$55			
	11	Maytag MRT711BZDM	67	\$1,005	↑	↓	↓	↓	↑	↓		66	33	32	18.1	\$57			
	12	Whirlpool WRT511SZDM	67	\$1,005	↑	↓	↓	↓	↑	↓		66	33	32	18.1	\$57			
	13	GE GTS21FSKSS	66	\$700	↓	↓	↑	↑	↑	↓		67	32	32	17.6	\$56			
	14	Frigidaire FFHT1821TS	65	\$700	↑	↓	↑	↑	↑	↓		64	30	30	14.2	\$47			
	15	Kenmore 79433	65	\$1,350	↑	↓	↓	↓	↑	↓		69	33	32	19.4	\$71	Internal water		
	16	GE GTE15CTHRWW	64	\$575	↓	↓	↑	↑	↑	↓		62	28	30	11.6	\$43			
	17	Kenmore 78032	63	\$1,015	↑	↓	↓	↓	↑	↓		69	33	32	19.6	\$71			
	18	GE GTS18GSHSS	62	\$675	↓	↓	↑	↑	↑	↓		68	28	29	13.4	\$51			
	19	Kenmore 60412	61	\$450	↑	↓	↑	↓	↑	↓		66	30	30	15.8	\$52			
	20	Insignia NS-RTM21SS7	61	\$680	—	—	↓	↓	↑	↓		67	33	34	18.0	\$51			
	21	GE GIE21GSHSS	60	\$1,205	↓	↓	↑	↓	↑	↓		67	33	33	17.7	\$62			
	22	Haier HRT18RCWW	60	\$450	—	—	↓	↓	↑	↓		66	30	33	15.1	\$53			
	23	Amana ART104TFDW	55	\$540	↑	↓	↓	↓	↑	↓		63	28	30	12.4	\$48			
BOTTOM-FREEZER REFRIGERATORS																			
✓	1	LG LDCS24223S	89	\$1,650	↑	↑	↑	↑	↑	↑		69	33	33	17.1	\$61			
✓	2	Kenmore Elite 79043	89	\$1,510	↑	↑	↑	↑	↑	↑		70	33	33	17.1	\$61			
✓	3	Kenmore Elite 79023	89	\$1,450	↑	↑	↑	↑	↑	↑		69	30	34	15.8	\$60			
Ⓢ	4	Kenmore 69313	84	\$950	↑	↑	↑	↑	↑	↓		66	30	31	13.4	\$58			
✓	5	KitchenAid KRBR109ESS	76	\$1,700	↑	↓	↑	↑	↓	↓		67	30	31	12.1	\$61			
✓	6	KitchenAid KRBR102ESS	74	\$1,400	↑	↓	↑	↑	↓	↓		69	33	31	14.9	\$75			
✓	7	GE GDE25ESKSS	74	\$1,600	↓	↓	↑	↑	↑	↓		69	33	35	17.1	\$79			
	8	Amana ABB1924BRM	71	\$1,220	↓	↓	↑	↑	↑	↓		66	30	31	12.5	\$58			
	9	GE GDE21ESKSS	71	\$1,500	↓	↓	↑	↑	↓	↓		70	30	35	14.6	\$74			
	10	Maytag MBF1958DEM	70	\$1,700	↓	↓	↑	↑	↓	↓		67	30	31	12.1	\$61			
	11	Maytag MBF2258DEM	68	\$1,400	↓	↓	↑	↑	↓	↓		69	33	31	14.9	\$75			
	12	Whirlpool WRB329DMBM	67	\$1,700	↓	↓	↑	↑	↓	↓		67	30	31	12.1	\$61			

Recommended	Rank	Brand & Model	Overall Score	Price	Survey Results		Test Results					Features							
					Predicted reliability	Owner satisfaction	Temperature uniformity	Thermostat control	Energy efficiency	Noise	Ease of use	Cabinet-depth model	Exterior height (in.)	Exterior width (in.)	Exterior depth (in.)	Total usable capacity (cu. ft.)	Energy cost/yr.	Ice and water	Stainless/SS-look option

BOTTOM-FREEZER REFRIGERATORS *Continued*

	13	Bosch B11CB50SSS	66	\$2,150	–	–	↑	↑	↓	↑	↓	●	79	24	26	8.4	\$46		●	●
	14	Haier HRB15N3BGS	65	\$1,000	–	–	↑	↑	↑	↑	↓	●	68	28	24	11.9	\$55		●	●
	15	Whirlpool WRB322DMBM	65	\$1,400	↓	↓	↑	↑	↓	↓	↓		69	33	31	14.9	\$75		●	●
	16	GE GDE23GSHSS	65	\$1,590	↓	↓	↑	↑	↑	↑	↓		68	33	33	16.2	\$77		●	●

THREE-DOOR FRENCH-DOOR REFRIGERATORS

✓	1	Kenmore Elite 74093	85	\$2,700	↓	↓	↑	↑	↑	↑	↑		69	36	36	21.5	\$99	Both	●	●
✓	2	LG LFXS32766S	85	\$3,600	↓	↑	↑	↑	↑	↑	↑		69	36	34	20.9	\$99	Both	●	●
✓	3	Samsung RF28HDEDPWW	85	\$2,430	↓	↓	↑	↑	↑	↑	↑		69	36	34	20.0	\$89	Both	●	●
✓	4	Samsung RF28MFEDES8	83	\$2,800	↓	↓	↑	↑	↑	↑	↑		69	36	34	19.0	\$81	Both	●	●
Ⓢ	5	LG LFC24770ST	83	\$1,710	↓	↑	↑	↑	↑	↑	↑		69	33	33	17.4	\$78		●	●
✓	6	Kenmore Elite 73153	82	\$2,200	↓	↓	↑	↑	↑	↑	↑		69	36	34	19.5	\$95	Both	●	●
✓	7	LG LFXS32736D	81	\$3,340	↓	↑	↑	↑	↑	↑	↑		69	36	35	21.5	\$94	Both	●	●
✓	8	Kenmore Elite 74033	81	\$2,700	↓	↓	↑	↑	↑	↑	↑		69	36	34	19.1	\$96	Both	●	●
Ⓢ	9	LG LFC22770ST	81	\$1,620	↓	↑	↑	↑	↑	↑	↓		68	30	33	15.4	\$76		●	●
Ⓢ	10	Kenmore 70333	80	\$1,600	↓	↓	↑	↑	↓	↑	↑		69	36	32	16.3	\$97	Both	●	●
	11	Kenmore Elite 73163	79	\$2,300	↓	↓	↑	↑	↑	↑	↑		69	36	34	19.2	\$95	Both	●	●
	12	Samsung RF20HFENBSR	79	\$1,350	↓	↓	↑	↑	↓	↑	↑		71	32	30	14.8	\$80		●	●
	13	LG LFXS29766S	78	\$2,400	↓	↑	↑	↑	↑	↑	↑		69	36	35	19.6	\$95	Both	●	●
	14	Samsung RF265BEAESG	78	\$3,000	↓	↓	↑	↑	↑	↑	↑		70	36	34	17.3	\$93	Both	●	●
	15	Kenmore 71323	78	\$1,700	↓	↓	↑	↑	↑	↑	↑		68	30	33	15.3	\$76	External Water	●	●
	16	GE GFD28GSLSS	78	\$2,800	↓	↓	↑	↑	↓	↓	↑		70	36	33	19.8	\$103	Both	●	●
	17	GE Café CYE22TSHSS	78	\$2,800	↓	↓	↑	↑	↓	↑	↑	●	70	36	30	15.1	\$86	Both	●	●
	18	Kenmore Elite 73133	78	\$1,600	↓	↓	↑	↑	↓	↑	↓		69	33	33	17.4	\$78		●	●
	19	Kenmore Elite 73133	77	\$2,000	↓	↓	↑	↑	↓	↑	↑		69	33	33	15.7	\$89	Both	●	●
	20	Samsung RF30HDEDTSR	77	\$3,000	↓	↓	↑	↑	↓	↑	↑		69	36	35	20.9	\$97	Both	●	●
	21	LG LFCS22520S	77	\$1,530	↓	↑	↑	↑	↓	↑	↓		68	30	33	14.8	\$76		●	●
	22	LG LFXS28968S	77	\$2,340	↓	↑	↑	↑	↑	↑	↑		70	36	34	19.4	\$94	Both	●	●
	23	Samsung RF28HFEDBSR	77	\$2,175	↓	↓	↑	↑	↓	↑	↑		69	36	34	20.0	\$94	Both	●	●
	24	LG LFCS31626S	77	\$3,420	↓	↑	↑	↑	↑	↑	↑		69	36	34	20.8	\$87		●	●
	25	Kenmore 72493	76	\$2,200	↓	↓	↑	↑	↓	↑	↑		69	36	33	17.1	\$92	Both	●	●
	26	Samsung RF28HDEDBSR	76	\$2,500	↓	↓	↑	↑	↑	↑	↑		69	36	34	20.0	\$93	Both	●	●
	27	Samsung RF26J7500SR	76	\$2,300	↓	↓	↑	↑	↓	↑	↑		69	36	34	16.4	\$90	Both	●	●
	28	LG LFXS28566S	75	\$2,900	↓	↑	↑	↑	↑	↓	↑		70	36	34	19.2	\$93	Both	●	●
	29	LG LFX21976[ST]	75	\$2,000	↓	↑	↑	↑	↓	↑	↑	●	70	36	28	13.5	\$82	Both	●	●
	30	Samsung RF261BEAE[SR]	75	\$1,350	↓	↓	↑	↑	↑	↓	↑		69	36	35	18.6	\$80	Internal water	●	●
	31	Samsung RF263BEAE[SR]	75	\$2,400	↓	↓	↑	↑	↑	↑	↑		69	36	35	17.1	\$82	Both	●	●

Recommended	Rank	Brand & Model	Overall Score	Price	Survey Results		Test Results					Features							
					Predicted reliability	Owner satisfaction	Temperature uniformity	Thermostat control	Energy efficiency	Noise	Ease of use	Cabinet-depth model	Exterior height (in.)	Exterior width (in.)	Exterior depth (in.)	Total usable capacity (cu. ft.)	Energy cost/yr.	Ice and water	Stainless/SS-look option

THREE-DOOR FRENCH-DOOR REFRIGERATORS *Continued*

	32	KitchenAid KRFC704FBS	74	\$3,870	⬇️	⬇️	⬆️	⬆️	⬇️	⬆️	⬆️	●	71	36	29	15.3	\$95	Both	●	●
	33	Kenmore Elite 74023	74	\$2,300	⬇️	⬇️	⬆️	⬆️	⬆️	⬆️	⬆️	●	69	36	34	19.5	\$96	Both	●	●
	34	LG LFCS25426D	74	\$1,400	⬇️	⬆️	⬆️	⬆️	⬆️	⬆️	⬇️	●	69	36	32	17.6	\$80		●	●
	35	Kenmore 70343	73	\$1,410	⬇️	⬇️	⬆️	⬆️	⬆️	⬇️	⬆️	●	69	36	34	18.2	\$92	Both	●	●
	36	LG LFX25974ST	73	\$1,700	⬇️	⬆️	⬆️	⬆️	⬇️	⬆️	⬆️	●	69	36	32	16.2	\$97	Both	●	●
	37	LG LFX25973ST	73	\$1,700	⬇️	⬆️	⬆️	⬆️	⬇️	⬆️	⬆️	●	69	36	32	16.2	\$97	Both	●	●

FOUR-DOOR (OR MORE) FRENCH-DOOR REFRIGERATORS

✓	1	Samsung RF22K9381SR	81	\$3,000	⬇️	⬇️	⬆️	⬆️	⬇️	⬆️	⬆️	●	72	36	29	15.8	\$91	Both	●	●
✓	2	Kenmore Elite 72483	81	\$2,900	⬇️	⬇️	⬆️	⬆️	⬆️	⬆️	⬆️	●	69	36	36	21.1	\$96	Both	●	●
💰	3	Samsung RF28K9070SR	81	\$2,200	⬇️	⬇️	⬆️	⬆️	⬆️	⬆️	⬆️	●	71	36	35	20.4	\$101	Both	●	●
✓	4	Samsung RF23M8070SR	81	\$3,550	⬇️	⬇️	⬆️	⬆️	⬇️	⬆️	⬆️	●	70	36	29	14.5	\$82	Both	●	●
	5	Samsung RF23M8570SG	80	\$3,800	⬇️	⬇️	⬆️	⬆️	⬇️	⬆️	⬆️	●	70	36	29	14.3	\$85	Both	●	●
	6	LG LMXS30786S	79	\$3,500	⬇️	⬆️	⬆️	⬆️	⬆️	⬆️	⬆️	●	69	36	36	20.1	\$89	Both	●	●
	7	LG LMXS30796D	79	\$3,100	⬇️	⬆️	⬆️	⬆️	⬇️	⬆️	⬆️	●	71	36	36	19.4	\$100	Both	●	●
	8	Samsung RF23J9011SR	79	\$2,700	⬇️	⬇️	⬆️	⬆️	⬆️	⬆️	⬆️	●	72	36	29	16.1	\$88	Both	●	●
	9	LG Signature LUPXS3186N	79	\$7,585	⬇️	⬆️	⬆️	⬆️	⬆️	⬆️	⬆️	●	70	36	37	21.8	\$104	Both	●	●
	10	Samsung RF28JBEDBSR	78	\$2,685	⬇️	⬇️	⬆️	⬆️	⬇️	⬆️	⬆️	●	70	36	34	16.8	\$93	Both	●	●
	11	Dacor DRF36C100SR	77	\$4,540	—	—	⬆️	⬆️	⬆️	⬆️	⬆️	●	69	36	31	14.3	\$71	Both	●	●
	12	Samsung RF22KREDBSR	77	\$2,900	⬇️	⬇️	⬆️	⬆️	⬇️	⬆️	⬆️	●	70	36	29	14.9	\$86	Both	●	●
	13	Samsung RF30KMEDBSR	77	\$2,195	⬇️	⬇️	⬆️	⬆️	⬆️	⬆️	⬆️	●	70	36	36	20.0	\$95	Both	●	●
	14	Samsung RF31FMESBSR	77	\$3,795	⬇️	⬇️	⬆️	⬆️	⬆️	⬆️	⬆️	●	69	36	36	19.0	\$87	Both	●	●
	15	Samsung RF25HMEDBSR	77	\$2,600	⬇️	⬇️	⬆️	⬆️	⬇️	⬆️	⬆️	●	69	33	34	16.6	\$89	Both	●	●
	16	Samsung RF28HMEDBSR	77	\$2,300	⬇️	⬇️	⬆️	⬆️	⬆️	⬆️	⬆️	●	69	36	34	18.8	\$93	Both	●	●
	17	LG LMXS28626S	76	\$2,520	⬇️	⬆️	⬆️	⬆️	⬇️	⬆️	⬆️	●	70	36	34	18.1	\$93	Both	●	●
	18	Samsung Family Hub RF28K9580SR	76	\$3,500	⬇️	⬇️	⬆️	⬆️	⬆️	⬆️	⬆️	●	72	36	35	19.0	\$100	Both	●	●
	19	LG LFXS24663S	76	\$2,200	⬇️	⬆️	⬆️	⬆️	⬇️	⬆️	⬆️	●	70	36	32	17	\$89	Both	●	●
	20	LG LMXC23746S	75	\$2,800	⬇️	⬆️	⬆️	⬆️	⬇️	⬆️	⬆️	●	71	36	29	14.7	\$86	Both	●	●
	21	LG Signature LUPXC2386N	75	\$7,560	⬇️	⬆️	⬆️	⬆️	⬇️	⬆️	⬆️	●	70	36	30	15.5	\$92	Both	●	●
	22	LG LMXS27626S	75	\$2,000	⬇️	⬆️	⬆️	⬆️	⬇️	⬆️	⬆️	●	69	36	33	17.6	\$92	Both	●	●
	23	LG LNXC23766D	75	\$3,690	⬇️	⬆️	⬆️	⬆️	⬇️	⬆️	⬆️	●	71	36	29	13.9	\$91	Both	●	●
	24	LG LMXC23796D	73	\$3,525	⬇️	⬆️	⬆️	⬆️	⬇️	⬆️	⬆️	●	69	36	30	14.8	\$76	Both	●	●

SIDE-BY-SIDE REFRIGERATORS

✓	1	Whirlpool WRS975SIDM	74	\$1,775	⬆️	⬇️	⬇️	⬆️	⬆️	⬆️	⬆️	●	69	36	34	18.7	\$79	Both	●	●
💰	2	Kenmore 51783	72	\$1,200	⬇️	⬇️	⬆️	⬆️	⬇️	⬆️	⬆️	●	69	36	29	14.6	\$84	Both	●	●
	3	LG LSXS26366S	71	\$1,500	⬇️	⬇️	⬆️	⬆️	⬆️	⬆️	⬆️	●	69	36	34	20.7	\$92	Both	●	●
	4	Whirlpool WRS586FIEM	71	\$1,700	⬆️	⬇️	⬇️	⬆️	⬆️	⬆️	⬆️	●	69	36	33	18.9	\$83	Both	●	●

Recommended	Rank	Brand & Model	Overall Score	Price	Survey Results		Test Results					Features							
					Predicted reliability	Owner satisfaction	Temperature uniformity	Thermostat control	Energy efficiency	Noise	Ease of use	Cabinet-depth model	Exterior height (in.)	Exterior width (in.)	Exterior depth (in.)	Total usable capacity (cu. ft.)	Energy cost/yr.	Ice and water	Stainless/SS-look option

SIDE-BY-SIDE REFRIGERATORS *Continued*

5	Whirlpool	WRS588FIHZ	70	\$1,200	↑	↓	↑	↑	↑	↑	↑	69	36	33	20.5	\$96	Both	•	•	
6	Kenmore	Elite 51773	69	\$1,550	↓	↓	↓	↑	↑	↑	↑	69	36	34	21.8	\$95	Both	•	•	
7	LG	LSXS26326S	68	\$1,300	↓	↑	↑	↑	↑	↑	↑	69	36	34	20.6	\$92	Both	•	•	
8	Whirlpool	WRS571CIDM	68	\$1,200	↑	↓	↑	↑	↓	↓	↑	•	69	36	28	14.6	\$84	Both	•	•
9	Frigidaire	Gallery FGHS2655PF	68	\$1,200	↓	↓	↓	↑	↑	↓	↑	70	36	34	17.4	\$83	Both	•	•	
10	LG	LSXC22386S	68	\$1,980	↓	↑	↑	↑	↑	↑	↑	•	70	36	30	16.2	\$78	Both	•	•
11	Frigidaire	FFSS2625TS	67	\$1,035	↓	↓	↑	↑	↑	↓	↑	70	36	32	17.4	\$91	Both	•	•	
12	Kenmore	Elite 51823	67	\$1,400	↓	↓	↑	↑	↑	↓	↑	66	33	32	17.1	\$78	Both	•	•	
13	Amana	ASI2275FRS	66	\$900	↑	↓	↑	↑	↓	↓	↓	69	33	33	13.3	\$85	Both	•	•	
14	Amana	ASI2575FRS	66	\$990	↑	↓	↑	↑	↑	↓	↓	69	36	33	15.8	\$90	Both	•	•	
15	Frigidaire	FFSS2325TS	65	\$1,035	↓	↓	↑	↑	↑	↓	↑	70	33	32	15.5	\$87	Both	•	•	
16	GE	Profile PSS28KSHSS	65	\$2,200	↓	↓	↑	↑	↑	↑	↑	70	36	33	17.0	\$95	Both	•	•	
17	KitchenAid	KRSF505ESS	65	\$1,775	↓	↓	↑	↑	↑	↑	↑	69	36	34	18.7	\$79	Both	•	•	
18	Whirlpool	WRS325FDAM	65	\$1,000	↑	↓	↑	↓	↑	↓	↓	69	36	33	15.1	\$90	Both	•	•	
19	Frigidaire	FFHS2622MW	65	\$965	↓	↓	↑	↑	↑	↓	↓	70	36	32	17.9	\$91	Both	•	•	

BUILT-IN REFRIGERATORS

✓	1	Miele	MasterCool KF1903SF	84	\$8,600	↑	↑	↑	↑	↓	↑	•	83	36	25	14.1	\$74		•	•
✓	2	Thermador	Freedom Collection T36BT810NS	80	\$8,500	↓	↑	↑	↑	↓	↑	•	84	36	25	13.8	\$80		•	•
✓	3	Dacor	Modernist DRF367500AP	78	\$8,150	—	—	↑	↑	↑	↑	•	84	36	24	14.6	\$71	Internal water	•	•
✓	4	LG	LSSB2791[ST]	78	\$8,500	↑	↓	↑	↑	↓	↑	•	84	42	26	17.0	\$97	Both	•	•
	5	Sub-Zero	BI-42UFD/S	76	\$9,800	↑	↑	↑	↑	↓	↑	•	83	42	26	17.4	\$89		•	•
	6	Sub-Zero	BI36UFDS	76	\$9,900	↑	↑	↑	↑	↓	↑	•	84	36	25	14.8	\$84		•	•
	7	Sub-Zero	IT36CI	75	\$7,600	↑	↑	↑	↑	↓	↑	•	83	36	25	15.1	\$77		•	•
	8	Jenn-Air	JB36NXFXRE	74	\$8,200	↓	↓	↑	↑	↓	↑	•	83	36	26	14.9	\$77		•	•
	9	Sub-Zero	BI42SIDS/PH	74	\$9,800	↑	↑	↑	↑	↓	↑	•	84	42	26	16.4	\$96	Internal ice and water	•	•
	10	Miele	PerfectCool KFN9955IDE	74	\$6,500	↑	↑	↑	↑	↓	↑	•	80	36	24	13.6	\$72		•	•
	11	Samsung	RS27FDBTNSR	72	\$6,570	↓	↓	↑	↑	↑	↑	•	84	48	26	20.3	\$109	Both	•	•
	12	Dacor	Discovery DYF36BFTSR	71	\$8,000	—	—	↑	↑	↑	↑	•	84	36	26	15.8	\$74		•	•

Readers with a Digital or All Access membership can find the latest ratings at [CR.org/refrigerators](https://www.consumerreports.org/refrigerators).

HOW WE RATE REFRIGERATORS: The new Overall Score combines test results with survey data for predicted reliability and owner satisfaction, and is based on a 100-point scale. Predicted reliability estimates the likelihood that newly purchased models from a given brand, not under service

contract, will break within the first five years. Owner satisfaction reflects the proportion of CR members who are extremely likely to recommend the refrigerator they bought to friends and family. In cases where we have insufficient survey data to provide a brand-level rating, indicated by a gray

dash (—), we assume the model has average reliability and satisfaction. Temperature uniformity is the ability to mitigate warm and cold spots in the fridge and freezer compartments. Thermostat control assesses the ability to reach and maintain a set temperature despite changes in

room temperature. Energy efficiency indicates energy consumption based on usable storage space and the national average electricity cost. Noise reflects quietness of operation based on noise-meter readings and a panel of listeners. Ease of use assesses layout and features.

The Mosquito Meets Its Match

Insect repellents can ward off mosquitoes and ticks—and prevent the diseases they carry. Our testing reveals which products will help protect you and your family.

by **Catherine Roberts**



THE FEMALE
AEDES AEGYPTI
MOSQUITO ENLARGED
34 TIMES



INSIDE
CR'S LABS

Forty-four percent of consumers think that natural pest control products work as well as conventional ones.* But most natural repellents we test perform in the Poor range, says Joan Muratore, CR's insect repellent test leader. One of our recommended products is an exception; it contains oil of lemon eucalyptus. Most with an Excellent rating use deet. Readers with a Digital or All-Access membership can find full ratings at [CR.org/repellents0818](https://www.consumerreports.org/repellents0818).



CR's Joan
Muratore

MORE THAN JUST a warm-weather nuisance, mosquitoes and ticks spread illnesses, including the West Nile and Zika viruses and Lyme disease. Insect repellents can protect against these pests, but our testing shows that not all of them are equal. “We find great variation among products in how well they protect,” says Joan Muratore, who oversees CR’s mosquito repellent testing. Only our recommended products are shown below. All of them contain one of the following active ingredients: **Deet**. Most of our recommended repellents contain 15 to 30 percent deet. (Research has shown that deet

is safe at those levels when used as directed, even for pregnant women and kids. Don’t use it on infants younger than 2 months.)

Picaridin or **oil of lemon eucalyptus** (OLE). Two products containing picaridin or OLE also did well in our tests. Research suggests both are safe, though OLE should not be used on children younger than 3 years old.

Our testers found that repellent sprays, lotions, and wipes could all be effective. But proper application is key. Follow the directions on the label and these five tips for best results.

1. Apply a thin coat to all exposed skin, but avoid eyes and mouth and use sparingly around your ears. Do not apply under clothing.
2. Adults should spray repellent on their hands to apply to children. Don’t spray on kids or apply to their hands to avoid it getting into their eyes or mouth.
3. Frequent reapplication isn’t necessary. Wash hands after applying and wash off repellent at the end of the day.
4. Never spray directly onto the face; spray on palms, then apply to the face.
5. When using towelettes, be sure to use enough of them to cover all exposed skin with repellent.

Recommended	Rank	Brand & Product	Overall Score	Pricing		Test Results		Features		
				Package	Per oz./ per towelette	Protection against mosquitoes and ticks	Resists damage to materials	Type	Claims to protect against ticks	Active ingredients
SPRAYS										
📍	1	Total Home (CVS) Woodland Scent Insect Repellent	94	\$6.00	\$1.00	⬆️	⬇️	Aerosol	•	Deet 30%
✓	2	Off Deep Woods Insect Repellent VIII Dry	94	\$6.00	\$1.50	⬆️	⬇️	Aerosol	•	Deet 25%
📍	3	Repel Plant-Based Lemon Eucalyptus Insect Repellent2	90	\$5.00	\$1.25	⬆️	⬆️	Pump spray		Oil of lemon eucalyptus 30.0% [Approx. 65% p-menthane-3,8-diol]
📍	4	Ben's 30% Deet Tick & Insect Repellent	88	\$8.00	\$1.33	⬆️	⬇️	Aerosol	•	Deet 30%
✓	5	Coleman Insect Repellent High and Dry 25% Deet	86	\$7.00	\$1.75	⬆️	⬇️	Aerosol	•	Deet 25%
✓	6	Sawyer Premium Insect Repellent 20% Picaridin	83	\$8.00	\$2.00	⬆️	⬇️	Pump spray	•	Picaridin, 1-Methylpropyl-2-(2-hydroxyethyl)-1-piperidine carboxylate 20%
📍	7	Repel Insect Repellent Scented Family 15% Deet	83	\$4.00	\$0.62	⬆️	⬇️	Aerosol	•	Deet 15%
✓	8	Repel Insect Repellent Sportsmen Formula Dry 25% Deet	76	\$5.00	\$1.25	⬆️	⬇️	Aerosol	•	Deet 25%
📍	9	Off Deep Woods Sportsmen Insect Repellent II	74	\$6.00	\$0.75	⬆️	⬇️	Aerosol	•	Deet 30%
✓	10	Cutter Backwoods Dry Insect Repellent	69	\$6.00	\$1.50	⬆️	⬇️	Aerosol	•	Deet 25%
✓	11	Natrapel Tick & Insect Repellent	69	\$9.00	\$1.50	⬆️	⬇️	Aerosol	•	Picaridin 20%
LOTION										
✓	1	Sawyer Ultra 30 Insect Repellent	84	\$10.00	\$3.33	⬆️	⬇️	Lotion	•	Deet 30%
TOWELETTES										
✓	1	Repel Insect Repellent Mosquito Wipes 30% Deet	65	\$5.00	\$0.33	⬆️	⬆️	Towelettes	•	Deet 30%
✓	2	Off Deep Woods Insect Repellent Towelettes	64	\$6.50	\$0.54	⬆️	⬆️	Towelettes	•	Deet 25%

HOW WE TEST: We apply a standard dose of repellent to a measured area of skin on test volunteers’ arms. Their

arms are then placed in a cage of disease-free mosquitoes 30 minutes and 1 hour after applying, then hourly

until the volunteer receives two bites in one 5-minute session or one bite in each of two consecutive sessions.

Repellents that work well against mosquitoes also work well against ticks, our past tests have shown.

PHOTOS: JAMIE CHUNG/TRUNK ARCHIVE (MOSQUITO); JOHN WALSH/CONSUMER REPORTS (HEADSHOT)

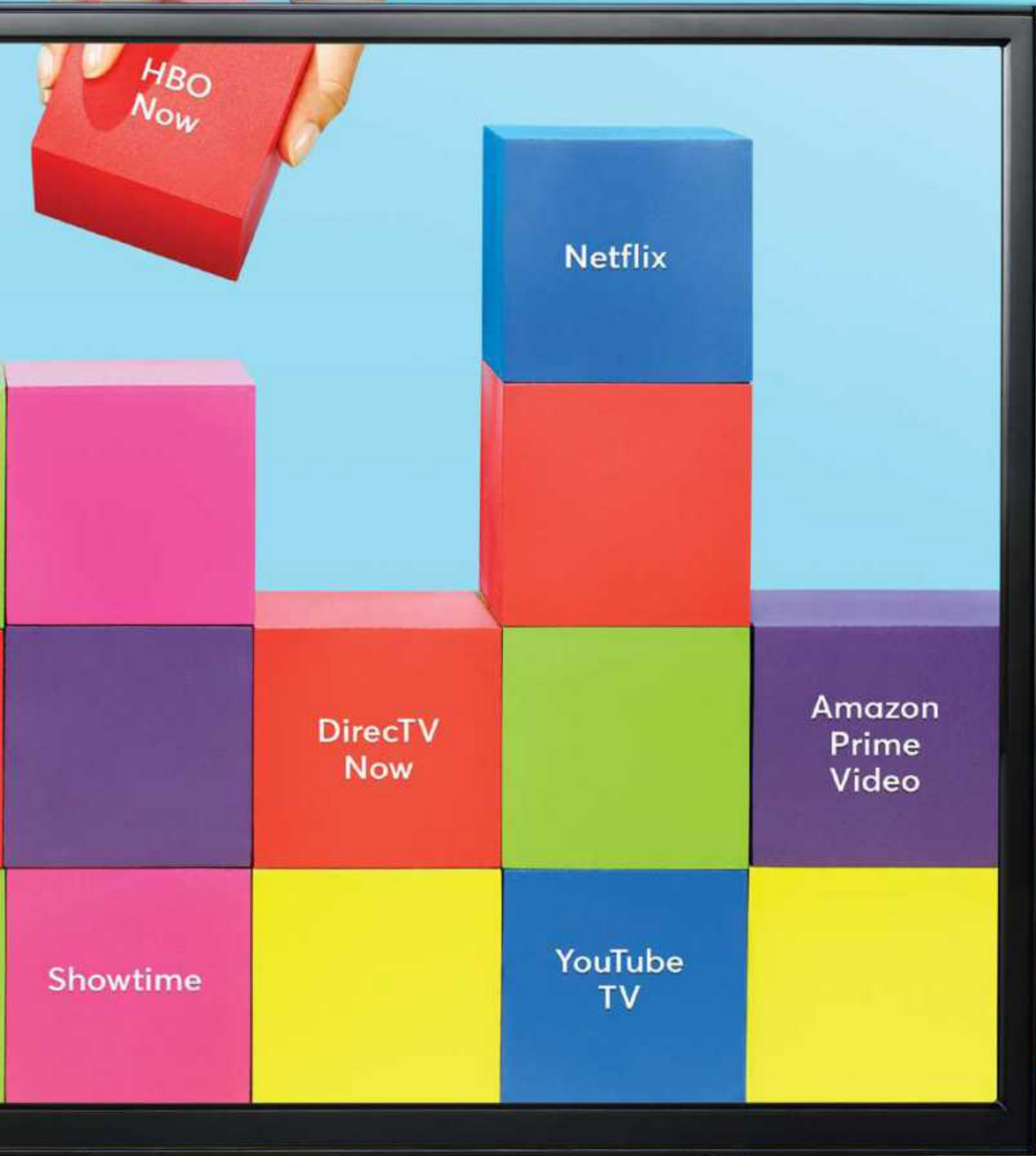
Take Control

Want to watch more of what you like at a price you'll love? Follow our guide to shrinking your cable bill, slashing fees, and switching to streaming.

by James K. Willcox



of Cable TV!



LET'S GET STARTED



By late 2017, Lisa and Ken Sharp had finally had enough of their \$180-per-month Verizon Fios bill. And with college tuition for their two daughters on the horizon, the Valley Cottage, N.Y., residents eyed their TV, internet, and phone bundle as a potential place to save money.

The Sharps were a bit nervous about losing access to certain channels and favorite shows such as “Game of Thrones,” and they faced a confusing array of choices. “We explored the various options for months before we took the leap,” Lisa says. Once they made the move, though, they were able to cut their bill by about \$85 a month.

In dumping pay TV, the Sharps joined a growing group of consumers. According to the research firm eMarketer, the number of cord cutters in the U.S. will swell to about 27.1 million in 2018, a jump of 22 percent in just a year.

Rising prices are a big motivation. The average annual bill for TV service rose from \$700 in 2000 to \$1,200 in 2017, according to estimates from the research firm Kagan, S&P Global Market Intelligence, far outpacing increases in wages or inflation. And many consumers are fed up with cable TV’s short-term promotions and unexpected fees, which make it hard to know what they’ll really end up paying. (See “Cable TV’s Sneaky Fees,” on page 36.)

Frustration with cable is nothing new. What has changed is that consumers have so many more choices now, delivered over the internet. You can get a streaming service like Netflix to watch movies and TV series. A handful of companies, including Sling TV and YouTube TV, offer “cable replacement” packages that deliver TV shows from multiple networks, such as HGTV and CNN, as they air. You can even subscribe to a single network, such as HBO. It all comes through the web.

“Over the past year, we’ve seen cord cutting accelerate” thanks to new streaming options, says eMarketer’s principal analyst, Paul Verna. “Suddenly, we have a market with several digital offerings that generally cost less than their cable and satellite counterparts.”

Assembling your own entertainment package from a mix of services can feel liberating. Note, though, that even if you terminate TV service, you won’t be completely cutting the cord to a cable company. That’s because most consumers will still need internet service from the very same company that used to supply them with both internet and TV.

Navigating all of this doesn’t have to be difficult. We’ve created this step-by-step guide to help you understand the options and decide whether cutting the cord is the right move. We’ll show you how to blow up your cable bill and then rebuild a plan with small pieces you choose yourself.

In the end, you’ll be able to customize your TV-watching experience—and probably save money.

1 | Review your bill.

Do you get a bundle of TV, internet, and phone service all from the same company? If so, look for the portion of the bill where the price for each service is broken out separately. The TV portion is approximately what you’ll save from your cable bill if you cut the cord.

If you’re one of the tens of millions of people who pay for TV shows delivered by a satellite company such as DirectTV or Dish, just note what the company charges you each month.

Next, whether you have cable or satellite TV, note what tier of service you have, which determines how many channels you receive. (Tiers may have names like “Standard” or “Signature.”) And check whether you’re paying for premium channels such as Showtime.

If you’re using your cable company to get a bundle of services, it’s hard to predict precisely what you’ll be charged once you drop the TV portion.

On the positive side, you might save on fees—those hard-to-understand charges for everything from broadcast TV to regional sports to the rental of your set-top box. We’ve seen plans where they added \$20 or more, and many of those fees will disappear.

On the other hand, a cable company could raise your price for internet and phone once you cancel the TV part of the bundle. It’s something you’ll have to ask about when you call.

We’ll get to that a bit later.

2 | List your must-have shows and channels.

Your cable package may include many channels you never watch—and a few that you really like. As you design a new, customized TV plan, the goal is to include all of the programming you and your family value without paying for a lot of content you don't care about.

When the Sharps were considering whether to cut the cord, the whole family spent a month logging the shows they watched in a notebook kept on the coffee table. “What we found was eye-opening,” Lisa says. “Almost everything we watched was coming in through streaming. At first the girls thought they couldn't live without cable TV, but the reality was that pretty much everything they watched was on either Netflix or YouTube.”

Keep your own log, and as you progress through the rest of our steps, you'll be able to judge what mix of options can fill your needs best, and which shows you may be willing to give up to save money.

Once you have all of your family's viewing information laid out, you're ready to explore your options.

3 | Try an antenna.

An antenna—old-fashioned, humble, and inexpensive—is the very first thing to think about if you want to cut the cord. Here's why: Many of us stick with cable or satellite TV mainly to watch broadcast channels, such as ABC, CBS, Fox, NBC, PBS, and Telemundo. Those networks deliver local and national news, sitcoms, crime dramas, baseball games, award shows, and more.

All those channels are available free over the air, in full HD—as long as you live somewhere with good reception and have an antenna. If so, cord cutting might be particularly easy for you.

Antennas don't work well everywhere.

Enter your address at fcc.gov/media/engineering/dtvmaps to see whether you're likely to get good reception.

If the answer is yes, try using an easy-to-set up indoor antenna. (See “The ABCs of Antennas,” on page 35.) Just make sure there's a good return policy in case you don't get as many channels as you'd like.

Of course, an antenna won't deliver cable channels, such as AMC or the Food Network. If those are important to you, it's time to shop around.

4 | Check for deals beyond your cable company.

If your household's TV log reveals that you watch a lot of cable news, ESPN, and other cable channels, an antenna won't be enough. In this case, the simplest way to save money might be to switch pay-TV providers.

There aren't many choices in most locations, but you might be able to score a promotional deal if competitors such as DirecTV or Verizon Fios are trying to attract new customers in your area.

Ask for the total cost of a plan, including add-on fees and installation charges, plus the price once the promotion ends. Find out whether you'll be locked into a contract—and what penalty you'll pay if you terminate early.

5 | Compare your channel wish list with cable replacement services.

Let's say you get lousy antenna reception and you want to keep some cable channels—but just a few. And saving money is important to you. The best option may be one of a new breed of streaming services that's really shaking up the TV business and giving consumers new choices.

Services such as Sling TV and Hulu With Live TV aren't like Netflix, where users watch individual shows or movies.

Instead, these cable replacement services provide access to cable channels such as CNN and TBS Network, along with many broadcast channels.

The price is typically around \$35 to \$45 a month for 30 to 60 channels. You can often pay a bit more to get premium channels such as HBO or packages that add channels focusing on such things as Spanish-language content or sports. What's available varies by service, where you live, and even the smart TV or streaming player you use. For instance, you might not get all local broadcasts. (For details, see “Cable Replacement Services,” starting on page 38.)

You can try an online tool to help find the best cable replacement service. For instance, one at Untangle.TV leads you through a series of questions on your viewing habits, then spits out a recommendation. But in the end you'll need to go to each service's website and sift through the channel lineups to find the best match for your household.

A cable replacement service was a big part of the solution for John and Alisa Moore, a couple in Fallbrook, Calif. They got rid of cable TV and, after experimenting with several internet and cable replacement combinations, settled on a \$25 plan from Sling TV for broadcast and cable channels along with AT&T for internet service.

The couple also have accounts with several other streaming services including Netflix, but they're still saving about \$70 per month. “We like what we have now,” John told us by email. “The obvious pro is that it is much cheaper.” The downside? They spend more time navigating between services to watch TV. “I'd have to say that is a con.”

6 | See whether Netflix and Amazon are all you need.

Not everyone cares about cable or broadcast channels. If you're happy with older TV shows, some movies, and exclusive series such as Netflix's



“Stranger Things” and Amazon’s “The Marvelous Mrs. Maisel,” conventional streaming services will deliver the goods. Netflix and Amazon Prime each cost about \$8 to \$14 a month, and prices for other services are in the same ballpark. (See “More Choices to Love,” on page 40.) For instance, people who like to watch “Game of Thrones” or “Silicon Valley” can sign up for the HBO Now streaming service for \$15 per month, and fans of British TV can subscribe to a \$5-a-month service called Acorn TV.

If you just want to watch an occasional movie, even those services may not be a great deal. Pay-per-view

companies such as FandangoNOW and Vudu generally charge \$5 or \$6 for a one- or two-day rental of a newer movie. A couple of movies a month will cost more than Netflix, but you can get exactly the content you want, including blockbusters that have just left theaters.

7 | Now call your cable company.

Now that you’ve done your research, you’re ready to confront your cable company. Bypass regular customer

service and ask to speak to a customer-retention specialist.

If you’ve decided you still want broadcast networks plus some cable channels, ask whether the company has started to offer a cheap “skinny TV” plan. You may have to emphasize that you want the absolute cheapest TV deal available, not the standard “basic” package. These skinny plans can be very similar to the cable replacement streaming services described above, offering a few channels for a low price.

For instance, Comcast offers a \$40-a-month Xfinity Instant TV plan

that includes internet along with local broadcasts, The CW, PBS, C-SPAN, and educational and home-shopping channels. For an additional fee, you can add a package of children's, sports, or news content.

If you've decided to go antenna-and-Netflix only, even a cheap skinny bundle may not appeal to you. In that case, you're just trying to make sure the bill for your internet access, and maybe your phone, doesn't rise too much once you cancel the TV part of the bundle.

"We were able to keep our Fios internet service for the same \$70-a-month price we paid as part of the bundle," Lisa Sharp says. "Verizon was surprisingly very helpful."

8 | Put your plan into action.

Whew. Now you have the information you need to decide whether to go with a pared-down TV package from a cable company, a combination of streaming services, or some other arrangement.

Of course, if you're subscribing to streaming services and don't have a smart TV, you'll need an add-on streaming device. (You can find test results on page 41.)

In the end, the Sharps decided they'd be happy with just Netflix and HBO Now, to the tune of \$25 per month. Add that to their \$70 Fios internet service, and their total bill dropped from \$180 to \$95.

The biggest sacrifice was giving up local broadcast TV. "Occasionally, there's a show my friends are talking about, such as "This Is Us," that I can't watch because it's on network TV," Lisa says. "But it just wasn't worth the cost."



For TV ratings, CR readers with a Digital or All-Access membership can go to [CR.org/tvs0818](https://www.consumerreports.org/tvs0818).

THE ABCs OF ANTENNAS

TV ANTENNAS ARE making a comeback. In fact, one-fifth of households in the U.S. with broadband internet now use one, according to Parks Associates, a market research firm.

CR recently tested 10 indoor antennas at homes located within an hour of New York City. The antennas ranged in price from just \$10 to \$80 and came in a variety of designs. All were easy to set up.

Antenna reception is affected by both distance from broadcast towers and geography. Some homes got dozens of channels, which is great news for cord cutters. But others barely got any signals at all, even with the best antennas.

The models, listed below, are ranked by the percentage of stations they received across our 10 test locations, out of all the stations available. (One "station" can have multiple "channels" with different programming.)

The test included some amplified models, which plug into an AC outlet and may pull in more distant stations.

Make sure you can return any antenna you buy, since you won't know how many stations you can receive until you try it. To get the best reception, experiment with placing the antenna in a few spots. A position near a window often works best.

ANTENNA BY RANK	PERCENTAGE OF STATIONS RECEIVED
1 Mohu Releaf 1 \$35	78%
2 Winegard FlatWave FL5500A AMPLIFIED \$52	77%
3 ClearStream 2 Max \$80	75%
4 Terk HDTVVAZ AMPLIFIED \$36	72%
5 ClearStream Eclipse AMPLIFIED \$60	70%
6 NAXA NAA-308 AMPLIFIED \$15	66%
7 ViewTV VT-9042G \$20	64%
8 Mohu Curve 50 AMPLIFIED \$70	62%
9 Terk OMNITWR AMPLIFIED \$62	62%
10 RCA ANT111Z \$10	60%

How You Can Save \$100s Off Your Annual Bill

Cable-TV pricing can be complicated. Prices vary by location, there are lots of opaque fees, and promotional pricing keeps changing. But you can take control of your bills by building a customized collection of entertainment services. Here are four sample scenarios to give you ideas for your own plan.

Cable Bill **Before** Cord Cutting

Let's say you have a fairly typical bundle of three services from your cable company: TV, internet, and digital phone. Here's what the bill might look like. It's based on an actual bill from a consumer in Connecticut, rounded to whole-dollar amounts.

TRIPLE-PLAY BILL

TV	\$92
Internet	\$55
Phone	\$20
Broadcast TV Surcharge	\$9
<hr/>	
TOTAL COST	\$176

Note: Sample bill excludes taxes, which vary by state. TV price is for a mid-tier plan with 175 channels including HBO and Showtime, plus a digital receiver. Internet price is for standard broadband. See "Cable TV's Sneaky Fees" (below) for a discussion of the broadcast TV surcharge and similar fees.

CABLE TV'S SNEAKY FEES

CONSUMERS HATE unexpected charges on everything from airline tickets to cellular bills.

That's why Consumers Union, the advocacy division of Consumer Reports, is launching a program called "What the Fee?!" to highlight surprising charges—and help consumers fight back.

No fees seem to bother

consumers more than the ones on their cable bills. When we asked CR members about their experiences with all kinds of add-on fees, we received hundreds of complaints about cable TV charges that seemed unfair.

Cable's add-on fees let cable companies advertise prices lower than what they actually charge their

customers each month. Confusing? CR members seem to think so.

What can you do? First, some fees will go away if you eliminate your cable TV service, even if you keep internet and phone.

Second, you can join Consumers Union's effort by going online to **WhatTheFee.com** and

Monthly Costs **After** Cord Cutting

Now let's get rid of cable TV service—and the associated fees. That saves \$101 per month. But you still want to watch movies and TV shows, right? And streaming services cost money, too. Your new TV-viewing budget can vary a lot depending on what choices you make.

Antennas in a recent CR test (page 35) cost between \$10 and \$80; there's no monthly cost. Internet and phone service may rise in price when you cut TV from a triple-play bundle, though some consumers report no increase.

WATCH FREE OR NOT AT ALL	NETFLIX, PLUS A LITTLE MORE	SIMILAR TO CABLE, BUT CHEAPER	THE TV-LOVER'S PLAN
<p>Live in a spot where an antenna works well? Have a library card that entitles you to a Kanopy account? If you can do without cable channels, TV viewing can be cost-free.</p>	<p>This plan uses an antenna for broadcast channels. Netflix delivers older movies and original series ("The Crown"). And you can rent two new releases from FandangoNOW.</p>	<p>SlingTV Blue gives you about 45 cable and broadcast channels. Netflix delivers older movies and original series ("The Crown"). Add two options, such as HBO and Spanish-language programming, and you still cut \$56 from our sample bill.</p>	<p>Saving money isn't the only reason to cut the cord. It also helps you customize your viewing. A mix of streaming series can give you the kind of content you like most.</p>
<p>Antenna \$0</p> <p>Sony Crackle \$0</p> <p>Kanopy \$0</p> <p>Internet \$55</p> <p>Phone \$20</p> <hr/> <p>TOTAL COST \$75</p>	<p>Antenna \$0</p> <p>FandangoNOW (2 movies) \$12</p> <p>Netflix \$11</p> <p>Internet \$55</p> <p>Phone \$20</p> <hr/> <p>TOTAL COST \$98</p>	<p>Sling TV Blue \$25</p> <p>HBO (Sling add-on) \$15</p> <p>Best of Spanish TV (Sling add-on) \$5</p> <p>Internet \$55</p> <p>Phone \$20</p> <hr/> <p>TOTAL COST \$120</p>	<p>Amazon Prime \$10</p> <p>DirectTV Now Go Big package \$60</p> <p>HBO (DirectTV add-on) \$5</p> <p>Filmstruck with Criterion \$11</p> <p>Netflix \$11</p> <p>Internet \$55</p> <p>Phone \$20</p> <hr/> <p>TOTAL COST \$172</p>

signing a petition that we'll send to cable companies, urging them to make their pricing more transparent.

Here are some of the cable TV add-on fees we've seen, and what they pay for:

Broadcast TV fee \$4-\$11

Networks such as ABC and Fox have always charged

cable companies for content—and yet somehow that's not baked into the advertised price.

Sports Surcharge \$7-\$12

This pays for regional sports networks, but no one tells you that some are owned by the cable companies themselves.

HD Technology Fees \$10

The HD fee persists as an add-on years after nearly all programming has switched to high-def.

Set-Top Box/Receiver Fees \$7-\$13

You have to rent your cable box and maybe the remote

control. Over a few years, these charges can easily add up to more than you paid for the TV itself.

DVR Service \$13-25

This is often the biggest added fee in a cable-TV bill. It's what you're charged for the ability to record shows.

Cable Replacement Services



The big networks and cable channels keep many people tethered to a monthly TV bill. Sure, you can get Netflix to watch certain movies or series such as “Stranger Things.” But if you want NBC or HGTV you need a cable, Fios, or satellite contract.

At least, that’s how it used to be. Today, online “cable replacement” services are giving any cord cutter with a broadband connection unprecedented TV-watching freedom.

IF YOU LIKE the sound of these cable replacement services, which let you stream cable and broadcast channels over the internet, you've got a handful of options. Typically, you'll get a few dozen channels, for less money than you were paying the cable company.

A service's offerings may vary by geography, especially when it comes to local channels, so go to each company's website, plug in your ZIP code, and see what's available in your area.

Even if a particular channel isn't available in your area, you may be able to watch some of its shows a day or two later, on demand. Or think about getting an indoor antenna. We just tested 10 of them, and some of our testers were able to get scores of channels. (See "The ABCs of Antennas," on page 35.)

Pricing and channel lineups change often, so check the latest offers before signing up.

And here's a tip: Try before you buy. All of the services offer free trial periods. Just keep track of when the offer expires to keep your credit card from being charged if you decide not to sign up for ongoing service.

DIRECTV NOW

MONTHLY BILL \$35 and up
WHAT YOU GET DirecTV Now is a streaming version of the DirecTV satellite pay-TV service. You don't get everything satellite customers can watch, however. It offers four tiers of service. For instance, you can get about 60 channels for \$35 per month or 80 channels for \$50. These include broadcast channels in many major markets, plus a nice selection of cable channels. You can add HBO for \$5 more per month—it costs \$15 elsewhere—and Showtime for \$8.

Two people can use the service at a time, or you can pay \$5 more a month for one more simultaneous user. New subscribers who prepay for three

months of DirecTV Now can get a free Apple TV 4K streaming player. The service provides a cloud DVR, which lets you record shows on the company's servers to watch later.

WHAT YOU DON'T GET Like most of these services, DirecTV Now doesn't provide live broadcasts in some smaller markets. You can usually watch some programs a day or two later.

fuboTV

MONTHLY BILL \$45 and up
WHAT YOU GET Fubo straddles a line between cable replacement services and old-fashioned streaming. It targets sports fans with live MLB, NHL, NBA, and NFL games plus college, regional, and international sports. That's the bulk of the programming.

But Fubo also supplies network broadcasts in many markets, plus a handful of non-sports channels such as AMC, Bravo, Food Network, and HGTV. You can add Spanish- or Portuguese-language packages, Showtime, or special sports packages such as golf or cycling for additional monthly fees.

WHAT YOU DON'T GET This service lacks many cable channels, but the missing channel that potential Fubo customers may care about most is ESPN.

hulu

MONTHLY BILL \$40 and up
WHAT YOU GET Hulu With Live TV offers about 50 channels, including major broadcast networks in some areas, a good selection of cable channels, and sports stations such as CBS Sports, ESPN, and Fox Sports. You can watch on two devices at a time and record 50 hours of programming on a cloud DVR. You can pay extra for more users, extra DVR storage, or the option to skip commercials.

WHAT YOU DON'T GET You can't watch AMC, Discovery, or Viacom stations (Comedy Central, MTV, Nickelodeon, Spike) right now.

sling TELEVISION

MONTHLY BILL \$20 and up
WHAT YOU GET The company's basic Orange package costs \$20 per month and comes with about 30 cable offerings, including A&E, the Food Network, and TBS, but limited broadcast TV. You can get Fox and NBC in some markets, plus Univision, as part of the \$25-per-month Blue package of about 45 channels.

ABC and Univision are available in some markets in the Orange plan, or in a combined Orange and Blue plan as part of the \$5-a-month Broadcast Extra add-on pack. Other themed add-on packs, such as Sports, Kids, and International, start at \$5 each per month.

You can add premium channels, such as HBO and Showtime, for an extra \$10 to \$15 each per month. New subscribers prepaying for two months of service can get a free Roku Express as part of a current promotion. A cloud DVR is now available for most devices.

WHAT YOU DON'T GET Sling lacks CBS, the Discovery Channel, and Fox News.

PlayStation.Vue

MONTHLY BILL \$40 and up
WHAT YOU GET PlayStation Vue packages range from about 45 channels (in the \$40-per-month Access plan) to a comprehensive package of about 90 channels, including some premium channels (in the \$75-per-month Ultra plan). You also get live local

channels in many major markets—on demand in others—plus a cloud DVR for recording shows.

Vue works on most streaming devices, not just PlayStation game consoles. And it supports up to five simultaneous users, the most of any of these services.

The service allows you to watch your favorite local teams on regional sports networks (such as Fox Sports or NBC Sports) even if you're traveling to another city. You can also watch any local broadcast channels available in cities you visit.

WHAT YOU DON'T GET PlayStation Vue doesn't have any Viacom stations (Comedy Central, MTV, Nickelodeon, Spike).

YouTubeTV

MONTHLY BILL \$40 and up
WHAT YOU GET YouTube TV, which launched in April last year in just a few markets, has gradually rolled out to dozens of metro areas across the country.

It offers access to live TV from about 60 networks depending on the area, including all of the major networks and a decent selection of cable channels.

You also get access to the original programming on YouTube Red, which would be \$10 per month on its own. Showtime can be added for \$11 per month.

The service supports up to three users at a time, and a cloud DVR lets you save as many shows as you want for up to nine months.

WHAT YOU DON'T GET There's no programming from Discovery Communications, Scripps Networks Interactive (the Food Network, HGTV), or Viacom (Comedy Central, MTV). And so far, YouTube isn't supported on Amazon Fire TV streaming players.

More Choices to Love

Services such as DirecTV Now and Sling TV deliver a bunch of familiar cable channels over the internet. In contrast, the following services have specific movies or series that you can watch on demand. Netflix, the granddaddy of streaming, has a wide variety of content. But some other streaming services cater to specific interests, including art-house movies, sports, and horror flicks. Here's what to look for.

The Big Guys

Amazon Prime Video (\$119 per year) is included with the Amazon membership program that gives consumers free two-day shipping. Prime Video's original shows include "Goliath" and "The Grand Tour," and it has exclusive rights to stream "Suits" and "The Americans." You can add HBO, Showtime, and other premium channels for \$5 to \$15 per month. A video-only subscription costs \$9 per month.

Netflix (\$11 per month for HD, \$14 a month for 4K plus more users) is the king of

binge. In addition to movies and reruns of shows, it has now-classic original shows ("House of Cards," "Orange Is the New Black") and newer hits ("Stranger Things"), plus shows from the Marvel universe, including "Daredevil." Subscribers can watch Disney titles until the end of 2018, when Disney will pull those films to start its own streaming service.



STRANGER THINGS

Solo Acts

HBO Now (\$15 per month) lets you watch HBO movies and original series ("Game of Thrones," "Veep," "Silicon Valley," etc.) without signing up for any other cable channels. You can also add HBO to some other services, including DirecTV Now and Amazon Prime.

Showtime (\$11 per month, \$9 through Amazon Prime) is another one-network service, giving you just Showtime's movies, plus original shows such as "Billions," "Homeland," and "The Affair."

British TV

Acorn TV (\$5 per month) streams an assortment of mysteries ("Agatha Raisin"), dramas ("A Place to Call Home"), and comedies ("After Henry"), mainly from the U.K. One exclusive title is "Jack Irish," an Aussie noir thriller starring Guy Pearce.

Art-House Films

Fandor (\$10 per month) offers cinephile-friendly films you'd be unlikely to find on Netflix, everything from Buster Keaton's 1926 classic "The General" to Cannes winners, much of it curated by editors or members. (Fandor is also available through Amazon for \$4 per month, and as part of \$5 Sling TV add-on pack.)



CASABLANCA

FilmStruck (\$7 per month for the basic service, \$11 per month with Criterion Channel) started as a joint venture between Turner Classic Movies and the Criterion Collection. It focuses on delivering a rotation of classic, independent, and foreign films. The company has a deal to add hundreds of classics from Warner Bros.—think "Casablanca."

Mubi (\$9 per month) takes a

totally different approach to streaming by showing only 30 classic or highly acclaimed films at a time. Each day, one film drops off and Mubi's film experts add a new one. They range from foreign-language classics (Akira Kurosawa's "Ran") to small, just-released documentaries.

Kanopy (free) is a collection of 30,000 feature films, documentaries, and assorted videos open to members of many libraries and university communities. There are international films, Cannes winners, and works as diverse as Ingmar Bergman's "The Seventh Seal" and how-to videos on tai chi. If you have a library card from a participating institution, it's definitely worth browsing through the collection.



SEINFELD

Classic TV, Free

Sony Crackle, a free, ad-supported service, launched the popular "Comedians in Cars Getting Coffee." The show has now jumped ship for Netflix, leaving an appealing smorgasbord of classic shows ("All in the Family," "Seinfeld") and movies ("Pineapple Express," "50 First Dates"), plus some original series.

Scary Stuff

Shudder (\$5 per month) is a huge trove of things that go bump in the night, from not-so-scary one-offs ("Fright Night") to movie collections (Stephen King) to slasher flicks and thrillers such as "The Girl With the Dragon Tattoo."

Bollywood

Spuul (\$5 per month or \$50 per year) grants you access to a huge library of movies starring everyone from Shah Rukh Khan, arguably the biggest movie star in the world, to obscure hopefuls.

BEST STREAMING MEDIA PLAYERS

A streaming media device is a simple, relatively inexpensive way to give any TV internet capability. If you own a smart TV, you probably don't need a streaming player to get Netflix or other web-based services. But some people find that these add-on devices are more convenient to use, work with more streaming services, or have added features, such as voice search, that they like. Our suggestion: First choose among the four main platforms (Roku, Apple, etc.), then drill down to specific models.

Amazon Fire TV With 4K Ultra HD and Alexa Voice Remote, \$70

75

This updated Fire TV model is a diamond-shaped dongle that works with Alexa, Amazon's digital voice assistant. You can use an Echo smart speaker to control it. The device can play 4K videos with high dynamic range (HDR), and it supports Dolby Atmos, an immersive sound technology. It can't access as many services as Roku devices, though, and it will push Amazon Prime content ahead of offerings from other streaming services.

Amazon Fire TV Stick With Alexa Voice Remote, \$40

74

Amazon's entry-level stick-style streaming device works with Alexa, and it's among the least expensive models you can buy. It lacks some of the features you'll find on its pricier sibling (left), such as support for 4K HDR video and Dolby Atmos sound. But it's a solid, lower-priced performer that lets you access a decent amount of content.

Apple TV 4K (32GB version) \$180

77

Apple TV is best for those who live in Apple's world. You can ask Siri to search for content by genre, cast members, director, date, or age group. The device supports HDR10 and Dolby Vision HDR, and is adding Dolby Atmos sound. In an improvement from the past, Apple TV 4K now works with Amazon Prime videos. Apple sweetens the deal by upgrading your iTunes purchases to 4K for free.

Google Chromecast Ultra \$70

80

Chromecast streaming devices don't come with a remote control; you use a phone or tablet loaded with the Google Home app to find content, then "cast" it to your TV. Some consumers might find that inconvenient. The 4K Chromecast Ultra supports HDR10 and Dolby Vision HDR. A new Chromecast app offers improved search and content discovery.

Google Chromecast (2nd Gen.), \$35

75

Chromecast, Google's regular high-definition model, is an inexpensive but worthy option for adding streaming services to a TV. It works like the Chromecast Ultra (above right). You use a smartphone or tablet loaded with the Google Home app to find and "cast" content to your TV.

Roku Ultra \$90

82

Roku's flagship 4K streaming device—our top-rated model—offers great performance plus the wide assortment of apps and the convenient interface all Rokus share. Two reasons to spring for this set-top box instead of the cheaper Roku Streaming Stick+, at right: a button on the device that makes the remote beep if you misplace it, and a headphone jack on the remote control for private listening.

Roku Streaming Stick+ \$55

77

If you want a 4K Roku but not another set-top box in your home entertainment system, this 4K model is for you. It has an unobtrusive stick-style design that can barely be seen when it's plugged into an HDMI port on the set. Like the Roku Ultra at left, the Streaming Stick+ lets you mirror the screen of an Android device on your television.

Roku Express \$30

69

The Roku Express packs all the content you get with other Roku boxes into a very small set-top box. This is Roku's most basic model, so you don't get the voice-enabled remote control or 4K video. (You can use a phone or tablet loaded with the Roku app to do voice searches.) For older TVs lacking an HDMI input, the \$35 Roku Express+—sold exclusively at Walmart stores—has composite video connections.

RISE & DINE!

We ate and rated grab-and-go morning grub from fast-food chains. Find out which are the healthiest (and tastiest) of the bunch. **by Jesse Hirsch**



ONE PIECE OF DIETARY WISDOM that has stood the test of time: Breakfast is the most important meal of your day.

“Research shows that people who eat breakfast tend to have a healthier body mass index (the relationship between your height and weight) and lower rates of obesity, heart disease, and type 2 diabetes than people who skip it,” says Marie-Pierre St-Onge, Ph.D., associate professor of nutritional medicine at the Columbia University Irving Medical Center. Eating a morning meal is also linked with improved cognitive function.

But home-cooked breakfasts are increasingly a thing of the past—and even cold-cereal sales are getting soggy. “As people are pressed for time, they want faster ways to get their breakfast fix,” says Amanda Topper, associate director of food service research at market research firm Mintel. According to market research firm NPD Group, the number of Americans eating breakfast outside the home was up 5 percent in 2016 over 2015, continuing a steady upward trend. NPD estimates that we now eat roughly one-third of our

breakfasts at fast-food and coffee chains.

Are we sacrificing healthfulness for speed and convenience? Potentially. “It can be tricky to find a breakfast item that’s reasonable in calories, fat, sodium, and sugars while high in valuable nutrients, especially fiber—and that also tastes good,” says Amy Keating, R.D., a Consumer Reports nutritionist. That’s why she and the rest of CR’s food testing team scrutinized offerings at six popular chains to help you make smart choices.

Happily, some comparatively healthy and tasty options were found.



✓ Panera Bread
Avocado, Egg
White & Spinach
on Sprouted Grain
Bagel Flat \$5

75

OVERALL
SCORE

WHAT'S ON THE MENU?

WE LOOKED AT SIX CHAINS—Au Bon Pain, Dunkin' Donuts, Jamba Juice, Panera Bread, McDonald's, and Starbucks—that Antonella Pomilla, senior market analyst at CR, says “represent examples of national fast-food and fast-casual restaurants, smoothie chains, and coffee shops you're likely to find in strip malls or at an airport.” From there, our dietitians scanned the calories, fat, saturated fat, sodium, sugars, and fiber content. “We then fully tested only items that had some baseline possibility of being nutritious,” Keating says. This left 48 options to try—only a fraction of the total items available.

To be recommended, an item had to receive at least a Very Good rating for nutrition and taste. Overall, Panera Bread fared best, with five recommended items. Starbucks landed four recommendations, and Au Bon Pain and Jamba Juice had three each. Finding a healthy option was more difficult at Dunkin' Donuts and McDonald's. Both chains scored high marks for taste, but none of their menu items met our nutritional criteria for a recommendation.

The offerings break out into four categories:

Egg-and-Cheese Sandwiches

The No. 1 restaurant breakfast item in America, according to Mintel, is a combination of eggs, cheese, and some kind of meat on a bagel, croissant, wrap, or other type of bread. These are tasty, filling, and easy to transport, but they're also often loaded with fat and sodium.

Take, for instance, McDonald's sausage biscuit with egg (which we eliminated as an option in our menu review), with 530 calories, 1,140 mg of sodium, and 34 grams of fat. “We don't think anyone should get half their day's sodium in one meal,” Keating says, because the odds are good that you'll end up eating far more sodium than the recommended daily limit, which is 2,300 mg.

The items that fared best in this category tended to use whole-grain breads, egg whites, and leaner proteins (such as turkey bacon) or veggies. Top-rated among all the sandwiches CR tested was Panera Bread's avocado, scrambled egg white, and spinach on a flat sprouted-grain

bagel, which got an Excellent rating for taste and a Very Good rating for nutrition.

MAKE IT HEALTHIER: “Flat bagels are a good way to cut down on carb calories,” Keating says. Also, skipping cheese on your sandwich can significantly reduce fat and sodium. Going meatless at least some of the time is also a good idea. “Sandwiches with veggies like spinach and tomato were healthier than anything with ham, bacon, or sausage,” Keating says.

Oatmeal

Oatmeal is a great source of antioxidants and dietary fiber—especially soluble fiber, which has been shown to help lower cholesterol levels. But our testers found that the nutritional quality of this category varied widely from chain to chain. For instance, the oatmeal at McDonald's is premixed with brown sugar, fresh apples, and dried fruit, and has a whopping 33 grams of sugars (though there is an off-menu unsweetened option). Compare this with the strawberry and pecan oatmeal at Panera Bread, which has just 16 grams of sugar.

Starting with unsweetened oatmeal and adding your own toppings and sweeteners gives you more control. But be mindful of what you pick. “Chocolate chips, sweetened coconut, and granola can significantly up the calorie and sugars count,” Keating says. “And no one type of sweetener is any healthier than another. Brown sugar, maple syrup, and honey all supply about the same amount of added sugars, teaspoon for teaspoon.”

MAKE IT HEALTHIER: Order unsweetened oatmeal if available, then ask for your sweeteners on the side, so you control the amounts. When it comes to toppings, stick with fruits and nuts.

Smoothies and Energy Bowls

Jamba Juice bills itself as a “healthful, active-lifestyle brand.” But our testers found that the high sugars in many of its smoothies and bowls belied those healthy claims. Similar offerings at other chains fared poorly, too, for the same reasons. Only one—Jamba Juice's fruit and Greek yogurt energy bowl—was recommended. It had less sugars than other bowls and smoothies, and it got a boost for containing an abundance of fresh fruit.

MAKE IT HEALTHIER: If it's an option, get sweeteners on the side. Also, look for items that contain whole fruit—which supply a hit of dietary fiber and sweetness without added sugars.

Breakfast Boxes

Au Bon Pain and Starbucks offer boxes filled with cheeses, nut butters, hard-boiled eggs, and fruit. Au Bon Pain's healthy salmon box received only a Fair rating for taste, while its fruit-and-cheese option had too much fat to make our list. The one recommended box, Starbucks' eggs-and-cheese protein box, has more fat than most options in our ratings—but much of it is unsaturated fat from the peanut butter.

ON-THE-GO GOOD GUYS

It's often cheaper and healthier to cook breakfast at home, but for times when you can't, here's a look at six fast-food choices that scored among the best in our nutrition and taste tests.

✓ Au Bon Pain
Greek Vanilla Yogurt
& Wild Blueberry
Parfait \$4.50

66

OVERALL
SCORE

✓ Jamba Juice
Fruit and Greek
Yogurt Energy
Bowl \$7.40

71

OVERALL
SCORE

✓ Au Bon Pain Egg
Whites &
Cheddar on
a Skinny
Wheat Bagel
\$4.95

73

OVERALL
SCORE

✓ Jamba
Juice Spinach
'n Cheese
Breakfast
Wrap \$3.60

67

OVERALL
SCORE

✓ Starbucks
Hearty
Blueberry
Oatmeal with
Fruit, Nuts,
Seeds & Agave
Syrup \$3.75

73

OVERALL
SCORE

✓ Panera
Bread
Steel-Cut
Oatmeal
With
Strawberries
and Pecans
\$4.60

75

OVERALL
SCORE

Breakfast Bombs

These babies may blow your nutrition budget in one sitting.

MCDONALD'S
The **Big Breakfast with Hotcakes** weighs in at 1,350 calories, 65 grams of fat, and 2,100 mg of sodium—close to the daily recommended maximum.

DUNKIN' DONUTS
At 700 calories and 1,120 mg of sodium—49 percent of the max amount you should have in a day, steer clear of the **sausage, egg, and cheese** on a (high-fat) croissant.

AU BON PAIN
Two eggs, sausage, and cheddar on an Asiago bagel clocks in at 660 calories, 1,140 mg of sodium, and 16 grams of saturated fat—80 percent of the max most people should get in a day.

PANERA BREAD
A **spinach and artichoke soufflé** may sound healthy, but it has 33 grams of fat (19 saturated) and 890 mg of sodium.

JAMBA JUICE
A large **banana berry classic smoothie** has a whopping 106 grams of natural and added sugars.

STARBUCKS
The **chicken, sausage, and bacon biscuit** has 1,160 mg of sodium.

Ratings > Hello, Sunshine! Our testers went to breakfast and crunched the nutrition numbers to find the best options at six chains.

Recommended	Menu Item	Overall Score	Rating		Nutrition Information									Price	Flavor & Texture Description
			Nutrition score	Sensory score	Serving size (oz.)	Calories	Fat (g)	Saturated fat (g)	Protein (g)	Carbohydrates (g)	Fiber (g)	Sugars (g)	Sodium (mg)		
AU BON PAIN															
✓	Egg Whites & Cheddar on Skinny Wheat Bagel	73	↑	↑	5.7	210	7	4.5	19	22	6	1	490	\$4.95	Fluffy egg white. Lightly toasted, thin bagel. Balanced flavor and texture.
✓	Classic Oatmeal (With Raisins, Almonds, and Brown Sugar) ¹	72	↑	↑	9.5	338	9	1	10	59	6	22	12	\$3.40	Soft, small-grain oatmeal with a variety of topping options.
✓	2 Eggs, Cheddar & Ham on Skinny Wheat Bagel	66	↑	↑	6.3	300	14	5	26	24	7	3	790	\$4.75	Slightly rubbery eggs. Slightly sweet, smoky ham. Thin, toasted bagel.
	Greek Vanilla Yogurt & Wild Blueberry Parfait	66	↓	↑	10.2	340	6	1	24	51	5	34	160	\$4.50	Creamy nonfat yogurt; real vanilla flavor. Sweet granola. Scant fruit.
	2 Eggs on a Bagel (Skinny Wheat)	64	↑	↓	4.8	240	11	4	17	21	6	1	370	\$3.55	Slightly rubbery eggs. Slightly dry.
	2 Eggs on a Bagel With Cheese	62	↓	↑	6.8	430	16	7	22	50	2	5	650	\$4.10	Slightly rubbery eggs. Bready bagel.
	Smoked Salmon Wasabi on Skinny Wheat Bagel	60	↓	↑	6.3	370	11	5	17	54	2	8	900	\$4.85	Slightly smoky salmon. Sauce adds heat and a sweet note. Very thin bagel.
	The Good Egg Sandwich	59	↓	↑	9.6	540	28	9	24	47	4	2	670	\$4.70	Fresh and tasty. Crunchy, fresh baguette with spinach and avocado.
	2 Eggs on a Bagel	56	↓	↓	6.3	380	11	4	19	50	2	5	560	\$3.55	Firm eggs. Slightly sweet bagel.
	Smoked Salmon Bon to Go Box	53	↑	↓	5.3	210	10	4.5	12	19	3	5	550	\$6.55	Slightly fishy salmon. Tough roll.
	Muesli	51	↓	↓	8.0	370	6	0.5	10	74	7	39	40	\$2.85	Chewy cold oats with nuts and fruit.
	Overnight Oats	49	↑	↓	8.0	410	13	3	15	61	8	20	40	\$2.70	Chewy cold oats. Add-ins just okay.
	2 Eggs & Turkey Sausage on Skinny Wheat Bagel	48	↑	↓	6.2	310	16	6	23	22	7	1	660	\$4.20	Slightly rubbery eggs. Very spicy, moist sausage. Seasonings overpower.
DUNKIN' DONUTS															
	Whole Grain Oatmeal Original With Dried Fruit Topping ^{1,2}	53	↓	↓	8.0	310	2	0	5	66	7	35	250	\$2.50	Slightly mushy small-grain oats. Moderately sweet; slight maple flavor.
	Veggie Egg White on English Muffin	51	↓	↓	5.2	330	14	7	18	33	3	5	570	\$3.80	Bland, slightly spongy egg white. Soft, thick English muffin.
	Egg & Cheese Wake-Up Wrap	50	↓	↓	1.9	180	10	4	7	14	0	1	470	\$1.70	Cheesy and flavorful. Small portion.
	Egg & Cheese on English Muffin	50	↓	↓	4.8	340	15	5	14	37	1	4	640	\$3.40	Slightly spongy, bland egg with cheese. Soft, bready English muffin.
JAMBA JUICE															
✓	Oatmeal (With Strawberries and Brown Sugar Crumble) ^{1,2}	74	↑	↑	9.3	250	3	0.5	9	49	5.5	15	28	\$3.75	Small, chewy oats. Fresh strawberries. Tasty.
✓	Fruit and Greek Yogurt Energy Bowl	71	↑	↑	15.8	390	4	0.5	31	62	5	42	105	\$7.40	Creamy nonfat yogurt. Slightly sweet, crunchy granola. Fresh fruit.
✓	Spinach 'n Cheese Breakfast Wrap	67	↑	↑	5.3	240	8	6	15	30	3	1	530	\$3.60	Fresh-tasting spinach and onion. Flavorful whole-grain wrap. Mild flavor overall.
	Acai Primo Energy Bowl ²	62	↓	↑	18.5	490	10	3	8	99	11	67	40	\$7.40	Thick smoothie. Fresh fruit. Crunchy granola. Generous portion.
	Chunky Strawberry Energy Bowl ^{1,2}	60	↓	↑	19.9	590	17	2.5	19	96	12	58	150	\$7.40	Thick smoothie; big peanut butter flavor. Fresh fruit. Generous portion.
	Kale-ribbean Breeze Whole Food Nutrition Smoothie	57	↓	↑	16 ³	320	3	0	10	66	6	48	75	\$6.25	Thick nonfat yogurt smoothie. Big kale flavor; tangy. Slightly chalky.
	Bacon, Roasted Tomato & Spinach Breakfast Sandwich	50	↑	↓	4.6	250	9	3	12	30	4	2	600	\$4.00	Smoky bacon. Spongy egg white. Cheese-and-spinach spread overpowers.
	Protein Berry Workout Smoothie With Whey	48	↓	↓	16 ³	290	1	0	16	56	3	48	170	\$6.15	Tastes mostly of whey powder; could use more berry flavor. Slightly chalky.
	Turkey Sausage, Roasted Red Pepper & Gouda Breakfast Sandwich	45	↓	↓	5.3	320	16	7	17	29	1	1	550	\$3.85	Spongy egg white. Spicy sausage patty and red pepper spread overpower.
	Turkey Sausage 'n Cheese Breakfast Wrap	45	↓	↓	4.6	320	16	7	17	29	1	1	550	\$3.60	Mild egg white, slightly greasy sausage bits. Tortilla raw or doughy in spots.

	Menu Item	Overall Score	Rating		Nutrition Information									Price	Flavor & Texture Description	
			Nutrition score	Sensory score	Serving size (oz.)	Calories	Fat (g)	Saturated fat (g)	Protein (g)	Carbohydrates (g)	Fiber (g)	Sugars (g)	Sodium (mg)			Average price
Recommended																
MCDONALD'S																
	Egg White Delight McMuffin	66	↓	↑	4.8	280	10	6	16	29	2	2	680	\$3.70	Fresh-tasting egg white. Slightly sweet and smoky Canadian bacon. Flavorful.	
	Egg McMuffin	64	↓	↑	4.8	300	12	6	18	30	2	3	730	\$3.70	Firm egg. Slightly sweet and smoky Canadian bacon. Flavorful.	
	Fruit & Maple Oatmeal With Brown Sugar	55	↓	↓	8.9	310	4	1.5	6	62	5	33	140	\$2.65	Slightly mushy maple-flavored oats. Tasty fresh fruit.	
	Fruit 'N Yogurt Parfait	45	↓	↓	6.1	150	2	1	4	30	1	22	75	\$1.50	So-so low-fat yogurt. Hard granola.	
	Sausage Burrito	44	↓	↓	3.9	300	16	6	13	26	1	2	780	\$1.00	Egg, chiles, slightly greasy sausage bits.	
PANERA BREAD																
✓	Steel Cut Oatmeal With Strawberries & Pecans ¹	75	↑	↑	11.3	340	14	2	6	51	9	16	180	\$4.60	Chewy unsweetened oats. Fresh strawberries. Flavorful nuts.	
✓	Avocado, Egg White & Spinach on Sprouted Grain Bagel Flat	75	↑	↑	7.6	410	14	6	21	52	7	4	590	\$5.00	Cheddar, avocado, baby spinach, and tomato. Fresh-tasting; flavorful.	
✓	Steel Cut Oatmeal With Almonds, Quinoa & Honey	74	↑	↑	10.9	300	7	1	8	51	8	7	220	\$4.60	Chewy unsweetened oats; slight nutty flavor. Toasted almond slices.	
✓	Steel Cut Oatmeal With Apple Chips & Pecans ^{1,4}	73	↑	↑	10.2	370	15	2	6	53	9	18	170	\$4.60	Chewy unsweetened oats. Flavorful nuts. Crispy apple chips.	
✓	Egg & Cheese on Sprouted Grain Bagel Flat	64	↑	↑	5.9	410	16	7	20	48	5	4	640	\$4.00	Scrambled egg. Dense, slightly chewy bagel flat. Sharp, melted cheddar.	
	Greek Yogurt With Mixed Berries	62	↓	↑	8.6	300	10	5	15	39	3	30	55	\$4.05	Creamy, thick whole-milk yogurt. Toasted granola. Fresh berries.	
	Ham, Egg & Cheese on Whole Grain Bread	59	↓	↑	6.0	350	16	7	23	30	4	3	910	\$5.00	Fresh over-easy egg. Thin, smoky, slightly sweet ham slices.	
STARBUCKS																
✓	Hearty Blueberry Oatmeal With Fruit, Nuts, Seeds & Agave Syrup ¹	73	↑	↑	8.5	271	5.5	1.5	7	46	6	13	125	\$3.75	Chewy unsweetened oats. Crunchy mixed nuts and dried fruit. Fresh berries.	
✓	Reduced-Fat Turkey Bacon & Cage Free Egg White Breakfast Sandwich	70	↑	↑	4.2	210	5	2	18	26	3	2	560	\$3.75	Flavorful egg white, thin slices of smoky turkey bacon, and mild cheddar.	
✓	Eggs & Cheese Protein Box	67	↑	↑	8.8	460	24	7	23	40	5	11	530	\$5.75	Egg, cheese, fruit, and nut-butter combo. Pita tastes slightly doughy.	
✓	Certified Gluten-Free Breakfast Sandwich	65	↑	↑	4.3	280	13	4	18	18	6	2	740	\$4.75	Mild egg. Flavorful Canadian bacon. Salty, sweet, and slightly smoky overall.	
	Spinach, Feta & Cage Free Egg White Breakfast Wrap	65	↑	↓	5.6	290	10	3.5	19	33	6	4	830	\$3.75	Soft egg white. Herbed, whole-grain flatbread. Slightly sour flavor overall.	
	Classic Oatmeal With Dried Fruit, Nut Medley & Brown Sugar ¹	63	↓	↑	8.5	410	12.5	1.5	8	66	7	35	130	\$3.25	Chewy unsweetened oats. Crunchy toasted nuts with plump dried fruit.	
	Sous Vide Egg Bites: Egg White & Red Pepper	59	↓	↑	4.6	170	7	5	13	13	1	2	500	\$4.45	Soufflé-like egg whites with strong red-bell-pepper flavor. Mildly spicy heat.	
	Berry Trio Yogurt	53	↓	↓	5.8	230	2.5	0	14	39	3	25	125	\$3.75	Tart vanilla-bean nonfat yogurt. Scant berries in very sweet juice.	
	Strawberry Smoothie	48	↓	↓	16 ³	300	2	1	16	60	7	41	130	\$4.25	Thick and smooth; a little icy. Banana flavor. Could use more strawberry.	

HOW WE TEST: Nutrition information for breakfast items was reviewed to identify healthier breakfast options

from six fast-food chains. Single items, not meals, were evaluated. Nutrition information was from the

manufacturer. An item had to score at least a Good for nutrition to be included in the test. Items were

tasted by professionally trained tasters at different locations for each chain.

¹ Vegan (no meat, dairy, egg, or honey). ² Contains soy milk. ³ Fluid ounces; all other serving sizes are by weight in ounces. ⁴ Seasonal item.

A LAUNDRY ROOM YOU'LL LOVE

Make over your washer-dryer space, starting with our top-rated appliances, flooring, and paint, for form and function that will take the sting out of this chore.

by Kimberly Janeway

SICK OF TRUDGING down to a basement room with a low ceiling, exposed pipes, and peeling linoleum to do your loads of laundry? Or wedging your way into a cramped utility closet to tussle with piles of dirty clothes?

You're not alone.

Americans spent an average of \$2,800 on laundry room renovations in 2016, upgrading their washers and dryers, adding storage, even installing a window or seating, according to a survey by the home-remodeling site Houzz. That's 24 percent more than the spiffing-up spending in 2015.

"People are now paying attention to design in the laundry room," says Fan Winston of The Organized Home, a site devoted to creative storage solutions. "The aim is to add a few essentials that make the laundry room feel like part of the home."

Updating your laundry room can be a good investment for resale, too: First-time home buyers rank a dedicated laundry room as the second most essential home feature—right after a living room—according to a poll from the National

Association of Home Builders. And house hunters who have owned before rank a laundry room as their No. 1 must-have, even over a two-car garage and a walk-in closet in the master bedroom.

Whether you want to rework the space you have or move it to a new spot (a first-floor location for those with basements), we have tips to make the room work better, all with the goal of making the task at hand easier.

The Perfect Setup

You can justify a bigger footprint for a laundry room because it's an ideal multitasking space. "It can double as housekeeping supply storage, a pet grooming station, or garden prep area with a potting table," Winston says.

Appliances take center stage, of course. (See "5 Steps to Appliance Shopping Success," on page 50.) White is the most common laundry appliance finish, but you'll also find red, dark blue, black stainless, and an option similar to stainless that looks sleek against white or gray walls. As for flooring, "we're seeing a lot of patterned

floor tiles right now," says Gwendolyn Purdom, Houzz's home design editor, adding that they're typically paired with neutrals. Graphic black and white flooring is particularly popular.

But looks aren't everything when it comes to the material underfoot. The floor needs to be durable, easy to clean, and resistant to water and stains (including bleach), in case of spills, splashes, or leaks. According to Joan Muratore, the CR engineer who tests flooring, porcelain tile is the best choice, followed closely by vinyl tiles and planks. For walls, choose a mildew-resistant interior paint with a primer included—our top-rated paints check off both of those boxes.

"With these paints, one coat will do the job if you're painting over a similar color or applying a darker color," says Rico de Paz, the paint pro at CR. Pick a paint that goes on smoothly, resists stains, and holds up to scrubbing. You'll find three such interior paints listed in "Ask Our Experts," on page 12. Turn the page for more expert advice on outfitting your dream laundry room.

PHOTO: LISA ROMERIN/OTTO



5 Steps to Appliance Shopping Success

CR TEST ENGINEER

Richard Handel puts every machine we rate through a battery of tests in our laundry lab. He recommends focusing on these five factors when choosing your new appliances.

1 Determine Your Washer Type

The washer is the room's workhorse and a much more complicated machine than a dryer, so zero in on it first.

Front-loaders typically earn the highest scores in our cleaning tests, and they tend to use less water than top-loaders. In these, the tub's fast spinning extracts much of the water, which cuts down on drying time. But wash times are longer. Though mold can be a problem with any washer type, CR members continue to report mold buildup in front-loaders.

Top-loaders overall

tend to cost less, and of this type, "top-load agitator washers are usually your least expensive option," Handel says. They also offer the shortest cycle times, but many are tough on fabrics—without being as tough on heavy stains. Top-loaders with a center agitator also use the most water of all three types—and extract less of it, making the dryer's job more difficult.

High-efficiency (HE) top-loaders, the type without an agitator, generally clean better and have bigger capacities than agitator models. But HE models have longer cycle times and can also be rough on fabrics.

When space is especially tight, you could consider a compact set, but there's a trade-off: "Compacts are expensive, and your options are limited, plus

performance varies widely," Handel says.

2 Pick the Right Partner

"The dryer's moisture sensor feature detects the laundry's dampness and shuts off the machine when clothes are dry," says Handel. "That's easier on fabrics and saves energy." All of the full-sized dryers in our ratings on page 54 have moisture sensors.

To connect your new dryer to the exterior vent, use the shortest length possible of a heavy-gauge metal duct. "Unlike plastic and foil accordion-style ducts, metal won't sag and lint is less likely to accumulate, reducing the risk of a fire," Handel explains.

3 Correctly Size Up Your Space

Height and depth vary a lot from machine to

machine, so measuring thoroughly is critical, Handel says. A machine with bigger load capacity can grow the dimension 2 or 3 inches wider than the standard 27 inches. (Compacts, by contrast, are uniformly 24 inches wide.) Measure the area available for your washer and dryer, then check the machine dimensions in our ratings. Allow about an inch between the appliances, and at least 6 inches of clearance in back for water hookups and venting.

To avoid an installation headache, also measure all the doors into your home and the laundry room to be sure new appliances will clear each threshold.

4 Avoid Bad Vibrations

A front-loader's tub spins at a high speed to extract water. That speed combined with

the tub rotation—similar to a dryer's—can cause the washer to transmit vibrations to wood-framed floors. Most manufacturers have minimized the vibrations that full-sized front-loaders transmit, but all the compact front-loaders we tested shake—some more than others. So note the vibration scores in our ratings, and, to lessen any chance of vibration, make sure your washer is perfectly level when it's installed.

5 Take Note of Noise

Depending on where your laundry room is located, you may appreciate machines that are quiet, or quieter. If so, consider a washer and dryer that scored Very Good or Excellent in our noise tests. You'll know they're working, but they shouldn't disturb you.

IN OUR LABS, we employ the toughest stains possible: body oil, red wine, cocoa, soot, and more. Then we put washers to the test removing them. We use a spectroradiometer (a machine that measures color intensity) to analyze equally stained identical fabric swatches, before laundering and after. The lighter the stain after washing, the higher the machine

scores in our cleaning test. We also evaluate how gentle the machine is on fabrics by counting frayed threads on swatches designed for this test, after washing and air-drying. We record the amount of water and energy used, and note the energy needed to dry laundry.



CR lab technician Breann Chai



PHOTOS, FROM LEFT: JOHN WALSH; BRIAN FINKE

DAZZLING DUOS

Here are our picks for six top-performing matching washer-dryer pairs across all the categories we test. See our ratings for more.

FRONT-LOADERS



✔ **LG**
WM3770HWA washer
DLEX3570W electric dryer
 \$900 each

86

Locking in with a cycle time of 75 minutes (using the normal wash/heavy-soil setting), this front-loader is among the fastest we tested. And its performance—thanks, in part, to a score of Very Good for cleaning—makes it a CR Best Buy. The dryer aces its task and operates relatively quietly. The stackable set comes in white and graphite steel.



✔ **Maytag**
MHW8200FW washer
MED8200FW electric dryer
 \$1,000 each

85

Earning a score of Excellent in cleaning, this quiet Maytag is the fastest recommended front-loader, with a 70-minute cycle. Like the LG, it's gentle on fabrics, with low vibration. The matching dryer is among the quietest tested, and the duo is stackable. Comes in white and metallic slate.

COMPACT



Samsung
WW22K6800AW washer
DV22K6800EW electric dryer
 \$900 each

71

This washer scores a Very Good in cleaning, and it's gentle on fabrics. It takes 100 minutes to wash a load—longer than the wash times for some—but the vented dryer is the fastest of all we tested. Both are relatively quiet, but the washer vibrates a lot, similar to others tested. Available in white.

HIGH-EFFICIENCY TOP-LOADERS



✔ **LG**
WT7500CW washer
DLEX7600WE electric dryer
 \$950 each

82

Another high-capacity machine, this washer can easily fit a king-size comforter. Scoring a Very Good in cleaning, the washer takes 80 minutes but—like most top-loaders— isn't gentle on fabrics. It's relatively quiet, and the dryer is tops in our ratings. The pair comes in white.



✔ **Kenmore Elite**
31552 washer
61552 electric dryer
 \$765 washer, \$720 dryer

78

The washer scores similarly to the LG (at left) in every test and has the same claimed capacity of 5.2 cubic feet. Cycle time is slightly quicker, at 75 minutes using the normal wash/heavy-soil setting. The dryer scores an Excellent in drying and is quiet. Available in white and metallic silver.

AGITATOR



✔ **Maytag**
MVWB765FW washer
MEDB755DW electric dryer
 \$680 each

68

With a capacity that's among the largest we've seen in the agitator category, this washer scores a Good in our test for cleaning. But, like the category, it's weak on stains and tough on fabrics, so you'll need to pretreat stains and use gentler settings. Both the washer and dryer are relatively quiet. Available in white and metallic slate.

Ratings > **Cleans Up Nicely** This month debuts our new Overall Score for washers and dryers, which incorporates predicted reliability and owner satisfaction from our surveys with performance test results. See details on page 9.

Recommended	Rank	Brand & Model	Overall Score	Price	Survey Results		Test Results						Specs			
					Predicted reliability	Owner satisfaction	Washing performance	Energy efficiency	Water efficiency	Gentleness	Noise	Vibration	Cycle time (min.)	Claimed capacity (cu.ft.)	Dimensions (in.) (HxWxD)	Matching dryer*
FRONT-LOADER WASHERS																
✓	1	LG WM9000HVA	86	\$1,300	↑	↑	↑	↑	↑	↑	↑	↑	105	5.2	41x29x35	A5
✓	2	LG WM5000HWA	85	\$1,050	↑	↑	↑	↑	↑	↑	↑	↑	105	4.5	39x27x33	A11
✓	3	LG Signature WM9500HKA	85	\$1,800	↑	↑	↑	↑	↑	↑	↑	↑	120	5.6	41x30x34	A21
✓	4	LG WM5005HKA	85	\$1,500	↑	↑	↑	↑	↑	↑	↑	↑	75	4.5	39x27x33	A24
✓	5	LG WM4370HWA	84	\$1,050	↑	↑	↑	↑	↑	↑	↑	↑	75	4.5	39x27x31	A20
Ⓢ	6	LG WM3670HWA	84	\$870	↑	↑	↑	↑	↑	↑	↑	↑	90	4.5	39x27x31	A8
✓	7	Maytag MHW8200FW	84	\$1,000	↑	↑	↑	↑	↑	↑	↑	↑	70	4.5	39x27x34	A13
Ⓢ	8	LG WM3770HWA	83	\$900	↑	↑	↑	↑	↑	↑	↑	↑	75	4.5	39x27x31	A3
✓	9	Samsung WF50K7500AW	83	\$1,180	↑	↑	↑	↑	↑	↑	↑	↑	100	5.0	39x27x35	A27
✓	10	Samsung FlexWash WV60M9900AV	83	\$1,800	↑	↑	↑	↑	↑	↑	↑	↑	100	5.0	47x27x34	A41
✓	11	Samsung WF45K6500AW	83	\$1,000	↑	↑	↑	↑	↑	↑	↑	↑	100	4.5	39x27x35	A32
	12	Maytag MHW3505FW	82	\$820	↑	↑	↑	↑	↑	↓	↓	↑	85	4.4	39x27x33	
	13	LG WM8100HWA	82	\$1,000	↑	↑	↑	↑	↑	↑	↑	↑	95	5.2	41x29x32	A10
	14	Kenmore Elite 41982	82	\$1,150	↑	↓	↑	↑	↑	↑	↑	↑	105	5.2	41x29x35	
	15	Kenmore Elite 41072	81	\$1,260	↑	↓	↑	↑	↑	↑	↑	↑	95	5.2	41x29x33	
	16	Samsung WF42H5000AW	81	\$500	↑	↑	↑	↑	↑	↑	↓	↑	80	4.2	39x27x33	
	17	Kenmore Elite 41682	80	\$1,000	↑	↓	↑	↑	↑	↑	↑	↑	75	4.5	39x27x30	A23
	18	Kenmore 41262	79	\$630	↑	↓	↑	↑	↑	↑	↑	↑	90	4.5	39x27x31	A25
	19	Samsung FlexWash WV55M9600AW	79	\$1,450	↑	↑	↑	↑	↑	↑	↑	↑	95	5.5	47x27x34	A42
	20	Samsung WF45M5500AW	79	\$800	↑	↑	↑	↑	↑	↑	↑	↑	90	4.5	39x27x35	A40
	21	Whirlpool WFW75HEFW	79	\$820	↓	↓	↑	↑	↑	↑	↓	↑	95	4.5	39x27x34	A35
	22	Kenmore 41392	78	\$720	↑	↓	↑	↑	↑	↑	↑	↑	90	4.5	40x27x31	A22
	23	Whirlpool WFW92HEFW	77	\$990	↓	↓	↑	↑	↑	↑	↓	↓	95	4.5	39x27x33	A14
	24	Whirlpool WFW85HEFW	77	\$900	↓	↓	↑	↑	↑	↑	↑	↑	75	4.5	39x27x34	A15
	25	Kenmore 41382	77	\$680	↑	↓	↑	↑	↑	↑	↑	↑	110	4.3	40x27x31	A18
TOP-LOADER HE WASHERS																
✓	1	LG WT5680HVA	80	\$1,080	↑	↑	↑	↑	↑	↓	↑	↑	75	5.0	46x27x29	
✓	2	LG WT7600HWA	79	\$1,050	↑	↑	↑	↑	↑	↓	↑	↑	75	5.2	45x27x29	A1
✓	3	LG WT7500CW	78	\$950	↑	↑	↑	↑	↑	↓	↑	↑	80	5.2	45x27x29	A1
✓	4	LG WT7700HVA	76	\$1,450	↑	↑	↑	↑	↑	↓	↑	↑	75	5.7	46x29x31	A2
✓	5	LG WT7200CW	76	\$800	↑	↑	↑	↑	↑	↓	↑	↑	80	5.0	45x27x29	A7
✓	6	LG WT1901CW	76	\$900	↑	↑	↑	↑	↑	↓	↑	↑	75	5.0	41x27x29	A4

Recommended	Rank	Brand & Model	Overall Score	Price	Survey Results		Test Results							Specs		
					Predicted reliability	Owner satisfaction	Washing performance	Energy efficiency	Water efficiency	Gentleness	Noise	Vibration	Cycle time (min.)	Claimed capacity (cu. ft.)	Dimensions (in.) (HxWxD)	Matching dryer*

TOP-LOADER HE WASHERS *Continued*

👉	7	LG WT1150CW	75	\$630	👍	👍	👍	👍	👍	👎	👎	👍	75	4.5	41x27x29	
👍	8	Kenmore Elite 31552	75	\$765	👍	👎	👍	👍	👍	👎	👍	👍	75	5.2	45x27x29	A17
👉	9	LG WT1501CW	74	\$675	👍	👍	👍	👍	👍	👎	👍	👍	80	4.5	41x27x29	A16
	10	Kenmore Elite 31433	71	\$800	👍	👎	👍	👍	👍	👎	👎	👍	75	5.0	42x27x29	
	11	Whirlpool WTW8700EC	71	\$1,260	👍	👎	👍	👍	👍	👎	👍	👍	80	5.3	43x27x28	A31
	12	Kenmore 28132	70	\$675	👍	👎	👍	👍	👍	👎	👍	👍	60	5.3	43x27x28	
	13	Kenmore 26132	70	\$550	👍	👎	👍	👍	👍	👎	👍	👍	60	4.8	41x27x28	
	14	Kenmore 27132	70	\$600	👍	👎	👍	👍	👍	👎	👍	👍	60	4.8	41x27x28	A34
	15	Whirlpool WTW8500DW	70	\$1,080	👍	👎	👍	👍	👍	👍	👍	👍	80	5.3	43x28x28	A26
	16	Kenmore 29132	70	\$830	👍	👎	👍	👍	👍	👎	👍	👍	40	5.3	43x27x28	A28
	17	Maytag MVWB835DW	70	\$740	👍	👎	👍	👍	👍	👎	👍	👍	70	5.3	43x27x28	
	18	Samsung Activewash WA54M8750AV	68	\$950	👎	👎	👍	👍	👍	👎	👍	👍	75	5.4	43x27x29	A36

TOP-LOADER AGITATOR WASHERS

👍	1	Maytag MVWB865GW	65	\$820	👍	👎	👎	👍	👍	👎	👎	👍	70	5.2	43x27x28	
👍	2	Maytag MVWB765FW	63	\$680	👍	👎	👎	👍	👎	👎	👍	👍	70	4.7	41x27x28	A30
👍	3	GE GTW685BSLWS	62	\$665	👎	👎	👎	👍	👍	👎	👎	👍	50	4.5	44x27x27	A49
👍	4	GE GTW485ASJWS	61	\$590	👎	👎	👍	👍	👍	👎	👎	👍	50	4.2	44x27x27	
	5	Kenmore 22352	60	\$550	👎	👎	👎	👎	👍	👎	👎	👍	55	4.2	43x27x28	
	6	Maytag MVWC565FW	60	\$550	👍	👎	👎	👎	👍	👎	👎	👍	55	4.2	43x27x28	

COMPACT WASHERS

👍	1	Miele W3048	81	\$2,000	👍	👍	👍	👍	👍	👍	👍	👎	85	2.0	34x24x24	B6
👉	2	Electrolux EFLS210TIW	76	\$900	—	—	👍	👍	👍	👎	👍	👎	110	2.4	34x24x25	
👍	3	Bosch 800 Series WAT28402UC	75	\$1,260	👎	👎	👍	👍	👍	👍	👍	👎	60	2.5	34x24x26	B4
	4	Samsung WW22K6800AW	67	\$900	—	—	👍	👍	👍	👍	👍	👎	100	2.2	34x24x27	B1
	5	LG WM1388HW	64	\$900	👍	👎	👎	👍	👍	👍	👎	👎	75	2.3	34x24x27	B2

👉 Readers with a Digital or All-Access membership can go to [CR.org/washers0818](https://www.consumerreports.org/washers0818) for complete, up-to-date ratings.

HOW WE RATE WASHERS: The new **Overall Score** combines lab test results with survey data for predicted reliability and owner satisfaction, and is based on a 100-point scale. **Predicted reliability** estimates the likelihood that newly purchased models from a given brand, not under service contract, will break within the first 5 years. **Owner satisfaction** reflects the proportion

of CR members who are extremely likely to recommend the washer they bought to friends and family. In cases where we have insufficient survey data to provide a brand level rating, indicated by a dash (—), we assume the model has average reliability and satisfaction. **Washing performance** reflects the degree of color change in stained fabric swatches added to a load of mixed

cottons, using the washer's most aggressive normal cycle. **Energy efficiency** indicates the energy needed to heat the water, run the washer, and remove the water left in the clothes after the spin cycle completes. Machines that require less water earn higher scores for **Water efficiency**. For our **Gentleness** test, we count frayed threads on fabric swatches after washing and

air-drying. Our score for **Noise** reflects panelists' judgments during fill, wash, drain, and spin phases. The vibrations a washer transmits to a suspended wood floor are captured in the **Vibration** score. **Cycle time**, rounded to the nearest 5 minutes, is for the most aggressive normal cycle setting. **Claimed capacity** is what the manufacturer states. **Price** is approximate retail.

*For a variety of reasons, a matching dryer can't be provided.

Ratings > **Taking a Tumble** Decades of testing shows that electric and gas dryers perform similarly, so we test electric dryers—the big sellers—and list the gas version, too, which may have different reliability ratings.

Recommended	Rank	Brand & Model	Overall Score	Price	Gas Version	Survey Results		Test Results			Specs	
						Predicted reliability	Owner satisfaction	Drying performance	Covenience	Noise		Claimed capacity (cu. ft.)
A FULL-SIZED ELECTRIC DRYERS												
✓	A1	LG DLEX7600WE	92	\$950	DLGX7601WE	↑	↑	↑	↑	↑	7.3	45x27x30
✓	A2	LG DLEX7700VE	92	\$1,200	DLGX7701VE	↑	↑	↑	↑	↑	9.0	45x29x32
✓	A3	LG DLEX3570W	92	\$900	DLGX3571W	↑	↑	↑	↑	↑	7.3	39x27x31
✓	A4	LG DLEY1901WE	92	\$810		↑	↑	↑	↑	↑	7.3	40x27x30
✓	A5	LG DLEX9000V	91	\$1,300	DLGX9001V	↑	↑	↑	↑	↑	9.0	41x29x33
✓	A6	LG DLE3170W	91	\$760	DLG3171W	↑	↑	↑	↑	↑	7.4	39x27x30
Ⓢ	A7	LG DLE7200WE	90	\$700	DLG7201WE	↑	↑	↑	↑	↑	7.3	44x27x30
✓	A8	LG DLEX3370W	89	\$870	DLGX3371W	↑	↑	↑	↑	↑	7.4	39x27x30
✓	A9	Maytag MEDB955FW	89	\$1,080	MGDB955FW	↑	↑	↑	↑	↑	9.2	44x29x33
✓	A10	LG DLEX8100W	88	\$1,000	DLGX8101W	↑	↑	↑	↑	↑	9.0	41x29x32
✓	A11	LG DLEX5000W	88	\$1,050	DLGX5001W	↑	↑	↑	↑	↑	7.4	39x27x32
✓	A12	Kenmore Elite 61632	87	\$1,150		↓	↓	↑	↑	↑	9.2	44x29x33
✓	A13	Maytag MED8200FW	87	\$1,000	MGD8200FW	↑	↑	↑	↑	↑	7.4	39x27x31
✓	A14	Whirlpool WED92HEFW	87	\$990	WGD92HEFW	↑	↓	↑	↑	↑	7.4	39x27x31
✓	A15	Whirlpool WED85HEFW	87	\$900		↑	↓	↑	↑	↑	7.4	39x27x31
	A16	LG DLE1501W	86	\$600		↑	↑	↑	↑	↑	7.3	40x27x29
	A17	Kenmore Elite 61552	86	\$720	Elite 71552	↓	↓	↑	↑	↑	7.3	45x27x30
	A18	Kenmore 81382	86	\$800		↓	↓	↑	↑	↑	7.3	39x27x31
	A19	Maytag MED5500FW	85	\$750	MGD5500FW	↑	↑	↑	↑	↑	7.4	39x27x31
	A20	LG DLEX4370W	85	\$1,050		↑	↑	↑	↑	↑	7.4	39x27x31
	A21	LG Signature DLEX9500K	85	\$1,800	Signature DLGX9501K	↑	↑	↑	↑	↑	9.0	41x29x33
	A22	Kenmore 81392	84	\$680	91392	↓	↓	↑	↑	↑	7.3	39x27x30
	A23	Kenmore Elite 81582	84	\$900	Elite 91582	↓	↓	↑	↑	↑	7.4	39x27x31
	A24	LG DLEX5005K	84	\$1,500		↑	↑	↑	↑	↑	7.4	39x27x32
	A25	Kenmore 81182	83	\$630	91182	↓	↓	↑	↑	↑	7.3	39x27x30
	A26	Whirlpool WED8500DW	83	\$1,080		↑	↓	↑	↑	↑	8.8	43x29x32
	A27	Samsung DV50K7500EW	83	\$1,180	DV50K7500GW	↓	↓	↑	↑	↑	7.5	39x27x33
	A28	Kenmore 69132	82	\$830	79132	↓	↓	↑	↑	↑	8.8	43x29x32
	A29	Whirlpool WED7500GW	81	\$680		↑	↓	↑	↑	↑	7.4	40x27x30
	A30	Maytag MEDB755DW	81	\$680		↑	↑	↑	↑	↑	7.0	41x29x28
	A31	Whirlpool WED8700EC	81	\$1,260		↑	↓	↑	↑	↑	8.8	43x29x33
	A32	Samsung DV45K6500EW	80	\$1,000	DV45K6500GW	↓	↓	↑	↑	↑	7.5	39x27x32

Recommended	Rank	Brand & Model	Overall Score	Price	Gas Version	Survey Results		Test Results			Specs	
						Predicted reliability	Owner satisfaction	Drying performance	Convenience	Noise		Claimed capacity (cu. ft.)
A FULL-SIZED ELECTRIC DRYERS <i>Continued</i>												
	A33	Samsung DVE50M7450W	80	\$650		↓	↓	↑	↑	↑	7.4	45x27x30
	A34	Kenmore 67132	80	\$600	77132	↓	↓	↑	↑	↑	7.0	41x29x28
	A35	Whirlpool WED75HEFW	80	\$820	WGD75HEFW	↑	↓	↑	↑	↑	7.4	39x27x30
	A36	Samsung DVE54M8750V	79	\$950		↓	↓	↑	↑	↑	7.4	43x27x31
	A37	Samsung DVE52M8650W	79	\$650		↓	↓	↑	↑	↑	7.4	43x27x31
	A38	GE GFD48ESSKWW	79	\$990		↓	↓	↑	↑	↑	8.3	40x28x34
	A39	Maytag MEDX655DW	78	\$600		↑	↑	↑	↑	↓	7.0	43x30x27
	A40	Samsung DVE45M5500W	78	\$800		↓	↓	↑	↑	↑	7.4	39x27x32
	A41	Samsung FlexDry DVE60M9900V	77	\$1,800	FlexDry DVG60M9900V	↓	↓	↑	↑	↑	7.5	47x27x32
	A42	Samsung FlexDry DVE55M9600W	77	\$1,150	FlexDry DVG55M9600W	↓	↓	↑	↑	↑	7.5	47x27x32
	A43	Speed Queen ADEE9RGS175TW01	76	\$960		↑	↑	↓	↑	↑	7.0	43x27x28
	A44	Fisher & Paykel AeroCare DE7027P1	76	\$1,000		↓	↓	↑	↑	↑	7.0	43x27x30
	A45	Samsung DV40J3000EW	76	\$580	DV40J3000GW	↓	↓	↑	↑	↓	7.2	44x27x30
	A46	Fisher & Paykel AeroCare DE7027P2	76	\$1,000	AeroCare DG7027P2	↓	↓	↑	↑	↑	7.0	42x27x28
	A47	Whirlpool WED5000DW	75	\$570	WGD5000DW	↑	↓	↑	↑	↓	7.0	43x29x27
	A48	Whirlpool WED49STBW	74	\$560	WGD49STBW	↑	↓	↑	↑	↓	7.0	43x29x29
	A49	GE GTD65EBSJWS	74	\$600	GTD65GBSJWS	↓	↓	↑	↑	↑	7.4	44x27x31
	A50	Kenmore 62342	74	\$450	72342	↓	↓	↑	↑	↓	7.0	43x29x27
	A51	Electrolux EFME417SIW	73	\$700	EFMG417SIW	↑	↓	↑	↑	↑	8.0	38x27x32
B COMPACT ELECTRIC DRYERS												
✓	B1	Samsung DV22K6800EW	79	\$900		—	—	↑	↑	↑	4.0	34x24x26
✓	B2	LG DLEC888W*	74	\$900		↑	↑	↑	↑	↑	4.2	34x24x27
✓	B3	GE DCVH480EKWW	73	\$900		↓	↓	↑	↑	↑	4.0	34x24x26
✓	B4	Bosch 800 Series WTG86402UC*	72	\$1,260		↓	↓	↑	↑	↑	4.0	33x24x26
💰	B5	Blomberg DV17542	71	\$680		—	—	↑	↓	↓	3.7	33x24x23
	B6	Miele T8023C*	69	\$1,500		↑	↑	↓	↑	↓	3.9	33x24x23

Readers with a Digital or All-Access membership can go to [CR.org/dryers0818](https://www.consumerreports.org/dryers0818) for complete, up-to-date ratings.

HOW WE RATE DRYERS: The new Overall Score combines performance test results with survey data for predicted reliability and owner satisfaction, and is based on a 100-point scale. Predicted reliability estimates the likelihood that newly purchased models from

a given brand, not under service contract, will break within the first 5 years. Owner satisfaction reflects the proportion of CR members who are extremely likely to recommend the dryer they bought to friends and family. In cases where we have insufficient survey data to provide

a brand level rating, as indicated by a gray dash (—), we assume the model has average reliability and satisfaction. Drying performance combines performance of three loads of various sizes and fabric mixes. To score Convenience, we evaluate controls and ergonomics,

such as ease of loading and unloading, and cleaning the lint filter. A panel of judges determines the Noise score by listening to each machine dry an 8-pound load (6-pound for compacts). Claimed capacity is what the manufacturer states. Price is approximate retail.

*Ventless dryer.

Ratings > **Dirt Busters** Our tests of 54 laundry detergents show that cleaning performance varies widely. So does price, from 4 to 56 cents per load.

Recommended	Rank	Brand & Product	Overall Score	Price	Test Results					Spec
					Washer type	Body oil	Dirt	Grass	Other stains	

DETERGENT

Liquid detergents are the most popular, and that's why only three powders appear on this list of top performers. For sensitive skin, dermatologists recommend using a detergent that's free of dyes and fragrances.

✓	1	Tide Plus Ultra Stain Release	88	\$0.21	HE	↑↑	↑↑	↑↑	↑	
✓	2	Persil ProClean Power-Liquid 2in1	80	\$0.22	All	↑↑	↑↑	↑	↑	
	3	Persil ProClean Power-Liquid	77	\$0.23	All	↑↑	↑↑	↑	↑	
	4	Tide Plus Bleach Alternative	76	\$0.26	All	↑↑	↑↑	↑	↑	
	5	Persil ProClean Power-Liquid Sensitive Skin	76	\$0.23	All	↑↑	↑↑	↑	↑	•
	6	Persil ProClean Power-Pearls ¹	74	\$0.22	All	↑↑	↑↑	↑	↓	
	7	Member's Mark Ultimate Clean (Sam's Club)	70	\$0.12	All	↑↑	↑↑	↑	↑	
	8	Tide PurClean ²	70	\$0.21	All	↑↑	↑	↑	↑	
	9	Kirkland Signature (Costco) Ultra Clean Free & Clear	70	\$0.11	All	↑	↑	↑	↑	•
	10	Tide HE Turbo Clean	69	\$0.19	HE	↑	↑	↑	↑	
	11	Tide Plus Coldwater Clean HE	68	\$0.25	HE	↑↑	↑	↑	↑	
	12	All Stainlifter (with in-wash pre-treaters)	67	\$0.11	All	↑	↑	↑	↓	
	13	OxiClean High Def Liquid	66	\$0.16	All	↑	↑	↑	↑	
	14	Tide Free & Gentle Liquid	66	\$0.19	HE	↑	↑	↑	↑	•
	15	Kirkland Signature (Costco) Ultra Clean Environmentally Responsible	65	\$0.09	All	↑	↑	↑	↓	
	16	All Radiant	63	\$0.18	All	↑	↑	↑	↓	
	17	Up & Up (Target) HE Free & Clear	62	\$0.12	All	↑	↑	↑	↓	•
	18	Gain Original ¹	61	\$0.13	HE	↑	↑	↑	↑	

PODS/PACKS

CR won't recommend liquid laundry packets until we see a meaningful drop in injuries. In the past five years, poison-control centers received an estimated 56,000 calls related to liquid laundry detergent exposure in kids younger than 6. And at least eight people have died, including six adults with dementia. CR believes laundry pods should be avoided in homes where kids under 6 years old may be present or where you're caring for a person who is cognitively impaired.

	1	Persil ProClean Power-Caps 2in1	69	\$0.23	All	↑↑	↑	↑	↑	
	2	Persil ProClean Power-Caps	69	\$0.32	All	↑↑	↑	↑	↑	
	3	Tide Pods Plus Febreze 4 in 1	68	\$0.33	All	↑↑	↑	↑	↑	
	4	Gain Flings	66	\$0.34	All	↑↑	↑	↑	↑	
	5	Tide Pods Plus Downy 4 in 1	65	\$0.33	All	↑	↑	↑	↑	
	6	Tide Pods 3-in-1	65	\$0.29	All	↑	↑	↑	↑	
	7	All Mighty Pacs Oxi Free & Clear	62	\$0.28	All	↑↑	↑	↑	↓	•
	8	All PowerCore Pacs Oxi	61	\$0.33	All	↑↑	↑	↑	↑	
	9	Arm & Hammer 2-in-1 Power Pak OxiClean ¹	58	\$0.19	All	↑	↑	↑	↓	
	10	Dropps Oxi Scent+ Stain Fighting Detergent	52	\$0.20	All	↑	↑	↓	↓	

Readers with a Digital or All-Access membership can go to CR.org/laundrydetergents0818 for complete, up-to-date ratings.

HOW WE RATE LAUNDRY DETERGENTS: The Overall Score is based on cleaning performance for all stains, giving more weight to common ones, such as body oil and dirt. To detect

real differences in the detergents, we wash cotton swatches that are saturated with body oil, dirt, grass, blood, chocolate, red wine, and

tea in cool water in three identical washers using each detergent. We allow the swatches to air-dry. Testers then use a spectrophotometer, a device that measures color intensity,

to see how much of the stain remains on each swatch, compared with stained swatches that have been laundered using only water.

¹This detergent is a powder. ²Does not contain brighteners.

ROAD REPORT



STAY AHEAD OF THE CURVE WITH
CR AUTO RATINGS, NEWS & ADVICE

THE VITAL STATISTIC

20%

Percentage of Americans who say they're likely to buy an electric car, up from 15 percent in 2017.

Source: AAA.

ASK OUR EXPERTS

“SHOULD I GET UHP TIRES?”

All-season and summer ultra-high-performance (UHP) tires are built for grip and responsive steering. But they tend to wear faster than regular tires and can make for a stiffer ride, says Gene Petersen, CR's tire expert. “Our testing of all-season UHP tires shows that some have a tread life as low as 30,000 miles.”

We recommend the all-season **UHP BFGoodrich g-Force COMP-2 A/S** for its relatively low price and tread life of 60,000 miles. Digital or All-Access members can go to CR.org/tires for full tire ratings.

**UHP BFGOODRICH
G-FORCE COMP-2 A/S**
\$116

74

OVERALL
SCORE



TIPS FROM OUR TEST TRACK

HOW TO ACE THE TEST-DRIVE

1

Plan your own route.

Skip the dealer's recommended route. Plot your own path and make sure it includes rough pavement, a twisty stretch, and highway driving. Allow at least a half-hour for each test-drive.

2

Do back-to-back drives.

Drive all of your candidate cars on the same day, so you have a level playing field of impressions. After each test-drive, take notes so that you can remember all the important details about every car later.

3

Listen up.

Spend part of your drive time with the music off and no chatter so that you can listen for road or wind noise in the cabin as well as how the engine responds when you accelerate.



Too Close for Comfort?
Passing an 80,000-pound tractor-trailer on the right can be an invitation to disaster.

Reducing the Risks of Big Rigs

Deaths due to crashes with large trucks are on the rise. Learn how to steer clear of harm on the road, and what safety advocates say the industry can and must do to reduce collisions.

by **Mike Monticello**

IT'S A CLASSIC confrontation, one with increasingly deadly results: Tractor-trailer trucks competing with cars, SUVs, and pickups for space on the nation's roadways.

Deaths from crashes involving large trucks have been rising in the U.S. In 2016, more than 4,300 people were killed, up 5.4 percent from 2015, according to the latest statistics from the National Highway Traffic Safety Administration.

Research shows that advanced safety features—including forward-collision warning (FCW) and automatic emergency braking

PHOTO: GETTY IMAGES

(AEB)—are reducing crashes as they become more common in passenger vehicles.

But these same systems are largely missing from the nation's large commercial trucks, many of which are more than a decade old and predate the advent of the new technology, according to a report by Securing America's Future Energy (SAFE), a think tank in Washington, D.C. Only about 15 percent of large commercial truck fleets in the U.S. were fitted with FCW/collision-mitigation systems in 2015, according to SAFE's report.

The Insurance Institute for Highway Safety (IIHS) estimates that in the U.S., 107,000 crashes each year (about 28 percent of those involving large trucks) could be prevented—or the severity reduced—if those systems, along with blind-spot warning (BSW), lane-departure warning (LDW), and stability controls, were onboard.

“If anything, it's more important that these advanced driver aids come standard on trucks than on cars,” says Jake Fisher, CR's director of auto testing. “Tractor-trailer trucks can weigh up to 80,000 pounds, and the consequences of a crash—no matter who is at fault—can be devastating.”

Some advanced safety features, such as forward-collision, lane-departure, and blind-spot warning, are designed to alert drivers to imminent dangers. Others, such as automatic emergency braking and lane-keeping assist, are designed to prevent collisions.

Industry experts, regulators, and safety advocates including CR say that big-rig truck manufacturers and operators must do a better job adding these systems to new trucks and retrofitting older models.

But some trucking organizations are resistant to government mandates. And some truck drivers say that while they're generally in favor of safety systems, technology alone is no substitute for highly skilled driving. Research bears this out. Drivers of

Should Trucks Be Self-Driving?



For all the talk of self-driving cars, autonomous trucks might beat them to a road near you.

Daimler, Tesla, Uber, Volvo, and Waymo are among the manufacturers working to perfect the software and sensors needed to develop fully automated big rigs. There have been a few demonstration projects, such as Uber's trucking subsidiary, Otto, arranging a 120-mile beer delivery last year in Colorado.

Tesla also wants to shake up the industry by developing an electric truck with self-driving capabilities.

McKinsey & Company, the consulting firm, projects that one-third of new trucks could be highly autonomous by 2025. Ever more advanced versions of limited automation seem much closer.

Some companies envision a hybrid system for large trucks and cargo hauling, with human operators needed to drive the trucks onto major highways, where self-driving software would take over. Humans would still keep watch over operations, but they might also catch up on paperwork while the truck steers, accelerates, and brakes itself. And human drivers would need to exit highways, drive on side streets, and perform other duties,

such as ensuring that freight gets properly loaded.

The American Trucking Associations, an industry group, envisions future drivers as more like airline pilots, who often turn their planes over to computers at cruising altitude.

Dave Osiecki, president and CEO of Scopelitis Transportation Consulting, which tracks federal regulatory changes, says most people in the industry see self-driving trucks as a reality, with the biggest advances at least five or 10 years off. Limited self-driving systems on interstate highways, however, could come a lot sooner, he says. With automation, Osiecki says there's a potential to reduce U.S. highway deaths.

“As the technology starts to mature, that will quickly drop,” he says. But the technology, as it's being developed, won't be perfect, Osiecki adds. He agrees with industry sentiment that hundreds of people a year might be killed while tens of thousands of lives are saved overall.

Securing America's Future Energy, a group in Washington, D.C., that tracks potential fuel-saving innovations, says trucking companies are likely to be early adopters of automated-vehicle technology because of how much freight is hauled on interstate highways, which it calls a “more predictable and less complicated driving environment.”

Automation on interstates is easier to develop for quicker bottom-line savings, Osiecki says, compared with the more challenging technical requirements needed for higher levels of automation on side streets and in busy city driving.

—Jeff Plungis

passenger vehicles contributed to the reasons for crashes with large trucks more often than the truck drivers. And those passenger-car drivers were more likely to be killed in the crashes.

Dangerous Driver Dynamics

Car drivers have horror stories about run-ins with large trucks.

“I spend a lot of time driving for my job, and there are truckers who use their huge size to their advantage, bullying car drivers and not allowing us to merge into traffic,” says Kevin Sullivan of Ellington, Conn.

While some motorists complained to CR on Facebook that some truckers drive aggressively, most commenters said truckers are courteous and professional. And research makes it clear that passenger vehicles are a big part of the problem.

A definitive 1998 study by Daniel Blower, who was with the University of Michigan Transportation Research Institute at the time, found that in 70 percent of fatal two-vehicle truck-car crashes, actions by the passenger-vehicle driver contributed to the crash. Blower also found that in a majority of head-on collisions, the passenger vehicle crossed over the center line into the path of the truck.

Brian Halloran, a 20-year trucking veteran, hauls cars for Reliable Carriers. “It’s disgusting how many people are staring at their phones while driving,” he says. “I think every car driver should have to go for a ride in a big rig as part of their driving test. Then they’d have some idea what we have to deal with.”

For example, car drivers may not know that some trucks can take up to 40 percent more distance to stop, the IIHS says.

Adopting New Systems

If safety technology is spreading among passenger vehicles, then why are deaths going up? One answer involves the economy and simple math.

“As the economy improves, it puts more passenger vehicles and trucks on the road, and they’re covering more miles,” says Russ Rader, senior vice president of communications at the IIHS.

Technology aside, some simple changes could reduce crashes, such as lowering the speed limit for trucks and improving trailer guards to prevent cars from sliding underneath in a collision.

But more big rigs have extra safety systems than they did in the past. New trucks have been required to have antilock brakes (ABS) since 1997 and electronic stability control (ESC) since August 2017. Some commercial truck drivers are now required to use an onboard electronic logging device to ensure they don’t work longer than rules allow.

But adding newer crash-avoidance systems and driver aids such as blind-spot warning would also help, the IIHS says.

As much as 40 percent of large commercial truck fleets in the U.S. could have FCW/crash-mitigation systems by 2020, according to SAFE’s report.

United Parcel Service (UPS), for example, has been retrofitting older trucks and buying new ones with safety systems, says Dan McMackin, a UPS spokesman. About 45 percent of its fleet now has a collision-mitigation system, he says, and that should increase to about 65 percent by 2020.

Unless the systems are mandated by the government, many trucks will remain without the technology,



How to Steer Clear of Truck Danger

Here are five key areas that drivers need to avoid around big rigs to stay safe.

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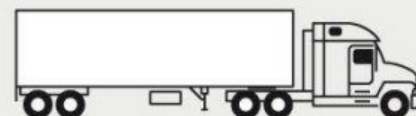
JUST HOW BIG ARE BIG RIGS?

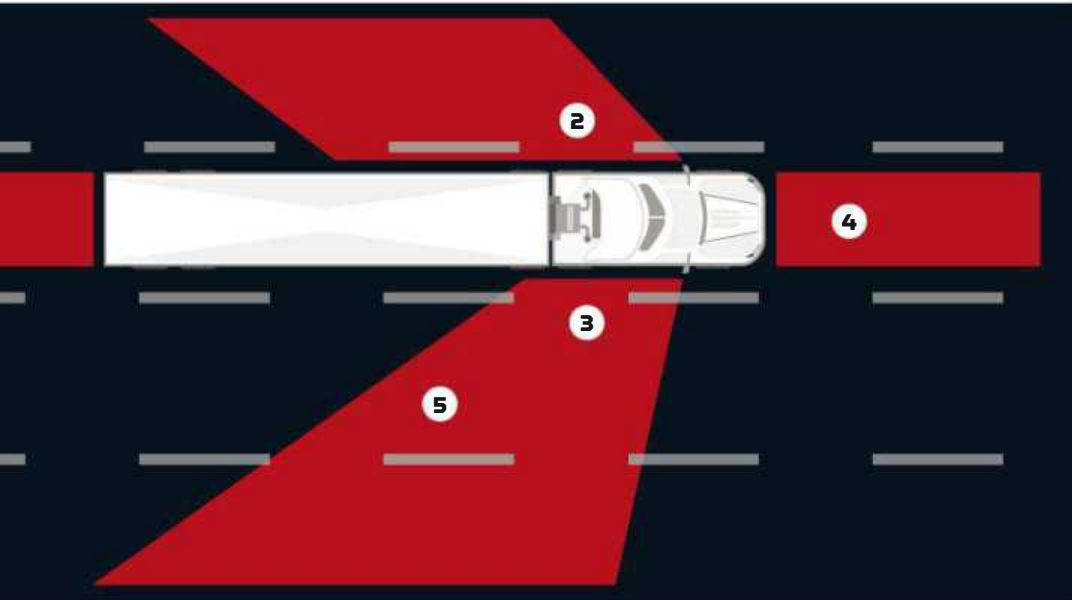
Tractor-trailer trucks come in many sizes and configurations. For comparison, we’ve included the length of a 2018 Toyota Camry.

Camry Size
16 feet



Combination Trucks
These can weigh up to 80,000 pounds. This is a five-axle semitrailer, which runs about 74 feet long.





lanes. "That's one of our largest blind spots," Lewis says. Avoid the risk of a crash by always passing on the left.

4

Look for the Lights

A fully loaded tractor-trailer combination can require 40 percent more stopping distance than a passenger car. That's why drivers shouldn't cut off a truck after passing it. Car and SUV drivers should make sure they can see a truck's headlights and front bumper in the rearview mirror before they complete a pass. "If you get that whole front bumper in your rearview mirror," Lewis says, "you're safe to come over."

5

Allow Turning Room on the Right

On city streets, tractor-trailers may need extra space to make a turn. Because of a truck's blind spots, cars that try to pass a turning truck on the right might end up crushed under the trailer. "If he has his right-turn signal on, do not try to pass him," Lewis says. "Just be patient; let him go ahead and make his turn."
—Keith Barry

Research shows that in fatal collisions between a truck and smaller vehicle, the driver of the passenger vehicle is more likely to be killed. To help the drivers of smaller vehicles avoid risks, we sought recommendations from an experienced trucker, Alphonso Lewis, who trains truckers and has been driving 18-wheelers for 28 years.

Truck drivers are trained to constantly survey their surroundings, Lewis says. Drivers of smaller vehicles should be just as vigilant when trucks are nearby, but that's not always the case. When he talks to other truck drivers, "their biggest pet peeve is distracted driving," he says. "You see people texting on their phones, and eating."

Car drivers also need to understand the challenges truck drivers face, including their bigger blind spots and much longer stopping distances.

1

Leave a Cushion

Lewis says that truck drivers are trained to create a safety cushion, extra space in which they can maneuver or brake without crashing. Car and SUV drivers who tailgate reduce that space, creating an unsafe situation. The safe distance isn't just to avoid rear-end collisions; trucks can also kick up dangerous debris.

finish passing as quickly as possible. That's because there's a blind spot behind the driver's left shoulder. Staying there could increase your risk of a crash. "You get people who tend to ride there, and that [truck] driver can lose that car and not be able to see it," Lewis says.

3

Pass on the Left

Truck drivers have a massive blind spot on their right side. It goes from the side of the cab to the end of the trailer, and extends by as much as three

2

Don't Linger

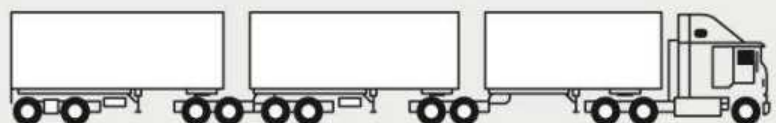
When passing a truck, drivers should try to

ILLUSTRATIONS, BELOW: MARTIN LAKSMAN

Longer Combination Vehicles

The long end includes "triples"—tractors that tow three 28-foot trailers at a typical total length of about 105 feet. They're allowed in only 23 states.

Source: Department of Transportation.



CONTINUED FROM PAGE 60

according to SAFE.

The American Trucking Associations (ATA) says it doesn't support a government mandate regarding advanced safety systems. "Fleets should be able to choose for themselves the technology that works best for their particular operations," said Sean McNally, a spokesman.

Stanislav Duda, an owner-operator, says that as much as he'd like a brand-new truck, he can't afford one. A new truck with a sleeper cab fit for multiday routes costs \$135,000 to \$160,000, according to Norita Taylor, a spokeswoman for the Owner-Operator Independent Drivers Association.

But it isn't necessary to buy a new truck to get the latest collision-avoidance systems. According to Mobileye, which makes advanced safety systems, trucks such as Duda's 2005 Volvo VNL670 could be retrofitted with a collision-avoidance warning system that includes forward-collision and lane-departure warning for only \$849.

But Duda doesn't think he needs them. "I have over a million miles without an accident," he says. And he noted that Mobileye's system doesn't have blind-spot warning, which he thinks would be the most beneficial to him.

More Training, Less Speed

Rader, from the IIHS, says that efforts should focus on proven approaches, such as lowering the speed limit for trucks, a policy that CR supports.

McMackin of UPS thinks that driver training could reduce even more crashes. He contends that every driver on the road needs more training. "What we as adults demonstrate to our kids is critical," he says. "If we are on our phones and doing our makeup or eating while driving, that is what our children will see as accepted practice."

After all, the results of truck crashes can be catastrophic. "There is no reset button when a crash occurs," he says. "Lives are changed forever."

A Collision Risk With a Clear Fix



A low-tech upgrade for big-rig trailers could save hundreds of lives a year, preventing some passenger vehicles from going partly or completely under them, say experts, safety advocates, and some members of Congress.

Underride guards work like metal bumpers; they hang from the sides and rear of trailers to block cars from getting wedged underneath during a collision. (They can also prevent cars from being run over by trailers.) Many trucks and trailers already have a rear guard version, but advocates and others say it's often not sturdy enough.

There were 250 fatalities involving cars colliding with the rear of a trailer and 302 deaths from striking the side of a trailer in 2016, according to the Insurance Institute for Highway Safety (IIHS).

Research shows the potential benefits of the guards. In IIHS testing last year, a side underride guard successfully blocked a sedan at a speed of up to 40 mph. This supports previous IIHS research that concluded that strong side underride guards could reduce injury risk in about three-fourths of crashes with a serious or fatal injury.

"Strong underride guards can prevent deaths and serious injuries," says William Wallace, senior policy

analyst for Consumers Union, the advocacy division of Consumer Reports. "There's no disputing that fact. Congress should require them on all large trucks without delay."

Rear guards are required on new trailers, though safety advocates and government agencies say they should be stronger.

The American Trucking Associations, an industry group, agrees with that point. It has "supported efforts to strengthen rear underride guards in the past," says Sean McNally, a spokesman for the ATA.

The bipartisan Stop Underrides Act of 2017 has been introduced in both chambers of Congress. The bill proposes strengthening rear underride protections, requiring side guards on new trailers, and retrofitting this protection on existing trailers. It also calls for routine inspections and a review of the standards every five years. "With so many unpredictable accidents on the road, underride guards are an easy solution for protecting people and preventing them from dying when a car collides with a truck," said Sen. Kirsten Gillibrand (D-N.Y.) in a statement. —Jeff S. Bartlett



ROAD TEST

WE CONDUCT MORE THAN 50 TESTS ON EACH VEHICLE AT OUR 327-ACRE AUTO TEST CENTER. FOR COMPLETE ROAD TESTS, MEMBERS CAN GO TO CR.ORG/CARS.



LUXURY ENTRY-LEVEL SUVs

BMW X2

More Sport Than Utility

73

OVERALL SCORE

ROAD-TEST SCORE 77

HIGHS Handling, responsive engine and transmission, fit and finish, front-seat comfort

LOWS Visibility, ride, road noise, blind-spot warning not available

POWERTRAIN 228-hp, 2.0-liter four-cylinder turbo engine; eight-speed automatic; all-wheel drive

FUEL 25 mpg on premium fuel

PRICE AS TESTED \$45,895

THE X2 DRIVES like a sports car when navigating curvy roads. But that feeling of exhilaration is quickly tempered by the firm, choppy ride.

The X2 is more performance-oriented than the X1 SUV that it's based on. Its turbo engine provides snappy acceleration along with a satisfying growl, and the transmission shifts promptly and smoothly.

It's not hard to imagine some buyers wishing for a little more calm and a quieter cabin from this entry-level luxury SUV. Drivers will also hear elevated levels of tire noise when rolling over coarse surfaces.

As with other BMWs, the X2's interior has a high-quality vibe. The controls are easy to use, and drivers don't have to wade through too many menus on the infotainment system. Even interacting with the display screen is logical.

The faux-leather front seats are comfortable and supportive. Because it sits low to the ground, drivers might feel like they're sitting in a car rather than an SUV.

In the rear, the seats are snug and the cargo volume is several cubic feet smaller than the space in the more upright X1.

The rearview is minimized by the X2's sloping roofline, chunky back pillars, and slit-like rear window.

And blind-spot and rear cross-traffic warning systems aren't available to help drivers feel more secure.

Forward-collision warning and automatic emergency braking are optional.

Consumer Reports believes that manufacturers should offer these two important safety features on all cars regardless of the trim level.

LUXURY ENTRY-LEVEL SUVs

Jaguar E-Pace

Flawed Feline

48

OVERALL SCORE

ROAD-TEST SCORE 69

HIGHS Handling, braking, standard advanced safety equipment

LOWS Uneven power delivery, ride, visibility, controls

POWERTRAIN 246-hp, 2.0-liter four-cylinder turbo engine; nine-speed automatic; all-wheel drive

FUEL 21 mpg on premium fuel

PRICE AS TESTED \$48,070

THE FRISKY E-PACE small luxury SUV has curvaceous styling, a perky engine, and sharp handling. But we don't think it's luxurious or refined enough for the price.

The E-Pace has responsive steering and it doesn't lean much when taking corners, making it an entertaining drive. Cruising around town, however, exposes the E-Pace's jerky drivetrain and bumpy ride.

There's a notable delay when starting from a standstill. After the slow start, the engine then delivers an excessive burst of power. The uneven acceleration is made worse by the automatic transmission, which is neither smooth nor responsive.

The cabin ambience is dreary, with lots of hard, smooth plastic and dark

colors, although some surfaces are padded and have attractive stitching.

The E-Pace's touch-screen infotainment system is slow to respond and requires extra steps to perform common functions. The electronic gear selector isn't as user-friendly as the rotary knob in other Jaguars.

The front seats are nicely shaped to accommodate most body types, but they lack lumbar adjustment.

It's challenging to get into the rear seat, though once inside, there's adequate room for adult passengers. But the vehicle's body shape severely limits side and rear visibility, and cargo room.

Forward-collision warning, low-speed automatic emergency braking, and lane-keeping assist come standard, which CR supports.



LUXURY ENTRY-LEVEL SUVs

Volvo XC40

Stylish Swede, Quirky Controls

60

OVERALL SCORE

THE XC40'S UPSCALE interior and comfortable front seats make the grade, but our testers found the controls on this Volvo cumbersome and maddening to use.

The turbocharged four-cylinder engine has decent power and acceleration, while registering a reasonable 24 mpg overall in CR testing. But the engine noise is coarse, and the stop/start system, designed to save fuel, restarts with an unpleasant jolt.

Volvo's stiff suspension amplifies ridges and ruts, and the handling is hurt by the SUV's dull steering. Still, the XC40 performed well, even when pushed to its limits taking sharp corners.

The touch-screen infotainment system looks high-tech, but using it while driving is frustrating and distracting. It requires multiple

ROAD-TEST SCORE 71

HIGHS Interior ambience, front-seat comfort, standard advanced safety equipment

LOWS Ride, controls, annoying gear selector, engine noise

POWERTRAIN 248-hp, 2.0-liter four-cylinder turbo engine; eight-speed automatic; all-wheel drive

FUEL 24 mpg on premium fuel

PRICE AS TESTED \$41,510

taps, swipes, and scrolls to execute common audio and climate-control tasks.

The gear selector may give drivers fits until they master it. That's because they have to move the selector twice in the appropriate direction to engage either Drive or Reverse. Miss the second move, and the transmission stays in Neutral, which is certainly annoying and possibly dangerous.

The flat rear seat is low to the floor and doesn't offer enough thigh support.

Unlike in other vehicles, the cargo cover can be stored under the floor, which is a handy feature, but the overall cargo space is only modest. All versions come with standard forward-collision warning, automatic emergency braking, and pedestrian detection.



LUXURY COMPACT SUVs

Infiniti QX50

Upscale but Underwhelming

67

OVERALL SCORE

THE INFINITI QX50 has an all-new, innovative engine and a roomy, quiet, and well-furnished interior. But the engine doesn't provide the promised performance or fuel economy, and the controls are confusing to use.

There's quick acceleration from a stop, but the engine's high revs become annoyingly loud, disrupting an otherwise quiet cabin. The QX50's 22 mpg overall in CR testing falls below results for its key competitors, and Infiniti's own fuel-economy claims of 26 mpg combined.

The QX feels ponderous to drive, even in day-to-day use, partly because of its overly light steering; this SUV handles more like a larger vehicle. The suspension absorbs most bumps, but some thumps punch through harder than expected.

ROAD-TEST SCORE 77

HIGHS Quiet interior, fit and finish, braking, standard advanced safety equipment

LOWS Confusing controls, short on agility

POWERTRAIN 268-hp, 2.0-liter four-cylinder turbo engine; continuously variable; all-wheel drive

FUEL 22 mpg on premium fuel

PRICE AS TESTED \$51,380

It's easy to get into the spacious cabin, and the fit and finish is a high point, featuring quality leather and chrome throughout.

Overall, the front seats are comfortable, but the bottom cushion is too short. Also, the lumbar adjustment is only two-way, which is unexpected at this price.

The infotainment controls are very confusing. We found it a hassle to select the correct function on the dual screens at a glance. It takes too many steps to execute some common tasks, such as programming audio presets.

We did, however, find the optional 360-degree vehicle display helpful when parking.

The key safety features, forward-collision warning with pedestrian detection and automatic emergency braking, come standard.

Ratings > **In the Lap of Luxury SUVs** These boutique SUVs are a cut above mainstream models. Within their categories, the better ones combine a sporty driving experience with refined interiors and user-friendly controls.

Recommended	Make & Model	Overall Score	Price	Survey Results		Safety	Road-Test Results										
				As tested	Predicted reliability		Owner satisfaction	Front-crash prevention	Road-test score	Overall mpg	Acceleration 0-60 mph, sec.	Dry braking 60-0 mph, ft.	Avoidance-maneuver speed, mph	Routine handling	Ride	Noise	Seat comfort front/rear
LUXURY ENTRY-LEVEL SUVs																	
✓	Audi Q3 Premium Plus	80	\$40,125	↑	↑	NA	77	22	8.4	132	51.5	↑	↑	↑	↑/↑	↓	24.5
✓	BMW X2 xDrive28i	73	\$45,895	↓	↑	Opt.	77	25	8.0	134	52.5	↑	↓	↑	↑/↓	↑	23.5
✓	BMW X1 xDrive28i	70	\$44,745	↓	↓	Opt.	74	26	7.9	134	53.0	↑	↓	↓	↓/↓	↑	27.0
	Infiniti QX30 Premium	64	\$43,745	↓	↓	Opt.	71	25	7.1	122	57.0	↑	↓	↓	↑/↓	↓	21.5
	Mini Cooper Countryman S	63	\$39,535	↓	↑	Opt.	82	25	8.3	120	53.0	↑	↓	↓	↑/↑	↓	23.5
	Mercedes-Benz GLA250	63	\$42,210	↓	↓	Std./↑	70	26	6.9	128	54.5	↑	↓	↓	↑/↓	↓	23.0
	Volvo XC40 T5 Momentum	60	\$41,510	↓	↑	Std./↑	71	24	7.3	132	54.0	↑	↓	↑	↑/↑	↓	25.5
	Jaguar E-Pace S	48	\$48,070	↓	↑	Std./↓	69	21	7.9	129	54.0	↑	↓	↑	↑/↑	↓	21.5
LUXURY COMPACT SUVs																	
✓	BMW X3 xDrive30i	81	\$53,745	↑	↑	Opt.	92	24	7.7	128	50.5	↑	↑	↑	↑/↑	↓	32.0
✓	Porsche Macan S	80	\$63,290	↑	↑	Opt.	85	19	6.4	130	51.0	↑	↓	↑	↑/↑	↓	29.0
✓	Lexus NX 300	78	\$43,284	↑	↓	Std./↑	74	24	7.5	132	49.5	↑	↓	↑	↑/↑	↓	28.5
✓	Audi Q5 Premium Plus	78	\$51,570	↑	↑	Std./↑	83	24	6.8	130	52.5	↑	↑	↑	↑/↑	↓	27.0
	Infiniti QX50 Essential	67	\$51,380	↓	↑	Std./↑	77	22	7.2	129	55.5	↓	↓	↑	↑/↑	↓	30.5
	Buick Envision Premium	67	\$45,380	↑	↓	Opt.	67	21	7.9	128	55.0	↓	↓	↓	↓/↑	↑	32.5
	Volvo XC60 T5 Momentum	66	\$50,040	↓	↑	Std./↑	79	23	8.0	124	52.0	↑	↓	↑	↑/↑	↓	34.0
	Cadillac XT5 Luxury	59	\$51,025	↓	↓	Opt.	76	20	7.1	132	53.5	↑	↓	↑	↑/↑	↓	33.0
	Lincoln MKC Reserve	56	\$46,485	↓	↓	Opt.	72	19	7.8	125	54.0	↓	↓	↑	↑/↓	↓	30.5
	Mercedes-Benz GLC300	54	\$49,105	↓	↑	Std./↑	81	22	6.8	132	50.0	↑	↑	↑	↑/↑	↓	28.0
	Land Rover Range Rover Velar S	51	\$59,503	↓	↑	Std./↓	76	21	8.4	130	51.5	↑	↓	↑	↑/↑	↓	29.0
	Alfa Romeo Stelvio Ti	51	\$52,040	↓	↑	Opt.	74	24	7.0	132	52.5	↑	↑	↑	↓/↓	↓	26.5
	Jaguar F-Pace Prestige	47	\$53,895	↓	↑	Opt.	72	20	6.0	129	50.5	↑	↓	↓	↑/↑	↓	28.5
	Land Rover Discovery Sport HSE	39	\$49,895	↓	↓	Opt.	58	21	8.6	136	50.5	↓	↓	↓	↑/↑	↓	33.0

HOW WE TEST: Recommended models did well in our **Overall Score**, which factors in **Road-Test Results**, **Predicted reliability**, **Owner satisfaction**, and **Safety**, which includes crash-test results and the

availability of front-crash prevention features, such as forward-collision warning and automatic emergency braking at city or highway speeds. For these systems, NA means no such system is offered; Opt. means

it's available on some versions but not necessarily on the one we tested; and models with standard systems are rated from ↓ to ↑ based on how many of these features are standard. We also deduct points

from the **Overall Score** if a vehicle's shifter lacks fail-safes or is difficult to operate. Readers with a Digital or All-Access membership can go to CR.org/cars for complete, up-to-date ratings.

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Movable Feast

Some of these food and dining ads may give you indigestion

Berry Confusing!

Looks like there are some mandarins trading places with strawberries at Trader Joe's. Submitted by Anna O'Hare, Deer Park, IL



Feast for the Eyes

How large do you have to make this cracker till it's really delicious? Submitted by Mary and Harold Johnson, Pelham, NH



When Less Is More

If 16.5 ounces is considered "more," we'll stick with "less," thank you. Submitted by Jeffrey May, Millsboro, DE



Deep Discount

And then do I get to spend the other \$20 anywhere I want? Submitted by Bruce Esselborn, Milton, GA



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