

4 TOP CASH-BACK CREDIT CARDS

Heart Surgery Safety Guide | BEST AND WORST SUNSCREENS

REVIEWS & RATINGS

- Security Cameras
- Window Air Conditioners
- Charcoal Grills
- Recreational Generators
- Smartphones

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JULY 2018

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On the Road Again



FEW MEMORIES ARE AS vivid for me as the road trips my family took each summer when I was a kid. My brothers and I would pile into our old blue station wagon, roll down the windows, and clown around as we made our way down the Garden State Parkway to the Jersey Shore.

Of course, the road-trip experience was a lot different in those days; we still have my dad's old

8 mm home movies to prove it! There was no air conditioning to keep us cool and no sunroof to let in a view of the sky, and many of the car safety features that protect our families today were nowhere to be found back then.

Anyone who has been on a road trip knows that a few small decisions—from choosing a high-quality sunscreen to getting directions you can trust—can make all the difference between an adventure to remember and a long haul that's best forgotten. This month, we're helping you get both the big and small things right, from packing the healthiest snacks and best first-aid kits to getting the most out of your gas tank, your smartphone, and your credit cards while you're on the road. Our packing tips and pretrip car checkup will steer you clear of bumps along the way, and our latest expert recommendations on gear for poolside, trailside, and everywhere in between will help ensure that your next voyage is memorable—for all the right reasons.

Marta Tellado

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Preserving Fuel-Economy Standards

WHAT'S AT STAKE

The fuel economy of cars and trucks has improved dramatically over the past decade—the impact of which is economic as well as environmental. Better mileage means the average new-car buyer now saves hundreds of dollars a year in gas money.

This development is the direct result of stronger fuel-economy standards, established in 2010 and 2012 with the goal of encouraging automakers to offer a variety of vehicles with improved mileage, including pickups, SUVs, and crossovers. As a result, more consumers can find vehicles that both fit their needs *and* save money on gas. A recent CR study showed that, when fully phased in, the standards will save drivers \$3,200 per car and \$4,800 per truck over the life of a vehicle.

But automakers have been pressuring regulators to put this trend in reverse—and now they've succeeded. The Environmental Protection Agency (EPA) and National Highway Traffic Safety Administration (NHTSA) have announced plans to roll back the standards.

HOW CR HAS YOUR BACK

CR was one of several groups working with government and industry to shape the current standards. We believe they deliver consumer benefits, and we're calling on policymakers to maintain them.

According to a nationally representative survey conducted by CR in 2017, most Americans agree: 87 percent say automakers should keep improving fuel economy, and 73 percent say government should set higher standards. And this support was strong across the political spectrum.

WHAT YOU CAN DO

Sign our petition urging

regulators to maintain strong standards through 2025. You'll find it at [CR.org/epa0718](https://www.consumerreports.org/epa0718).

Tackling the Pink Tax

WHAT'S AT STAKE

You may not have heard of it. But if you're a woman, you've almost certainly been affected by it.

The so-called pink tax is a nickname for a phenomenon whereby women are charged more than men for virtually identical products and services, from razors and soaps to dry cleaning and haircuts. In many cases, the only difference between the “male” and “female” versions is color.

Skeptical? A 2015 report by the New York City Department of Consumer Affairs compared almost 800 products across five industries: kids' toys, kids' clothing, adult clothing, personal care products, and home

healthcare products for seniors. It found that goods aimed at females cost more than similar items aimed at males 42 percent of the time, and that women pay an average of 7 percent more than men for the same thing. With personal care products such as shampoo, the price gap was 13 percent. The tax can really add up: A 1994 study by the state of California estimated that the pink tax on services such as haircuts runs a woman an average of \$1,350 a year, or about \$2,280 in 2018 dollars.

HOW CR HAS YOUR BACK

CR has been highlighting this problem for years and strongly supports the recently reintroduced Pink Tax Repeal Act. Championed by Rep. Jackie Speier, D-Calif., the law would let the Federal Trade Commission enforce violations and enable state attorneys general to sue on behalf of overcharged consumers.

WHAT YOU CAN DO

If you think this unfair practice

of gender-based pricing should end, go to [congress.gov](https://www.congress.gov) to contact your congressional representatives and urge them to support the Pink Tax Repeal Act. And when you're in the store, consider buying a “male” option that costs less.

Making Sense of Food Labels

WHAT'S AT STAKE

To make informed choices about the food we eat, we need labels to be simple, consistent, and accurate.

Unfortunately, that's often not the case. Today's food labels are frequently confusing and sometimes misleading. Commonly used terms, such as “healthy” and “natural,” for example, have no one official definition. And even the integrity of organic products, which have strict standards, is under threat: The Department of Agriculture recently declared carrageenan, a seaweed-derived thickening agent, to be an acceptable ingredient in foods marketed as “organic”—despite the National Organic Standards Board's 2016 vote to ban it.

HOW CR HAS YOUR BACK

We have endorsed the Food Labeling Modernization Act, which would create a simple and standardized way for companies to put nutrition information on the front of packaged foods. This system would use intuitive symbols, such as stars or traffic lights, to highlight the overall health value of foods. The bill would also crack down on misleading marketing terms.

We're also calling on the USDA to heed the recommendations of experts who carefully determine which ingredients should be permitted in organic food.

WHAT YOU CAN DO

Contact your lawmakers at [congress.gov](https://www.congress.gov) and ask them to support the Food Labeling Modernization Act. And take action to protect organic food standards at [CR.org/protectorganic](https://www.consumerreports.org/protectorganic).



Pedal to the Metal
Tell the EPA not to roll back fuel economy rules that save consumers money.



We received a torrent of responses to our May 2018 article, **“How to Pay Less for Your Meds,”** about the rising cost of prescriptions and how to lower drug costs. To share your story or opinion go to [CR.org/meds0718](https://www.consumerreports.org/meds0718).

YOUR ARTICLE CRITICIZED doctors for not talking enough about the cost of prescriptions with their patients. We cannot possibly know what a drug will cost with a patient's insurance until they reach the pharmacy. Let me offer a solution: Ask the pharmacist for the cost of the prescription *before* it is filled. If it is too expensive, call the prescribing doctor's office and explain that. Sometimes there is a cheaper alternative.

—Joseph Mulcahy, M.D., FACS, Anacortes, WA

AS AN ENDOCRINOLOGIST, I have seen the toll unaffordable medication costs have taken

on individuals with chronic diseases. One option, which my patients have found extremely helpful, is the use of online pharmacies in Canada. There are several online Canadian pharmacies, all of which honor prescriptions from licensed U.S. physicians, typically at 40 percent or less of the U.S. cost.

—Alfred J. Padilla, M.D., North Castle, NY

EDITOR'S NOTE Consumers Union, the advocacy division of Consumer Reports, believes that Americans should be able to safely purchase medication approved by the Food and Drug Administration from other countries, including Canada. Currently, however, there is no FDA oversight of drugs sold abroad, and many foreign online pharmacies sell counterfeit or poorly made medications that could be ineffective or even dangerous. That's why CR

supports the Affordable and Safe Prescription Drug Importation Act, introduced in the House and Senate last year. It would allow Americans to safely and legally order many prescription medications from Canada. You can contact your lawmakers to voice your support of the bill.

I WAS SURPRISED that no mention was made of direct-to-consumer TV advertising by pharmaceutical companies as a major reason for high drug prices in this country. Considering how frequently these ads appear, the expense to the drugmakers must be enormous and obviously passed on to the consumer, who places subtle pressure on the physician to prescribe the most expensive newer drugs. Costs would be lower if the media were out of the loop and the physician were the one initiating the use of the appropriate (often much

cheaper) drug, based on his or her knowledge and training.

—Chris Balkany, M.D., St. Cloud, MN

I WISH YOU'D MENTIONED the billions that could be saved if the drugmakers were to stop spending on television and print advertising. Few Americans realize that the U.S. is the only industrialized nation other than New Zealand that permits direct-to-consumer promotion of prescription drugs. I urge CU to back a federal ban on prescription drug advertising to consumers.

—James Russo, Durham, NC

EDITOR'S NOTE Direct-to-consumer advertising has been shown to drive up health costs, especially when equally effective and lower-cost treatments are available. Consumers Union has long supported efforts to reform pharmaceutical advertising.

MY HUSBAND AND I each have Medicare Part D prescription coverage plans. Asking a healthcare provider for a less expensive medication has helped us save money on two occasions. More important, this strategy not only makes providers and patients partners in their healthcare but also makes them partners in the effort to control the spiraling cost of Rx meds.

—Virginia Boller, Chicago

YOUR ARTICLE on drug costs neglected to mention one important money-saving practice: The Medicare Part D plan should be reanalyzed each year during the October to December enrollment period to make sure you're getting the best coverage at the best cost. One's drug use may change, or a plan that covers a given drug one year may drop it the next, resulting in substantial cost differences. This can be done easily on the Medicare website.

—Ariene Fell, Dix Hills, NY

ANOTHER USEFUL IDEA to save money on medication is to



Go to [CR.org/lettertoeditor](https://www.consumerreports.org/lettertoeditor) to share your comments for publication.

check with the manufacturer to see if it has a copay assistance program. I was quoted a \$300 copay that was reduced to \$15 after I joined the program.
—Ricardo Vila-Roger, Squirrel Hill, PA

EDITOR'S NOTE *Manufacturer copay assistance coupons can save consumers money but usually exclude people on programs such as Medicaid and Medicare.*

SOMETIMES A HIGH-DEDUCTIBLE plan is actually a good solution. The Affordable Care Act requires certain generic preventive medications to be provided free of charge. When my husband and I decided to switch to a high-deductible plan, the inclusion of certain generic drugs was a nice incentive. We receive three preventive maintenance drugs at no charge.
—Erin Jones, Hudson Oaks, TX

EDITOR'S NOTE *High-deductible health plans (HDHPs) have relatively low premiums and can indeed be a good option, especially for those who take advantage of free preventive coverage and don't use a lot of medical services. Unfortunately, for a growing number of people an HDHP is the only choice their employer offers or the only plan they can afford. If they're unable to pay the deductible, which can run into thousands of dollars, they may forgo needed medical care.*

CR'S COMPREHENSIVE ARTICLE on the cost of medications is excellent but didn't acknowledge the elephants in the room: First, the primary responsibility of drug companies is to reward shareholders with higher earnings. Profits do not reduce the cost of medications. Drugs that are costly in this country are considerably cheaper almost everywhere else in the world. Second, Congress passed legislation that prohibits Medicare and other

Your article 'A Hidden Hazard in Your Home' raises the awareness of a preventable tragedy.

—Wah Jo, via CR.org

agencies (with the exception of Veterans Affairs and the Department of Defense) from negotiating lower drug prices with drug companies. This ensures that drug prices will remain high. Finally, the pharmaceutical industry deploys an army of lobbyists and liberally dispenses money to politicians through political action committees (PACs), so-called continuing education junkets, and other means, virtually ensuring that the problem of high drug prices is not going to be resolved through congressional legislation anytime soon. It is unconscionable that citizens of one of the richest countries in the world are suffering or dying because they cannot afford the costs of healthcare or vital medications.
—David Karp, Cloverdale, CA

EDITOR'S NOTE *We agree that the high cost of healthcare and medications must be addressed. As one step to help lower drug prices for all Americans, CU advocates are supporting state and federal legislation that would prohibit drug companies from price gouging; stop pharmacy benefit managers (PBMs) from overcharging consumers at the pharmacy*

(“clawbacks”); and end so-called gag clauses, contractual provisions by PBMs that prohibit pharmacists from offering lower prices than your insurance company.

Furniture Dangers

YOUR ARTICLE “A Hidden Hazard in Your Home” raises the awareness of a preventable tragedy. As some parents commented in the story, they had no idea that one could or should anchor furniture. It has not been a normal expectation that furniture could tip over. In order for our society to secure furniture to the wall, it first has to be made aware of the need to do that.
—Wah Jo, via CR.org

DRESSER DRAWERS have been a problem since the first dressers were built. In Napa, which is in earthquake country, all wall items get fastened to the walls—not only dressers but also curio cabinets and china cabinets. Our dresser fell on the foot of our bed in an earthquake. (No one was injured.) Children and adults have to be informed of the need to attach furniture securely to the wall.
—Patricia Woody, Napa, CA

Gas Grills That Last

I READ “Gas Grills to Get Fired Up About” and need to say that a real problem is rusted-out grill parts. My CR top-rated stainless grill's steel drip pan rusted out in two years and is now dripping hot, flammable grease on my propane tank, lines, and deck. Is this dangerous? And how come your new sturdiness criteria didn't address that?
—John Mazur, Brookfield, CT

EDITOR'S NOTE *Rusting can be as much of a problem with gas grills as flexing and bending of the metal frame; our new sturdiness test is designed to assess the latter but not the former. Yes, hot grease spilling onto the propane line*

and tank can pose a safety risk. Buy a replacement pan directly from the manufacturer or disposable aluminum drip pans from your local hardware store or home center. Also, keep your grill covered whenever it's not in use to reduce the likelihood of rust.

Planet-Friendly Coffee

IN YOUR “Ask Our Experts” response on recyclable K-Cups for Keurig coffee makers, you missed two brands already offering easily recycled cups. Fulton Street has cups in No. 6 plastic with a special tab that lets you remove the lid and coffee filter in one motion. San Francisco Bay Gourmet Coffee offers plant-based pods that are fully compostable in industrial and commercial facilities.
—Joan Gundersen, Oakmont, PA

I WAS SURPRISED that you didn't mention Senseo coffee pods, which are 100 percent compostable. My Senseo is well over 20 years old and still brews a delicious cup of coffee!
—Jeff Schafran, West Wardsboro, VT

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What We're Testing in Our Labs ...

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

Smartphones

WE TESTED: 64 models

WE TEST FOR: A phone's calling, texting, and web-browsing performance; battery life; camera image and video quality; and more.

ABOUT THE SCORES:

Median: 73
Range: 54-81

Top Marks & Terrific Camera

Samsung Galaxy S9+
\$840

81

OVERALL
SCORE



Long Battery Life (28 hours)

Huawei Mate 10 Pro
\$730

78

OVERALL
SCORE



Great Deal

Sony Xperia Performance
\$300

74

OVERALL
SCORE



Wireless Security Cameras

WE TESTED: 4 models

WE TEST FOR: Video quality, including image clarity and contrast in varied lighting; ease of setup; how quickly notifications arrive after motion occurs; and more.

ABOUT THE SCORES:

Median: 72
Range: 59-84

Best of the Bunch

Nest Cam NC1102ES
\$200

84

OVERALL
SCORE



Speedy Notifications

Netgear Arlo Pro
VMS4130-100NAS
\$250

74

OVERALL
SCORE



Nice Price, but Indoors Only

D-Link DCS-2630L
\$160

71

OVERALL
SCORE



Ask Our Experts

How should I choose between a wireless security camera and a video doorbell?



VIDEO DOORBELLS ARE security cameras that are built into a doorbell. The Ring Pro gets a 68, our highest testing score. But if you want to also monitor other areas inside or outside your home, go with wireless security cameras. In both cases, these cameras send alerts and videos or images to your smartphone when they detect motion. The trade-off is that you might risk a bit of privacy. "Some companies have deployed these with weak security that can be circumvented," says Justin Brookman, director of privacy and technology policy for Consumers Union, the advocacy division of Consumer Reports. "Don't use default credentials. Make sure you set up your own unique username and robust password."

ILLUSTRATION: SERGE BLOCH

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).

Smart Locks

WE TESTED: 7 models
WE TEST FOR: How well it withstands impact, drilling, and picking; setup; performance of smart features, such as remote control and activity logging; and more.

ABOUT THE SCORES:
 Median: 74
 Range: 33-80

Excellent Smart Features
 August Smart Lock
 AUG-HK*
 \$230

80
 OVERALL
 SCORE



Easy Setup
 Schlage Sense Smart
 BE479CEN619
 \$230

76
 OVERALL
 SCORE



Well-Priced Protection
 Kwikset 925 KEVO
 Convert 15*
 \$150

74
 OVERALL
 SCORE



Light-Duty Cordless Drills

WE TESTED: 4 models
WE TEST FOR: Speed and power of drilling; run time per battery charge; how long the battery takes to recharge; noise (measured in decibels); handling; and more.

ABOUT THE SCORES:
 Median: 66
 Range: 58-71

Speedy & User-Friendly
 Makita FD06R1
 (2.1 lb.)
 \$110

71
 OVERALL
 SCORE



20-Year Warranty
 Hilti SFD 2-A
 (2.2 lb.)
 \$170

69
 OVERALL
 SCORE



Budget-Friendly
 Worx WX176L
 (2.8 lb.)
 \$95

62
 OVERALL
 SCORE



Recreational Generators (for Camping & Tailgating)

WE TESTED: 9 inverter models
WE TEST FOR: Power delivery, including how well a model handles power surges; quality of power, including smoothness and consistency; noise; ease of use; and more.

ABOUT THE SCORES:
 Median: 72
 Range: 69-77

Best Overall
 Honda
 EU2000iT1A1
 \$1,000

77
 OVERALL
 SCORE



Smooth, Consistent Power
 Westinghouse
 iGen2000
 \$520

76
 OVERALL
 SCORE



Quiet, With Fuel Gauge
 Predator 62523
 \$500

72
 OVERALL
 SCORE



Electric Dryers

WE TESTED: 93 models
WE TEST FOR: Drying performance with a mix of fabrics and load sizes; ease of use, including controls; noise; and more.

ABOUT THE SCORES:
Regular
 Median: 72, Range: 14-81
Compact
 Median: 47, Range: 34-70

Silent Spinner
 Maytag MEDB955FW
 (44hx29wx33d inches)
 \$1,080

81
 OVERALL
 SCORE



Dryer Deal
 Kenmore 81182
 (39hx27wx30d inches)
 \$600

79
 OVERALL
 SCORE



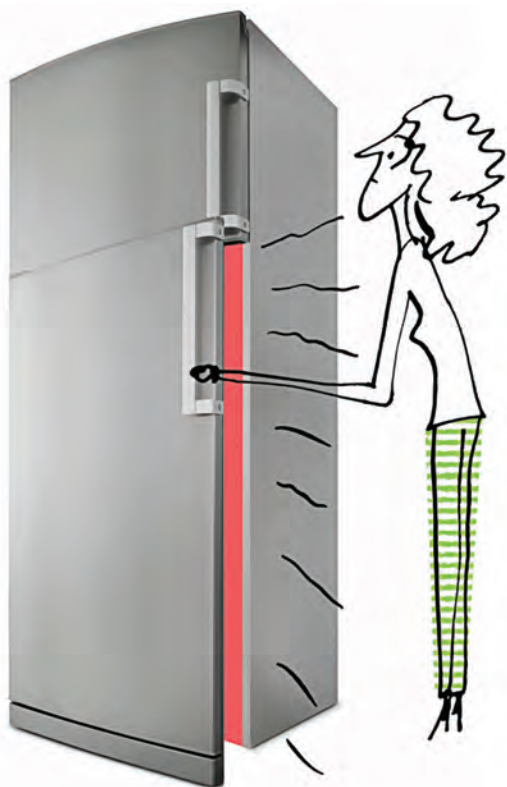
Compact for Tight Spaces
 Samsung DV22K6800EW
 vented dryer (34hx24wx26d inches)
 \$900

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. *Attaches to an existing deadbolt.

COMING NEXT MONTH Smart Speakers & More



Why does my fridge still feel warm at 37 degrees?

According to the Department of Agriculture, bacteria growth in food accelerates at around 40° F, “so keeping your fridge set to 37 degrees—and your freezer to zero—is a good idea,” says Joseph Pacella, CR’s refrigerator test engineer. If the temperature reading doesn’t match what you’re feeling, you want to first assess whether it’s just the thermostat readout that has become inaccurate and not a cooling issue per se.

To do that, buy a stand-alone fridge thermometer (about \$5)

to assess the temperature discrepancy. If you find that the interior is warmer than the fridge’s readout, turn the fridge’s temperature down a few degrees and wait 24 hours to see whether the internal temp drops. If it moves down slightly, keep making incremental decreases until you hit the desired 37-degree mark.

If the temp doesn’t budge, try cleaning the compressor coils, because dirty coils can prevent efficient cooling, Pacella says. Check your user manual for the coil location and vacuum them with a soft-bristle brush. If the fridge still doesn’t get cold, you may need a repairman—or a new fridge. The inability to cool can signal a defective or old fridge nearing the end of its life.



LEARN

We have more than 140 in-house experts who research, test, and compare! Submit your questions at [CR.org/askourexperts](https://www.consumerreports.org/askourexperts) ... and watch for the answers.

Are the deals on used cars from rental-car companies as good as they seem?

As you expect, rental cars have lived a harsher life than other used cars: Miles are piled on at a much faster rate, and renters may have not always been the most considerate drivers. So it makes sense that rental-car companies looking to unload their vehicles seek to sweeten the deal for used-car shoppers with lower prices and promotions.

For example, Enterprise Holdings, the largest rental-car company in the U.S., gives shoppers seven days to decide whether they’re happy with a purchased car. CR strongly suggests using that time to have the car inspected by a certified mechanic (about \$100).

Enterprise and Hertz also offer “no-haggle pricing” and a limited powertrain warranty (covering the engine and transmission) that lasts 12 months or 12,000 miles—whichever comes first.

But shoppers can and should get even more protection, says Mel Yu, CR’s automotive analyst. “Consider used models from automakers with the longest bumper-to-bumper and powertrain warranties, such as those from Hyundai and Kia,” he says. Buyers of a used Hyundai or Kia get the remaining balance of both warranties, capped at five years or 60,000 miles.

When buying any used car, remember that your best choices should have solid CR reliability scores, a clean history report, and the safety features you want.

I want to cut back on soda. Is fruit juice a healthy swap?

It’s great that you’re trying to cut back on soda, but fruit juice isn’t the best substitute. “While the vitamins, minerals, and antioxidants in fruit juice give it a nutritional edge over soda, it can have the same—or more—sugars and

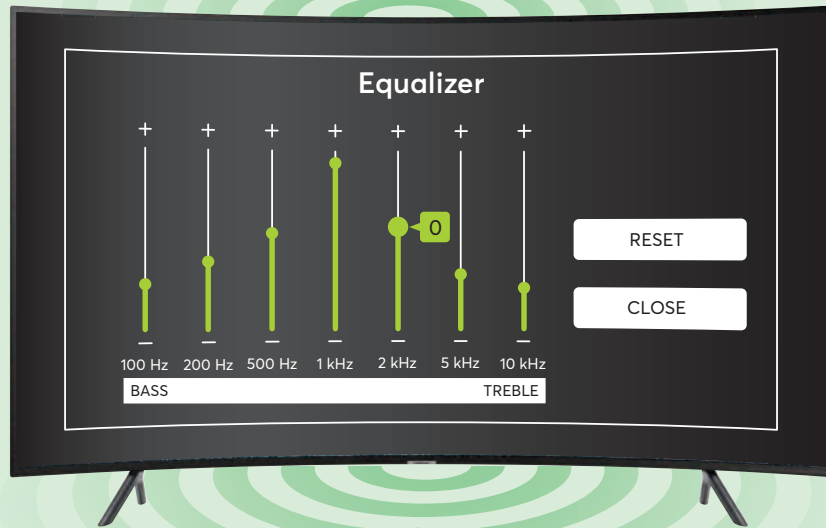
calories,” says Maxine Siegel, R.D., who heads CR’s food-testing lab. For example, a cup of grape juice has 36 grams of sugars—compared with 27 grams of sugars in a cup of grape soda. “The sugars are natural, but your body processes them in the same way as the added sugars in soda,” Siegel explains. Compared with eating the fruit itself, the sugars in juice are digested and released into your bloodstream faster, causing blood glucose levels to spike. This triggers the body to pump out large amounts of insulin, which can prompt fat storage and increase the risk of type 2 diabetes. In whole fruit, the sugars are encased inside the plant’s cells, so your body has to work harder to break them down. The fiber that fruit contains further slows digestion and, Siegel says, “will likely fill you up long before you eat enough fruit to consume the amount of sugars in a glass of juice.”

Another consideration: If you’re cutting down on soda because the carbonation bothers you, the acidic juices from citrus fruits can also irritate your stomach.

Your best bet is to trade soda for water into which you add either some fruit slices or just a splash of fruit juice for flavor.



CR Insights



✓ **Samsung**
UN65NU7300
\$1,200

69 OVERALL
SCORE

Can You Hear Me Now?

Many TVs—like this Samsung—have an equalizer setting that lets you adjust audio frequencies to your listening preferences.

In the Know

Hear Your TV Better

IF YOU or your couch mate suffers from hearing loss, you may be getting in the habit of cranking up your TV's volume to the max. Unfortunately, "an increase in volume alone will not help," says Meredith Scharf, Au.D. (Doctor of Audiology), of Manhattan Audio in New York. But CR's TV experts have a strategy that might: "Some TVs have simple audio settings that you can adjust," says Claudio Ciacci, who oversees CR's TV testing. Here are a few simple tweaks you can try.

Click "Settings" in the TV's menu, and look for an item labeled Audio or Sound. There, you may find presets specifically designed to enhance dialog.

Try features such as "auto volume."

This setting flattens out the volume, which may make it easier to hear dialog.

Switch to stereo. Some TVs try to create a surround-sound effect with a more diffuse sound field, but a stereo or "normal" setting could be better. You may also be able to boost the volume of the center-channel speaker, which contains dialog, then reduce

the volume of the other speakers.

Play with the equalizer. On many TVs, this setting (also shown as "EQ") lets you adjust various frequencies. Try lowering the bass, then playing with the midrange and higher frequencies (where voices typically are) until it sounds best to you. There may be EQ presets you can try, too.

Turn on closed captions. When in doubt, enable readable dialog across the bottom of your screen. This works best for prerecorded shows, though. Live programs are often less accurate.

WEAR A WIRELESS HEADPHONE OR HEADSET

Sennheiser
RS 195 \$400



Bluetooth-enabled TVs let you send sound straight to a pair of wireless headphones. Even inexpensive models may help hearing, but this Sennheiser model has a "speech" mode that claims to enhance intelligibility.

ADD A SOUND BAR SPEAKER

Zvox
AccuVoice
AV200 \$180



Sound bars can often deliver a richer sound experience than your TV alone can provide. This model from Zvox's AccuVoice line claims to be specifically designed to improve dialog intelligibility.

CONSIDER A NECK LOOP

Sennheiser
840 S \$280



Designed to work with hearing aids, neck loops such as this Sennheiser model send TV sound to a receiver on a wearable neck lanyard, which then creates a signal picked up by the telecoils inside your hearing device.

How to Clean Practically Anything™

Curtains

ARE DINGY DRAPES darkening your home? Dust them regularly with the soft-brush attachment of your vacuum, on a reduced suction setting so that you don't draw the fabric into the nozzle. You can also stretch an old nylon stocking over the nozzle, secured with a rubber band, to act as a screen. Or use a soft, long-handled broom with synthetic fibers (these are better than natural fibers at collecting dust). For a deeper clean, follow our steps below.

**STEP 1**

Check care labels to ensure that your curtains—including the lining and seams—are made of a washable fabric. (Always dry-clean drapes with stitched-in pleats, swags, or other ornamentation.) Remove hooks and weights, loosening the tapes so that they lie flat; now measure the curtain length and width

to use as a reference to stretch them back into shape later, if needed.

STEP 2

Set your washer to a gentle cycle, using lukewarm or cool water and a mild detergent. Curtains can be very heavy when wet, so don't overload your machine. To dry, hang them on a clothesline if you can or put them in

the dryer on a no-heat or delicate setting.

STEP 3

Ironing should be done while curtains are still damp. Run the iron along the vertical length on the side that won't show, and stretch the seams gently to avoid puckering. Then spread the curtains out, gently pulling them to the right size before they dry.



CR's Jennifer Stockburger

HOW WE TEST
Headlights

WHAT HAPPENS ON dark, moonless nights at our Auto Test Center?

Headlight testing, of course—just one of the more than 50 tests that CR performs on each car we buy. First our headlight specialists—led by Jennifer Stockburger, the center's director of operations—check the alignment of a car's headlights using a computerized laser system in a windowless indoor lab. Then, at night, the cars are positioned on our unlit outdoor track, which is set up with a series of black targets at specific intervals. This allows us to judge a car's low- and high-beam performance—evaluating intensity, width, and the evenness of the light pattern. It also allows us to assess straight-ahead illumination, which determines how much time and distance a driver will have to see, react, and brake for an obstacle. Last, our testers take the car for a spin on our course to evaluate the headlight's range as a car moves over curves and dips, as well as any potential glare effects for an oncoming driver.

PHOTOS, BOTTOM: CONSUMER REPORTS. PHOTO, TOP: JOHN POWERS/CONSUMER REPORTS

CR Time Traveler SUNSCREEN



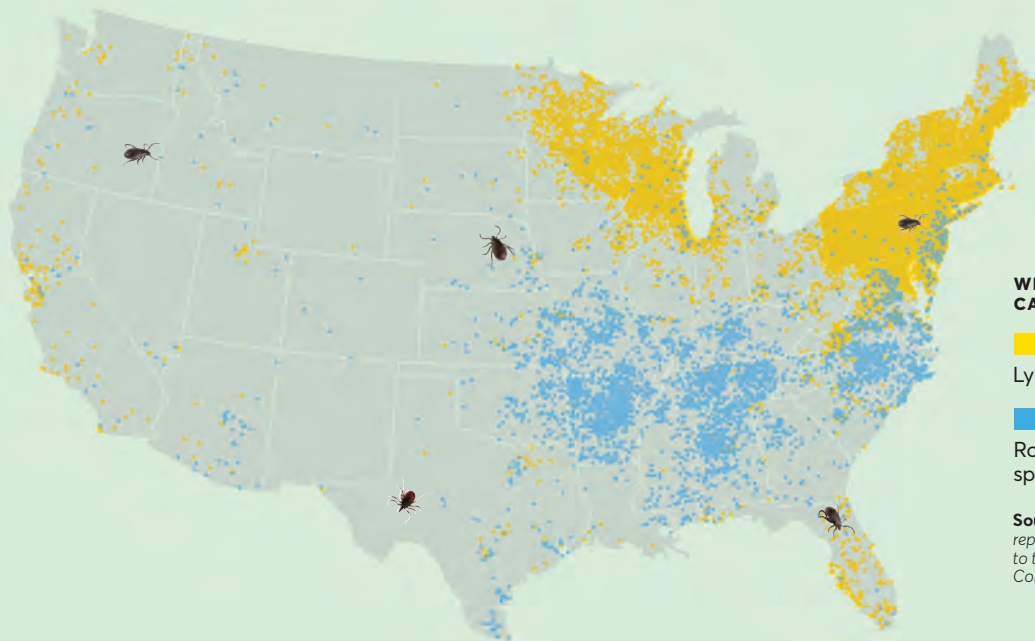
1936 CR tests 15 brands of sunburn preventives on staffers—using black crayon to mark the different lotions—and finds that only three work. The others leave burns in the shape of "shooting targets."



1945 "Wartime shortages seem to be reflected in scantier bathing suits," we report with a wink. But despite "more skin than ever" being exposed, 20 of the 49 oil and lotion brands we test still don't adequately protect users.

1953 CR tests 40 lotions on the backs of 44 "human guinea pigs" using ultraviolet lights and tape to mark 1-inch squares for each product. Only eight give "good protection." The best is Skolex Sun Allergy Cream.





WHERE MOST CASES OCCUR

Lyme disease

Rocky Mountain spotted fever

Source: 2016 data of reported cases, according to the Centers for Disease Control and Prevention.

Map of the Month

Tickproof Your Yard

Even if you live in a state with fewer reports of Lyme, Rocky Mountain spotted fever, or other tick-borne diseases (such as anaplasmosis, babesiosis, ehrlichiosis, and tularemia), don't let your guard down; at least one case has been reported in all 48 states shown above. To protect yourself, follow these expert lawn tips.

SAY 'NAY' TO SPRAYS

"Spraying your entire yard with pesticide can be ineffective and provide a false sense of security," says Michael Hansen, Ph.D., senior scientist at CR. Instead, consider placing tick tubes—cardboard tubes stuffed with cotton that has been treated with the tick-killing chemical permethrin—along the edges of your yard where rodents may pass by. When mice collect the cotton for their nests, the permethrin, which doesn't harm mice (but may harm cats), binds to their fur oils, killing any ticks that try to attach.

CUT GRASS LOW

Normally, our lawn experts suggest around 3- to 4-inch grass, but ticks like to climb to the top of tall blades, looking for the chance to grab onto hosts—and they enjoy the shade that shaggy lawns provide. If you're concerned, stay closer to 3 inches, and use a string trimmer on tall weeds.

BAG YOUR CLIPPINGS

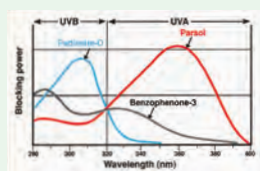
If you live in a tick-rich area, it's best to bag your lawn clippings when you mow because clippings and leaves—while good for your grass—provide the shady cover ticks like.

MAKE A MULCH MOAT

Adding a 3-foot-wide barrier of mulch around the perimeter of your yard does double duty. First, it creates a physical barrier that's dry and hot—something ticks can't tolerate. Second, it serves as a visual reminder to be extra careful once you step past the perimeter. Use mulch made from broad, dry wood chips, not the damp, shredded variety, which creates conditions favored by ticks.



1983 New products tout water resistance on labels, but no government agency checks the claim unless there's a complaint. So CR tests 19 sunscreens after water immersion: Six stay on, including a CR Best Buy called Mmm! What a tan!



2018 We test an Equate lotion that scores only 1 point lower than our top product—but costs \$31 less.



1962 After inspecting 30 sunlamps, Consumers Union, the advocacy division of CR, warns that the tan they offer can't justify the potential hazards.

1971 We find that thinly applied zinc oxide gives only "fair" protection. For it to work best, we advise readers to apply thick smears on small areas, like the nose, and use regular sunscreen everywhere else.

1991 A survey of our members shows that more than 99 percent know the risks of sun exposure, but only 66 percent use sunscreen. We show a chart of which chemicals block UVB and UVA rays.

EQUATE (WALMART) SPORT LOTION SPF 50* \$5

99 OVERALL SCORE





Still Confused By ...

Is Amazon Prime Membership Worth It?

AN ANNUAL SUBSCRIPTION to Amazon Prime—which offers members swift, two-day delivery—costs \$119 per year, but to know whether it's worth the money, you'll first need to evaluate your online shopping habits.

If you order just a few items from time to time, you may not need membership because Amazon.com offers free standard delivery when you buy \$25 of eligible items in one order. You do get additional services with membership, such as music streaming and cloud storage, but if you don't take advantage of these, you might be overpaying. To help you decide, here's a brief rundown of Prime perks:

Free same-day delivery. Prime members qualify for free same-day delivery on more than a million items, as well as Prime Now (available in select cities) on tens of thousands of items, which promises free delivery within 2 hours or within 1 hour for \$8. For restaurant orders, delivery is usually within an hour from Amazon-affiliated restaurants in select areas.

Video streaming. Members get instant access to thousands of movies and TV shows, including Amazon originals.

Music streaming. Prime Music offers ad-free listening to more than a million songs, plus playlists and stations.

Prime Photos. You'll have unlimited photo storage in the Amazon Cloud Drive.

PRIME & PRIVACY

Although in-home and in-car delivery are designed to thwart package theft by "porch pirates," the services also raise some security concerns of their own. In 2017 researchers demonstrated a security flaw in the Amazon Key app that allowed couriers to re-enter a customer's home after a delivery was complete.

(Amazon says it has fixed the issue.) Couriers for in-car deliveries will have access to the inside of vehicles and any valuables or personal information that may be left there. But an Amazon spokeswoman, Kristen Kish, told CR that delivery personnel "are thoroughly vetted, with comprehensive background checks and motor vehicle records reviews." For some shoppers, those security concerns may be offset by the system's convenience.

Early "Lightning Deal" access. Members can act on short-term, deeply discounted items 30 minutes before everyone else.

Kindle Owners' Lending Library. Members can borrow one title per month, with no due date, and have early access to one free book per month with First Reads.

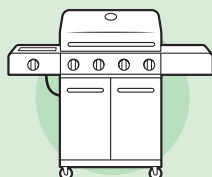
Amazon Family. The benefits include up to 20 percent off diapers through the site's Subscribe & Save service.

Membership sharing. Two adults and four teens can share certain Amazon Prime benefits at no added cost.

In-home or in-car delivery services. Prime members living in 37 eligible metro areas can download the Amazon Key app onto a smartphone to allow Amazon couriers to put packages into a home entryway or even in the trunk or cabin of a car when you're not there. But Key will cost you an additional \$220 on top of the annual Prime fee. For that, you get an Amazon-compatible home smart lock and camera so that you can get in-home drop-offs, although there is no charge to let couriers access your car. However, the car must be a certain type, such as a 2015 and newer Buick or GMC vehicle equipped with the OnStar telematics service. The car must also be parked in an "open, street-level, and publicly accessible area."

July Is

THE BEST TIME TO BUY ...



Gas Grills

If you're in need of a new barbecue, be sure to check out Fourth of July sales for good deals.



Insect Repellents

As summer buzzes along, keep an eye out for lower prices on bug repellents this month.



Dryers

You may see prices drop around the July Fourth holiday, particularly on past years' models.

WHAT 100 CALORIES LOOKS LIKE

Frozen Treats

Everyone loves a cool summer snack, but portion control is key, says Amy Keating, a registered dietitian at CR. "And many frozen treats contain added sugar, so along with calories, note sugars and try to stick to low amounts." For more guidance, go to [CR.org/frozen0718](https://www.consumerreports.org/frozen0718).



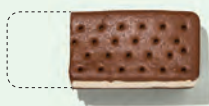
2 bars
Outshine Fruit Bars
(watermelon)
SUGARS: 26 g



1 cup
Marinor
Italian Ice (lemon)
SUGARS: 24 g



1 bar
Creamsicle Original
Cream Bar
SUGARS: 12 g



¾ sandwich
Nestlé Vanilla Sandwich
SUGARS: 9 g



¾ bar
Good Humor Strawberry
Shortcake Dessert Bar
SUGARS: 7 g



Food Sleuth

A Glass All-the-Way Full

AFTER DECADES of research and observational studies, the evidence is pretty clear: A moderate amount of alcohol in your diet can boost heart health. But when experts say "a glass of wine" is good for you, they're talking about a single 5-ounce serving—of red or white—for women and up to two servings for men. (Men are allowed more to account for their generally larger size and differences in the way they metabolize, or break down, alcohol.)

Wineglasses, however, come in a huge variety of shapes and sizes, ranging from

around 6 ounces to more than 30 ounces, which can make it tough to judge the amount of wine being poured. In fact, one 2017 study found that people were more likely to pour more than a serving's worth into larger glasses than into smaller ones.

The image above shows just how different 5 ounces of wine can look in five differently shaped glasses. Use it to guide your pour (no matter which color of wine you prefer), then simply sip your glass and enjoy—and put a stopper in the bottle for tomorrow.

CR Money-Saver APPLIANCES

In an exclusive survey, more than 42,000 CR members rated retailers, telling us which ones had the best price and selection for major and small appliance purchases.*

TOP RETAILERS TO BUY MAJOR APPLIANCES



Abt Electronics and Appliances
93 READER SCORE

▲ PRICE ▲ SELECTION

Amazon.com
92 READER SCORE

▲ PRICE ▲ SELECTION

Costco
91 READER SCORE
▲ PRICE ▼ SELECTION

Nebraska Furniture Mart
91 READER SCORE
▲ PRICE ▲ SELECTION

R.C. Willey Home Furnishings
91 READER SCORE

▲ PRICE ▲ SELECTION

Warners' Stellan
90 READER SCORE
! PRICE ▲ SELECTION

Independent Retailers
90 READER SCORE
! PRICE ▲ SELECTION

TOP RETAILERS TO BUY SMALL APPLIANCES



Abt Electronics and Appliances
93 READER SCORE

▲ PRICE ▲ SELECTION

Amazon.com
93 READER SCORE
▲ PRICE ▲ SELECTION

Williams-Sonoma
91 READER SCORE
▼ PRICE ! SELECTION

QVC.com
91 READER SCORE
▲ PRICE ! SELECTION

Costco
91 READER SCORE
▲ PRICE ▼ SELECTION

Manufacturers' Websites
90 READER SCORE
! PRICE ▲ SELECTION



RECALLS



HALOGEN LIGHTBULBS

H-E-B is recalling about 2.5 million GTC halogen lightbulbs because they can shatter while being used, posing a risk of laceration and fire. The bulbs were sold at H-E-B stores and online at heb.com from August 2015 to December 2017 for about \$2.20 for a two-pack and \$4 for a four-pack.

What to do: Stop using the lightbulbs and call H-E-B at 800-432-3113 or go to heb.com for a full refund.



PACIFIERS

Handi-Craft is recalling about 590,000 Dr. Brown's Lovey pacifier and teether holders because the snap can detach from the pacifier's ribbon and pose a choking hazard for young children. The pacifiers were sold at stores and online from August 2015 to March 2018 for about \$10.

What to do: Take the pacifier away from young children and call Handi-Craft at 833-224-7674 or go to drbrownsbaby.com to get a free replacement product.



SAFETY SWITCHES

Schneider Electric is recalling about 1,079,000 Square D brand safety switches because the

power can stay on when the safety switch handle is in the Off position, posing a risk of electrical shock or electrocution. The switches were sold at stores and online from January 2014 through January 2018 for \$40 to \$500.

What to do: Inspect the switch by moving the handle to the Off position. If the power stays on, call Schneider Electric at 877-672-1953 or go to schneider-electric.us/gdss-safetyalert for instructions and to get a free replacement.



LAMINATORS

3M is recalling about 395,000 Scotch thermal laminators because the plastic enclosure can overheat and pose a burn hazard. The units were sold on Amazon.com from July 2015 through March 2018 for about \$20.

What to do: Stop using the laminators and call 3M at 800-772-4337 or go to scotchbrand.com for a full refund.

PRESSURE WASHER SURFACE CLEANERS



Briggs & Stratton is recalling about 201,000 3000 PSI Briggs & Stratton and Craftsman brand pressure washer surface cleaners because the spray bar

can break and detach, and broken pieces can strike users. The products were sold at stores and online from March 2010 through February 2018 for \$50 to \$80.

What to do: Stop using the cleaners and call Briggs & Stratton at 877-370-7505 or go to briggsandstratton.com to register for a free replacement.

RECREATIONAL OFF-HIGHWAY VEHICLES



Polaris is recalling about 107,000 RZR XP 1000 recreational off-highway vehicles (ROVs) because if the exhaust silencer fatigues and cracks, the heat shield may fail to manage the heat properly, which could lead to components of the vehicle melting or to a fire. The ROVs have been sold since December 2013.

What to do: Stop riding the ROVs and contact a Polaris dealer for a free repair. Call Polaris at 800-765-2747 or go to polaris.com for details.



KIDS' TENTS

Jewett Cameron Company is recalling about 84,000 Playtime Pals Pop-Up Hideaway Hut children's tents because the fiberglass rod that supports the tent can break, splinter, and become sharp, posing a laceration risk. The tents were sold at Home Depot stores during November 2017 for about \$13.

What to do: Stop using the tent and call Jewett Cameron at 800-955-2879 or go to jewettcameron.com, or return the tent to any Home Depot for a full refund or store credit.



CEILING FANS

HD Supply is recalling about 144,000 Seasons brand ceiling fans because the brackets connected to the fan blades

can break and allow the blades to fall, posing a risk of injury. The fans were sold at HD Supply stores and on the company's website from March 2016 through February 2018 for \$60 to \$140.

What to do: Stop using the fan and call HD Supply at 800-782-4154 or go to hdsupplysolutions.com (click on Resources and Product Recalls) to get a free repair kit.



KIDS' HAT AND FLASHLIGHT SETS

Spirit Halloween is recalling about 20,000 Nickelodeon Paw Patrol Deluxe Marshal Hat with flashlight sets because the batteries in the flashlight can overheat, causing it to become hot and posing risks of burns and fire. The sets were sold at Spirit Halloween stores from September 2015 through November 2017 for about \$13.

What to do: Take the flashlight away from children, remove the batteries, then throw away the flashlight. Call Spirit Halloween at 866-586-0155 or go to spirithalloween.com to get a full refund. You will be asked to provide a photo of the tag located under the ear in the hat.



WIFI SWITCHES

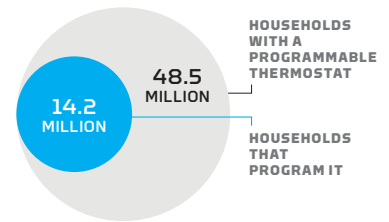
Southwire is recalling about 24,000 WiOn indoor in-wall Wi-Fi switches because they can overheat and pose a fire hazard. The switches were sold at stores and online for about \$40 and about \$80 for a three-pack.

What to do: Stop using the switch and call Southwire at 888-770-7156 or go to wionproducts.com or southwire.com to get \$4 to buy a standard (non-WiFi) replacement switch. You will also get a full refund once you return the recalled switch to Southwire. Consumers should hire an electrician to make the replacement, and Southwire will reimburse for this expense.

Product Update

The latest ratings from our labs

A programmable thermostat can cut annual cooling costs by 10 percent—as long as you program it.



Source: U.S. Energy Information Association 2015 Residential Energy Consumption Survey.

How to Play It Cool

Our air conditioner and thermostat ratings, plus our expert buying advice, will help you beat the heat and lower your utility bills, too.

by Mary H.J. Farrell



INSIDE
CR'S LABS

Senior project leader Chris Regan checks an air conditioner's noise level. Sensors on the net evaluate cooling direction.

A **WINDOW AIR CONDITIONER** should keep you comfortable for eight to 10 years, and a central air system can beat the heat even longer than that. But eventually they all lose their cool, leaving you to wilt once the weather turns warm.

“When your air conditioner is nearing the end of its life and stops cooling—even after you’ve cleaned the filter—it’s time to start looking for a replacement,” says Chris Regan, CR’s senior air conditioner tester. If you do need to buy a new model, the good news is that both window and central air units can cool more efficiently than those made even a decade ago.

Sizing Up the Options

CR’s air conditioner ratings (see page 21) will help you find the window unit that’s best for you, but first you’ll need to determine just how much space you’ll be cooling. A model that’s too small won’t cool adequately, and bigger isn’t always better: An air conditioner that’s too large may cool too quickly and not remove enough humidity, leaving the room feeling cold and clammy. For rough guidelines on the right size unit to buy, see “What Size Air Conditioner Do You Need?” at right.

If you’re unsure about the square footage of your space, multiply the length of the room by the width. Add together the square footage of all rooms that aren’t separated by doors if the unit needs to cool a large, open space. (For complicated floor plans, bring measurements to the store and rely on a salesperson’s expertise.) Energy Star recommends that you also consider the following:

- For a very sunny room, increase capacity by 10 percent.
- If more than two people regularly occupy the room, add 600 Btu for each additional person.
- For a kitchen A/C, increase capacity by 4,000 Btu.

Before buying a window air conditioner, remember to make sure

you have the correct type of electrical outlet: Models larger than 15,000 Btu usually require more voltage than smaller units (voltage is indicated on each model’s spec sheet).

If you’re planning to install a large air conditioner yourself, consider buying one with a slide-out chassis. This allows you to attach the cabinet and adjustable side curtains to the window before sliding the heavy mechanicals into position, rather than wrestling the whole unit into place while it teeters on the windowsill.

“Most new window units come with insulation panels to place over the plastic adjustable side panels,” Regan says. “But to maximize efficiency, you’ll still need to use weather stripping around the perimeter of the unit. And always use the manufacturer’s installation and safety hardware.”

Window Unit Alternatives

Window air conditioners aren’t always an option: Not every window can accommodate one, and some buildings don’t permit them. A portable air conditioner is an alternative—but not an ideal one. We tested 12 models and none received an Overall Score higher than Good. And at 50 to 80 pounds or more, they’re hardly portable. Plus they’re bulkier, noisier, and more expensive, and they use more energy than conventional air conditioners.

Another option is a split ductless system. Like central A/C, these use a condenser placed outside the home. But instead of venting through ductwork, a ductless unit cools via an air handler mounted high on an interior wall. There are currently no split ductless units in our ratings, but in past tests, they generally did an excellent job cooling and were much quieter than window units. Compared with a conventional room A/C, a split ductless system can cut cooling costs by 30 percent, according to Energy Star. But they’re more expensive and require professional installation.

What Size Air Conditioner Do You Need?

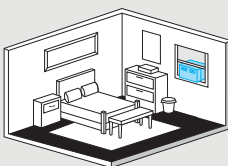
Bedroom
or home office



SQ. FT. **BTU**
100-300 5,000-6,500

THE RIGHT SIZE
76 **GE AHM05LW**
\$190

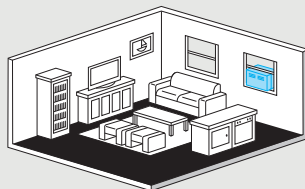
Master bedroom
or playroom



SQ. FT. **BTU**
250-400 7,000-8,500

THE RIGHT SIZE
76 **Kenmore 77080**
\$270

Living room,
family room,
or open plan



SQ. FT. **BTU**
350-650 9,800-12,500

THE RIGHT SIZE
82 **LG LW1216ER**
\$350

How to Lower Utility Bills When the Temperature Rises

THIRTEEN PERCENT of a home's energy costs are for cooling, according to Energy Star. Here are three easy ways to rein in those expenses—even on hot summer days.

1. Turn up your fan. Instead of setting the air conditioner to 74° or 76° F, set it to 78° and let your ceiling fan do the rest. It costs little to run and can make the temperature feel as much as 4 degrees cooler, according to the Department of Energy.

2. Make simple changes that increase efficiency. Close curtains during the day to keep the sun from heating up the house, reduce oven use, repair leaky A/C ductwork, and plug cracks by windows and doors.

3. Replace your thermostat. If you have central air conditioning, one of the most effective ways to save money on cooling is to install a programmable or smart thermostat. (As a bonus, you'll also save money on heating this winter.)

Programmable thermostats can be set to a schedule, typically one for weekdays and another for weekends, that reduces the amount of cooling (or heating) when the house is empty or when you're sound asleep. According to the Department of Energy, a programmable thermostat can reduce cooling and heating bills by 10 percent.

Smart thermostats connect to the internet via WiFi and allow you to control your central air and heat with your smartphone. Some smart thermostats keep track of your temperature preferences and use the data to optimize your cooling and heating schedule. Others have multiple sensors that monitor temperatures in various parts of the house for more

balanced cooling or heating.

For the fully automated approach, try the **Nest Learning Thermostat** or **Nest Thermostat E**, which use sensors and geolocation to learn when you are and are not at home and adjust the temperature accordingly.

Models like the **Carrier Cor** thermostat offer manual control and remote control from a smartphone but very little in the way of automation.

The **Honeywell Lyric T5**, **Eco-bee 3**, and **Ecobee 4** offer a hybrid approach for those who require some automation but still want a full set of manual control features.

Before investing in a smart or programmable model, check with your utility company to see whether it offers any incentives or even a free thermostat. Many offset the cost with rebates or discounts. For ratings and prices of these and other thermostats, see page 20.



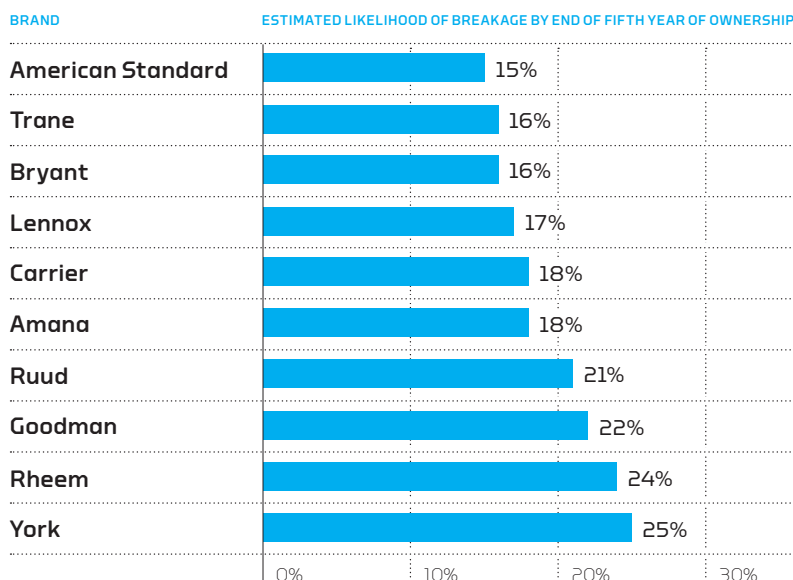
83

**Nest Learning
Thermostat**
\$250

NEST AND OTHER ENERGY STAR
CERTIFIED SMART THERMOSTATS
CAN CUT HEATING AND COOLING
COSTS BY ABOUT \$50 PER YEAR.

Central Air Conditioner Reliability

Almost 90 percent of new homes are built with central air conditioning. It's not practical for CR to test central air systems because too many variables can affect performance. Instead, we estimate the reliability of major brands based on the experiences that thousands of our members report in surveys. Choosing a brand with a lower breakage rate will help boost your chances of getting a system you can depend on.



Source: Results are based on Consumer Reports' 2016 Fall Product Reliability Survey of 14,452 owners of conventional central air conditioning systems. Differences of fewer than 6 points between brands aren't meaningful. Our statistical model estimates breakage rates (a system breaks down or ceases to function well enough to sufficiently cool a home) by end of fifth year of ownership, for systems that receive annual professional maintenance but are not covered by a service contract. We also adjust for the average number of months of use over a 12-month period. The median number of months during which these systems are used is five per year.

Ratings ➤ **Dial It Up** Keep your home cool and save money with a top-performing thermostat.

		Brand & Model	Overall Score	Price	Test Results		Feature
Recommended	Rank				Ease of use	Display	7-day programmable
PROGRAMMABLE THERMOSTATS							
✓	1	Honeywell Prestige HD YTHX9321R	95	\$250	⬆️	⬆️	•
💰	2	Lux TX9600TS	75	\$70	⬆️	⬆️	•
	3	Wiser EER56100	73	\$240	⬆️	⬆️	•
	4	Honeywell RTH7500D	70	\$90	⬆️	⬆️	•
	5	Honeywell Touchscreen RTH8500D	69	\$130	⬆️	⬆️	•
	6	Honeywell RTH6350D	68	\$50	⬆️	⬆️	
	7	Lennox ComfortSense 7000 Series	67	\$230	⬆️	⬆️	•
	8	Emerson Blue Easy Reader 1F95EZ-0671	67	\$90	⬆️	⬆️	•
	9	Insteon 2441TH	48	\$150	⬆️	⬆️	•
	10	ICM Controls SimpleComfort PRO SC5813	42	\$85	⬆️	⬆️	•

		Brand & Model	Overall Score	Price	Test Results				Features	
Recommended	Rank				Manual operation	Smart IQ	Automation	WiFi setup	Learns behavior	Voice command
SMART THERMOSTATS										
✓	1	Nest Learning Thermostat	83	\$250	⬆️	⬆️	⬆️	⬆️	•	•
💰	2	Nest Thermostat E	83	\$170	⬆️	⬆️	⬆️	⬆️	•	•
✓	3	Schneider Electric WiserAir 10BLKUS	69	\$225	⬆️	⬆️	⬆️	⬆️	•	•
💰	4	Honeywell Lyric T5 RCHT8610WF	65	\$100	⬆️	⬆️	⬆️	⬆️		•
	5	Ecobee 4 Smart WiFi*	60	\$250	⬆️	⬆️	⬆️	⬆️		•
	6	Ecobee 3 EB-STATE3-02	60	\$250	⬆️	⬆️	⬆️	⬆️		•
	7	Emerson Sensi UP500W	60	\$130	⬆️	⬆️	⬆️	⬆️		•
	8	Honeywell Lyric RCH9310WF5003	59	\$200	⬆️	⬆️	⬆️	⬆️		•
	9	Lux Geo-WH-003	57	\$150	⬆️	⬆️	⬆️	⬆️		•
	10	Carrier COR 21026670	54	\$250	⬆️	⬆️	⬆️	⬆️		•
	11	Ecobee Lite EB-STATE3L-01	49	\$170	⬆️	⬆️	⬆️	⬆️		•
	12	Honeywell RTH9580WF	47	\$200	⬆️	⬆️	⬆️	⬆️		•
	13	Venstar ColorTouch T7900	42	\$180	⬆️	⬆️	⬆️	⬆️		•
	14	Allure Energy EverSense	42	\$250	⬆️	⬆️	⬆️	⬆️		

HOW WE TEST: The **Manual operation** score factors in the ease of manually adjusting temperature, setting schedules,

and home and away modes. For smart thermostats, our **Smart IQ** score factors in features like occupancy sensing, app

control, voice control, and more. **Automation** judges each model's ability to learn your routines and adjust temperatures for you. The

WiFi setup score evaluates how easily the thermostat could be set up and connected to the internet.

*Has built-in Amazon Alexa.

Ratings ➤ **The Big Chill** For details on picking precisely the right size window air conditioner, see 'What Size Air Conditioner Do You Need?' on page 18.

		Brand & Model	Overall Score	Price	Test Results					Features				
Recommended	Rank				Comfort	Indoor noise low	Indoor noise high	Brownout	Ease of use	Electronic control with built-in timer	Auto fan speed	Dirty filter indicator	Weight (lb.)	Energy efficiency ratio (EER)
WINDOW AIR CONDITIONERS 5,000 TO 6,500 BTU/HR. (COOLS 100-300 SQ. FT.)														
💰	1	GE AHM05LW	76	\$190	⬆️	🟡	🟡	⬆️	🟡	●	●	●	45	12.2
✓	2	Amana AMAP061BW	75	\$200	⬆️	🟡	🟡	⬆️	🟡	●	●	●	44	12.2
✓	3	SPT WA-6022S	75	\$200	⬆️	⬆️	🟡	⬆️	🟡	●	●	●	45	11.2
✓	4	Kenmore 77060	75	\$220	⬆️	⬆️	🟡	⬆️	🟡	●	●	●	45	12.2
✓	5	Frigidaire FRE0633S1	75	\$240	⬆️	⬆️	🟡	⬆️	🟡	●	●	●	44	12.2
💰	6	GE AEW06LX (Walmart)	74	\$160	⬆️	⬆️	🟡	⬆️	🟡	●	●	●	46	11.2
	7	Frigidaire FFRA0511R1	71	\$140	⬆️	🟡	🟡	⬆️	🔻				42	11.1
	8	Friedrich Chill CP05G10	70	\$250	⬆️	⬆️	🟡	⬆️	⬆️	●	●		46	10.7
	9	Toshiba RAC-WK0611CRU (Home Depot)	66	\$180	⬆️	⬆️	🟡	⬆️	🟡	●	●	●	43	11.1
	10	Friedrich CP06G10B	63	\$320	⬆️	⬆️	⬆️	🟡	🟡	●		●	62	12.2
	11	Haier HWR06XCR	63	\$160	⬆️	🟡	🟡	⬆️	🟡		●	●	47	11.2
WINDOW AIR CONDITIONERS 7,000 TO 8,500 BTU/HR. (COOLS 250-400 SQ. FT.)														
✓	1	Friedrich Kuhl SQO8N10D*	82	\$710	⬆️	⬆️	🟡	⬆️	⬆️	●	●		85	12.2
💰	2	GE AHS08LX (Lowe's)	79	\$250	⬆️	🟡	🔻	⬆️	🟡	●	●	●	52	12.1
💰	3	GE AEC08LX	77	\$270	⬆️	🔻	🔻	⬆️	🟡	●	●	●	54	12
✓	4	Kenmore Elite 77087	76	\$390	⬆️	⬆️	🔻	⬆️	⬆️	●		●	58	12.1
✓	5	Kenmore 77080	76	\$270	⬆️	🟡	🟡	⬆️	🟡	●	●	●	52	12
✓	6	GE AEW08LX (Walmart)	74	\$200	⬆️	🟡	🔻	⬆️	🟡	●	●	●	51	11.3
✓	7	Danby DAC080BEUWDB (Costco)	74	\$175	⬆️	🟡	🔻	⬆️	⬆️	●	●	●	52	12
	8	Frigidaire Gallery FGRC0844S1	71	\$300	⬆️	🟡	🟡	⬆️	🟡	●	●	●	53	12
	9	Whirlpool WHAW081BW	71	\$250	⬆️	🟡	🔻	⬆️	🟡	●	●	●	51	12.1
	10	Frigidaire FFRE0833S1	67	\$280	⬆️	⬆️	🟡	⬆️	🟡	●	●	●	48	11.3
WINDOW AIR CONDITIONERS 9,800 TO 12,500 BTU/HR. (COOLS 350-650 SQ. FT.)														
💰	1	LG LW1216ER*	82	\$350	⬆️	⬆️	🟡	⬆️	🟡	●		●	85	12.1
✓	2	SPT WA-12FMS1	76	\$365	⬆️	🟡	🔻	⬆️	⬆️	●	●	●	68	12
✓	3	Frigidaire Gallery FGRC1244T1	74	\$470	⬆️	🟡	🔻	⬆️	🟡	●	●	●	74	12
✓	4	Haier HWE12XCR	74	\$320	⬆️	🟡	🔻	⬆️	🟡	●	●	●	69	11.3
	5	Kenmore 77120	72	\$370	⬆️	🟡	🟡	⬆️	🟡	●	●	●	70	12

HOW WE TEST: After installing the unit in a double-hung window in our lab, we crank up the heat to 90° F,

then measure how long it takes the A/C to cool the room by 10° F (the best units do it in less than

15 minutes). We also gauge how accurately the A/C reaches the set temperature, whether each model

can recover after a brownout, and how loud each unit is on the lowest and highest settings.

*Has a slide-out chassis, which eases installation.



INSIDE
CR'S LABS

CR senior test project leader Cindy Fisher uses thermocouples to test temperature and map heating evenness.

Grow Your Grill Skills!

Our expert grilling advice, accessory recommendations, and charcoal grill ratings are all you need to keep the sizzle in your summer.

by Paul Hope

ANYONE CAN FLIP a burger or brown a bun on the grill, but to make the most of what may be summer's greatest pleasure, you'll want a top-rated model. In this issue, for the first time in decades, we're providing ratings on charcoal grills. (You'll find our gas grill ratings in your May 2018 issue of CR.)

And because even the highest-rated grills can't make up for a lack of technique, you might be looking to expand your grilling skill set.

Learning how to make use of hot and warm zones on the grill, flavor with smoke, and get great results cooking meat, fish, and vegetables over charcoal or an open flame will broaden your backyard recipe repertoire. It's also a lot easier than you might think.

For these and other strategies that will make this grilling season sensational, we turned to two experts:

Chris Lilly, a champion pitmaster who has won 15 World BBQ Championships and is a partner at Big Bob Gibson's BBQ in Decatur, Ala.; and Meathead Goldwyn of AmazingRibs.com and co-author of "Meathead: The Science of Great Barbecue and Grilling" (Rux Martin/Houghton Mifflin Harcourt, 2016).

In addition to their tips for getting great results with both gas and charcoal, we bring you our own advice on grill maintenance and great new barbecue gear. Get ready to grill like a pro.

Fire It Up

Whether your grill is gas or charcoal, always take the time to get it good and hot before you begin to cook. "You want to preheat your grill, just as you do when cooking in your oven," says CR senior test project leader Cindy Fisher.

"Preheating helps to achieve optimal temperature for grilling and to keep food from sticking to the grates," Fisher says.

Our tests on gas grills show that you should preheat for at least 10 minutes. For a charcoal grill, our testers recommend using a chimney starter filled with coals and ignited by lighting crumpled newspaper (or a fire starter) below the chimney. Avoid lighter fluid and self-lighting coals, which can produce an off-taste that distorts the flavor of your food.

"You want the coals to be fully lit and covered in a layer of fine, white ash," Goldwyn says, noting that the process takes about 15 minutes and is well worth the wait. "Charcoal briquettes burn at their hottest and won't distort the flavor of your food with heavy smoke if you let them ignite fully." (For a quick comparison of traditional briquettes and lump charcoal, see "Face-Off: Charcoal," on page 27.)

Grill in Zones

You'd never cook everything in your oven at 500° F, but that's effectively what's happening when you turn on all of a grill's burners or distribute charcoal evenly across the bottom of the firebox.

Continued on page 26

SUMMERTIME FOOD SAFETY



Food poisonings peak in summer. These precautions will reduce the chances of sickness spoiling your cookout.

Handle With Care

Store raw meat in a sealed bag or container to prevent it from contaminating other food items. Marinate in the refrigerator, and discard the marinade when done (do not use it as a sauce).

Keep It Clean

Never place food—cooked or raw—on a plate that has

held raw meat, poultry, or seafood before washing it thoroughly with hot, soapy water. Wash utensils that have come into contact with uncooked meat of any kind before using them again.

Track the Temperature

Use a meat thermometer to make sure the meat has reached a sufficient internal temperature to kill harmful bacteria (at least 145° F for steaks, roasts, chops, and fish; 160° F for ground beef or pork; and 165° F for poultry).

Note that cooking meat over very high heat might not be an ideal way to get it to a safe internal temperature: Research suggests that eating a lot of heavily charred meats may increase the risk of cancer. Cold foods, such as potato or chicken salad, need to be kept at or below 40° F to prevent the growth of harmful bacteria. Toss perishable food that has been left at room temperature for more than 2 hours (1 hour if the temperature is 90° F or above).

GEAR FOR GREAT GRILLING

The right accessories can elevate your grilling from average to amazing. Here are six tools tested and rated by our experts (and an additional five they tried and liked) to consider adding to your arsenal.

TESTED & RATED

1 Weber Rib Rack 7648 \$35

Weber's rib rack allows you to stand three racks of ribs on edge horizontally to free up real estate for other fare on your grill grates.

2 Nexgrill Grill Brush 530-0024 \$10

Our testers liked this long-handled grill brush because it doesn't flex under pressure and the metal bristles cleaned effectively. A knob on the brush head allows you to use two hands for extra leverage; metal hooks can be used to scrape individual rungs of your grill grates, making this a solid choice for routine cleanings.

3 Broil King Basting Brush 64013 \$12

We found that the generous handle on this heat-resistant (up to 500° F) brush made it easy to keep hands away from the heat, even when basting foods near the back of a grill. You do, however, sacrifice some control due to the longer handle.

4 Char-Broil Aspire Silicone Basting Brush 6128523 \$7

This no-frills brush and bowl (not pictured) combo was a favorite of our testers. The short handle made the brush easy to control when slathering foods with sauce, and the bowl, shaped like a measuring cup, holds up to 8 ounces of sauce. Both are dishwasher-safe.

5 Earthstone Grillstone Cleaning Block 750SH \$6

The replaceable cleaning blocks were exceptionally effective at restoring grates to their original condition, though you'll get only about two cleanings out of each stone—and they leave behind some residue that you'll need to wipe away. New stones cost \$5 apiece, so this may be best for a once-a-season deep clean.

6 Broil King Rib Roaster 69615 \$90

Broil King's rib roaster lets you cook up to three slabs of baby back ribs in this porcelain-coated roasting box, which we found produced succulent ribs and prevented the fat drippings from falling onto coals or gas burners, reducing the chance for flare-ups.



1
WEBER
RIB RACK



2
NEXGRILL
GRILL BRUSH



3
BROIL KING
BASTING
BRUSH





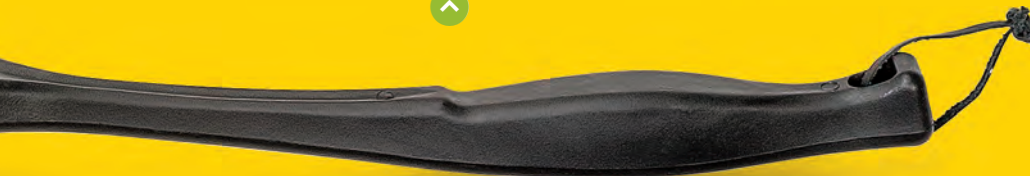
4

**CHAR-BROIL
BASTING
BRUSH**



5

**EARTHSTONE
GRILLSTONE
CLEANING BLOCK**



6

**BROIL KING
RIB ROASTER**



OTHER FAVORITES

Five more tools that impressed the experts in our labs

KitchenAid Grill Skillet 530-0059 \$13

To grill foods that are too small or fragile to place directly on the grate, this skillet fits the bill. Flames pass through the perforated base and lightly char shrimp, fish, veggies, and more.

Broil King Silicone Side Shelf Mat 60009 \$23

Broil King's dishwasher-safe grill mat keeps messy, slippery tools from mucking up your grill's side shelf and provides a slip-resistant surface for basting brushes, tongs, and thermometers.

Charcoal Companion Flat Skewers CC5147 \$10

When you turn these easy-to-use stainless steel skewers, meat and veggies turn, too—as opposed to spinning in place, as often happens with cylindrical wooden skewers. Our testers loved how secure the skewers felt when turning, but the wide blade tore through delicate veggies.

Broil King Grill Tongs 64012 \$17

Broil King's grill tongs have a clever design, with a flat, spatulalike surface on one side and traditional tongs on the other for a tool our testers found to be as handy at flipping burgers or fish as it was at turning hot dogs.

Napoleon Accu-Probe 70077 \$100

This meat thermometer attaches to the side of your grill with a powerful magnet and monitors the temperature of two different foods at once. It also uses Bluetooth and an app to send alerts to your smartphone when food is done cooking.

Instead, opt for a zone defense. “On a gas grill, turn one or two burners on and leave the others off,” Lilly says. “For charcoal, light your coals, then push them all to one side of the grill.” Use the hot side of the grill for searing and the cooler side for cooking meats (and other foods) all the way through without burning.

“I’ll cook chicken on the indirect side of the grill until it hits about 150° F, then move it to the hot side to crisp up the skin and cook it through to 165° F,” Goldwyn says. He explains that the technique allows you to cook burn-prone foods, like skin-on chicken, over low heat, then finish on the hot side of the grill.

Season With Smoke

Smoke, from wood chips or chunks, is used by skilled grillers to impart even more flavor. “I tell beginners to think of smoke as a seasoning or dry rub,” says Lilly. “You want it to lend flavor but not to overwhelm what you’re cooking.”

Package instructions often call for soaking the wood chips or chunks before using them, but both of our experts agree that there’s no need for this step—the chips barely absorb any of the water, and they quickly dry in a fire anyway. If you’re cooking with charcoal, simply throw the wood onto lit coals. “In a gas grill, I like to use wood chips in a smoker box, or put whole chunks of wood right on top of the shields that cover the grill’s burners,” Goldwyn says.

Lilly adds that the quantity and age of the wood typically influences flavor more than the wood variety (apple, cherry, or hickory, for instance), and that you need to experiment to get smoke just right, starting with small quantities and working your way up. “I encourage people to try using wood local to their area, dried or seasoned for at least four months after cutting,” Lilly says. You can also buy bags of preseasoned wood.

Chunks burn longer and hotter, but Lilly says he uses chips when smoking in a small grill because a chunk of wood that flares can raise the temperature too high.

HOW TO KEEP YOUR GRILL IN PEAK CONDITION

Grills take a lot of abuse—from in-season smoke and grease to off-season snow and ice. Follow our cleaning and care advice all season long to improve your grill’s performance and keep it working longer.

PRESEASON



Unless you’re a year-round griller, chances are that your grill will need a good cleaning before you fire it up for your first cookout of the year. Examine the inside and clear away any spiderwebs, which can cause a serious flare-up if they ignite. Reconnect your propane tank, open the valve, and spritz the flexible gas line with a mixture of water and dish soap. Look for any bubbling, which could indicate a possible leak. If you spot one, order a replacement gas line. Be sure to test the newly installed line with the same soapy water mixture.

BEFORE EACH COOKOUT



Weber, the largest grill manufacturer in the U.S., recommends brushing grates after a 15-minute preheat, because the heated food debris will turn to ash and will be easier to brush off. (For details on brushes, see “Gear for Great Grilling,” on page 24.)

You’ll also need to empty the drip tray, which collects fat, to avoid a mess and reduce the chances of a grease fire. Any flakes you see forming on the inside top of the lid might look like paint, but they’re actually grease and smoke deposits. Use a stainless steel brush to scrape them off so that they don’t end up in your food.

PERIODICALLY DURING THE SEASON



Scrub the inside of your grill, including the covers on the burners on gas grills, with soapy water and a scouring pad from time to time. How often depends upon how frequently you’re grilling, and what you’re cooking—if it’s fatty meats, you’ll need to clean more frequently to help prevent flare-ups. Protect your grill whenever it’s not in use with a cover made of a waterproof, breathable material, such as heavy-duty polyester (most brands’ covers are designed to fit a particular model). If you live right on the ocean or in a particularly humid area, however, leave your grill uncovered except during long periods of inclement weather, to avoid trapping salty or moist air that would cause the grill to rust. People in these regions should also wipe down grills once a week to remove salt deposits and accumulated moisture.

POST-SEASON



At the end of the season, scrub your grill inside and out. Use soapy water in the firebox and on the grates, and a multipurpose cleaner on the exterior. Store your grill covered, with the propane tank disconnected. That way, if anyone bumps into the grill in the off-season, there’s no risk of inadvertently turning on a burner. A detached garage or shed is a fine place to store propane tanks, but never bring them into the house.

Ratings ➤ **All 'Cue'd Up** Our experts evaluated a sampling of barrel- and kettle-style charcoal grills to find out which are the top performers.

		Brand & Model	Overall Score	Price	Test Results				Features		
Recommended	Rank				Convenience	Cleaning	Indirect cooking	Evenness performance	Exterior dimensions (HxWxD)	Exterior grill material	Grates
Barrel Grills											
✔	1	Dyna-Glo DGN576DNG-D	81	\$205	⬆️	⬆️	⬆️	⬆️	51x61x25	Powder-coated steel	Coated cast iron
	2	Kingsford BC222	71	\$100	⬆️	⬆️	⬇️	⬆️	42x45x27	Painted steel	Cast iron
	3	Expert Grill 24" XG1709603411	71	\$90	⬆️	⬆️	⬇️	⬆️	42x45x27	Powder-coated steel	Cast iron
	4	Char-Broil 16302044	71	\$130	⬆️	⬆️	⬆️	⬇️	44x48x28	Painted steel	Coated steel
	5	Char-Griller Pro Deluxe 2828	71	\$100	⬇️	⬆️	⬆️	⬇️	50x42x26	Powder-coated steel	Cast iron
	6	Royal Gourmet CD1824A	69	\$150	⬆️	⬆️	⬆️	⬆️	48x50x24	Painted steel	Coated steel
	7	Nexgrill 810-0025	69	\$90	⬇️	⬆️	⬆️	⬇️	46x37x29	Painted steel	Coated cast iron
	8	KitchenAid 810-0021	68	\$200	⬆️	⬆️	⬆️	⬇️	51x60x29	Painted steel	Coated cast iron
Kettle Grills											
✔	1	Weber 22" 14402001	67	\$150	⬆️	⬆️	⬇️	⬆️	39x23x30	Porcelain-coated steel	Plated steel
	2	Weber 18" 441001	58	\$80	⬆️	⬇️	⬇️	⬆️	36x18x21	Porcelain-coated steel	Plated steel
	3	Char-Broil Kettleman 16301878	58	\$100	⬆️	⬇️	⬆️	⬇️	39x28x29	Porcelain-coated steel	Coated steel

HOW WE TEST: **Overall Score** combines results from our tests for convenience, cleaning, indirect cooking, and evenness performance. **Convenience**

refers to ease of use, including adding and arranging briquettes. **Cleaning** indicates how easy it is to clean the grill, remove spent charcoal, and

access the catch tray. **Indirect cooking** indicates how well the grill will slow-cook food when it's not placed directly over the charcoal. **Evenness**

performance reflects temperature uniformity across the cooking surface with a single layer of charcoal briquettes. **Price** is approximate retail.

FACE-OFF: CHARCOAL

Which is better: Lump or briquette?
Our testers answer this burning question.



Lump charcoal, the favored fuel of many grilling purists, promises hotter, longer burn times than standard charcoal briquettes. Some people also prefer lump coal's more natural composition: Though briquettes are made primarily of sawdust, lump charcoal is simply charred wood.

But is lump charcoal really worth its premium price? To find out, we tested Kingsford Briquets (\$0.54 per pound) and Big Green Egg hardwood charcoal (\$1.25 per pound) in two types of grills—a traditional Weber Kettle and a Big Green Egg Kamado-style.

In both grills, the lump charcoal did burn slightly

hotter (40 to 50 degrees). But for evenness, briquettes were the clear winner. If we scored this test the same way we measure evenness performance on gas grills, the lump charcoal would have earned a score of Fair in the kettle and Very Good in the Kamado grill; the briquettes would have earned Excellent scores in both grill types.

We think briquettes are better suited than lump charcoal to most grilling tasks. They're also easier to stack, control, and light, which a lot of backyard chefs will appreciate. We suggest that you save lump charcoal for the times you need to sear a thin steak or pork chop without overcooking.

Road Trip!

In our new and exclusive ratings, you'll find Road-Trip-Worthy Scores for the best SUVs, trucks, and cars for any vacation or journey. Plus, follow our strategies for how to prep and pack, how to pay less for gas, and how to keep everyone healthy, safe, and sane.

by Mike Monticello

THERE'S A SPECIAL ROMANCE attached to hitting the open road with loved ones onboard, carrying high hopes for a journey rich with vivid sights, great food, bonding with friends, and hiking, fishing, or sightseeing. In fact, nearly two-thirds of American families planning to travel this year—more than 56 million individuals—are expected to take a road trip, according to the American Automobile Association.

Choosing the perfect vehicle for this adventure is perhaps your most important decision, which is why Consumer Reports has dug into our proprietary vehicle testing data and reliability and satisfaction surveys to craft

our first-ever Road-Trip-Worthy Score for 50 vehicles across six categories. We factored in safety, comfort, fuel efficiency, and more. (See ratings on page 40.)

No two road trips are the same. For some, it's a couple of hours to a cozy bed and breakfast. For others, it's a multiday cross-country trek to visit grandparents. For the outdoorsy, it could involve camping. "Theme parks, beaches, and state or national parks are consistently some of the most popular road-trip destinations," says Julie Hall, public relations manager at AAA. That's why our list of vehicles includes everything from sedans to trucks.

Lisa Seethaler, a 51-year-old mother

of two from Marlborough, Conn., is a fan of this vacation approach. "Road trips are the best way to soak up local culture, flavors, scenery, architecture, and nature," she says. "My Toyota Sienna minivan isn't glamorous, but it has a sunroof, great storage, and comfortable seats. The kids are happy in the backseat with a DVD player, and we often have our little dog in the third row."

No matter what your destination, smart planning can increase your odds of avoiding mishaps, saving money, and arriving home with happy memories. In this package, we've thought of everything you'll need to make that happen.



**Toyota
Sienna XLE**
83 ROAD-TRIP-
WORTHY
SCORE

How to Pack Like a Pro

Don't overload your car. Weight limits are listed on the driver's doorjamb and in the owner's manual; the figure is for the combined weight of passengers and cargo. Don't exceed

manufacturer recommendations, which vary widely. A Chevrolet Equinox has a 993-pound limit; a Honda Odyssey, 1,340 pounds; and a Buick Enclave, 1,623 pounds.

Stow the heaviest items low, particularly in SUVs. This keeps the center of gravity lower, reducing the chances of a rollover. Smaller items should be packed into duffel bags or safely tucked

into storage areas. Strap larger items down with cargo anchors. Don't place heavier items on top of the cargo pile, because they can become dangerous projectiles in a panic

stop or a crash.

You could opt for a roof cargo carrier, but CR tests found that a cargo carrier atop a midsize sedan can reduce fuel economy by as much as 5 mpg. —Jeff S. Bartlett

The Pretrip Checkup

Your vehicle will be where you spend the bulk of your time during your journey, so make sure all its functions are fine-tuned and operating at maximum performance levels.

Under the Hood

FLUIDS. Check all levels: oil, coolant, brake, and windshield-washer fluids. Inspect power-steering and transmission fluid levels, if applicable. If you're taking a long trip, schedule a service appointment to double-check these levels.

HOSES. Squeeze hoses with your thumb and forefinger near clamps—that's where they can

be weakest from wear. Feel for soft or mushy spots. A good hose will be firm but bendable. Look for parallel cracks around bends; a hardened, glassy surface (which indicates heat damage); or abrasive damage. Have damaged hoses replaced.

BELTS. Heat, oil, ozone, and abrasion can take a toll on belts. Look for cracks, fraying, and splits, as well as signs of glazing. Replace worn belts.

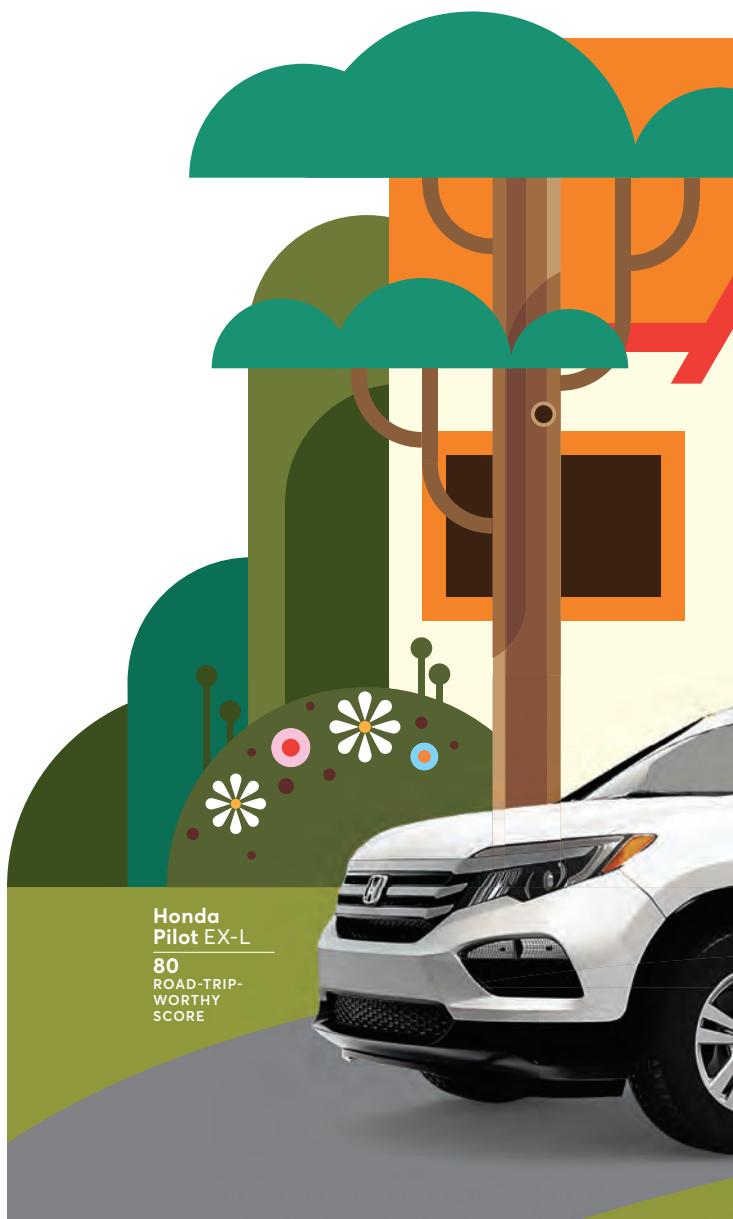
AIR FILTER. Remove the filter and hold it up to a strong light. If you don't see light, the filter is dirty enough to need to be replaced. A clean air filter helps the engine run better.

RADIATOR. Look through the grill and be sure the radiator is clear of any obstructions.

BATTERY. Make sure the terminals and cables are securely attached, with no corrosion. If the battery has removable caps, check its fluid level—especially in warmer climates. Top off as needed with distilled water.

Wipers

Based on CR tests, windshield wipers last about six months. If they're a few months old, consider replacing them before a long trip. If the wipers are newer, clean the blades with washer fluid or glass cleaner.



Your Truly Complete Car Emergency Kit

Prepare for breakdowns and make sure you have these items onboard.

PHONE CHARGER

In addition to having on hand a charging cord and power adapter, carry a small battery-based charger in case your car's battery dies.

BASIC TOOLS

Have standard and Phillips

screwdrivers, pliers, and a compact socket set.

WARNING LIGHT, HAZARD TRIANGLE, AND/OR FLARES

These can alert motorists to your presence along the side of the road.

TIRE TOOLS

If you don't know how to change a tire, consider learning before the trip. You could pack an easier-to-use lug or torque wrench, as well as work gloves. A short wooden board (about a foot long) can be invaluable to



Tires

Check the pressure on all tires, including the spare, before starting the trip. Use the pressure recommended by the vehicle's manufacturer, which usually can be found on a front doorjamb and in the owner's manual. Inspect tires for abnormal or uneven wear, cracks, cuts, and any sidewall bulges. Replace tires that are 10 years old or overly worn. Once underway, check the pressure only after the tires have cooled for 3 hours to get an accurate measurement.

Brakes

You might need a comprehensive checkup if you apply the brakes and there are grinding noises, or unusual vibrations in the brake pedal or steering wheel, or if the vehicle pulls to one side.

Glove Box

Be sure you have up-to-date registration and insurance paperwork.

Lights

Check exterior lights, including taillights, brake lights, turn signals, and fog lamps. Make sure lenses are clean, so the lights are as bright as possible.

Infotainment

Reduce distractions: Pair your phones and transfer your contact lists ahead of time. (Make sure the roadside-assistance number is programmed.) Confirm that any subscriptions for satellite radio, traffic services, and streaming music are up-to-date. Add radio presets and program all destinations before you hit the road.

—Jeff S. Bartlett

stabilize a jack on soft dirt or mud. Many newer cars don't have spare tires, so familiarize yourself with your car's "mobility kit." Know how to reach roadside assistance in case the tire can't be easily replaced.

FLASHLIGHT

This or a head-mounted light can be especially helpful during nighttime breakdowns or tire changes.

JUMPER CABLES OR A JUMP-STARTER

Cables can be handy, but

a paperback-sized jump-starter can get your motor running on its own. Plus, many can be used to charge other portable devices.

REFLECTIVE VEST

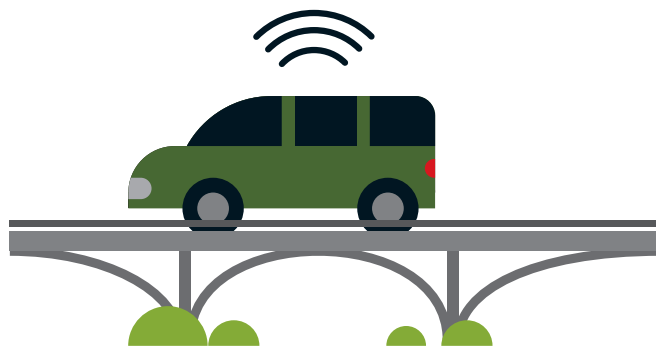
This safety measure will make you more visible in the dark.

FIRE EXTINGUISHER

Pack a compact dry-powder unit for fires fueled by solids and combustible liquids and gases (class ABC). Of course, the safest response may be to get passengers far away from the vehicle and call 911.

—Jeff S. Bartlett

6 Tech Checks to Smooth Your Travels



Look Into Unlimited Cell-Phone Data

A road trip might be the perfect time for families to switch to an unlimited data plan. After all, a minivan's passengers usually don't have access to free WiFi to look up directions, stream music, or share photos with friends back home—activities that can burn through monthly data plans. Pricing varies widely. At press time, AT&T, for example, had an unlimited monthly plan for four phones starting at \$180—the company charged \$190 for 20 gigabytes of shared data. On the other hand,

unlimited probably doesn't make sense if you need only 1GB or 2GB per phone.

Download Google Maps

Navigation apps have transformed travel, making it almost impossible to get lost. That is, unless you're out of cell range when you try to get directions, which can easily happen in rural or hilly regions. The problem isn't the GPS signal coming from satellites, which the phone can read nearly anywhere; it's the access to map and direction information via cellular. The solution? Download maps before you set out. Search for

the spot where you'll be driving (say, Livingston, Mont., on the outskirts of Yellowstone National Park), then tap the name of the location. Next, tap More, and click the Download button.

Buy a Multiphone Charger

Many drivers use a cable to charge a phone on their daily drive, but that's not enough for a family. Avoid squabbles by getting a charger with multiple USB ports. CR doesn't test car chargers, but as an example, the Anker 48W 4-Port USB Car Charger, \$16 at Amazon, can handle four phones at once, and it's

Android- and iOS-compatible.

Download Movies Before You Go

Even if you've signed up for an unlimited data plan, that doesn't mean you'll have great service along every stretch of road. Before you leave your home WiFi network, you can pay to download movies and TV episodes through Amazon, iTunes, and other services. And Amazon Prime and Netflix allow subscribers to download many titles at no extra cost. To download a Netflix title to a phone or tablet, for instance, open the Netflix app, find

your movie, click open the description window, and tap the Download icon. It looks like an arrow pointing downward. Once the movie or TV episode is on your mobile device, you'll have anywhere from 48 hours to more than a week to watch it—the time frame varies by title. (For more details on downloading videos, see the March 2018 Consumer Reports magazine, page 15.)

Don't Overshare

Sure, you might want to post vacation photos online for friends and family to see. But sharing your Grand Canyon photos with the

caption, "Just arrived! Can't wait for tomorrow's hike!" is a pretty good indication to a crook that your house is empty. We recommend waiting (if you can) or tightening up your sharing options. On Facebook, for example, choose a photo and write your post, then tap on the Friends tab. That opens a drop-down menu where you can indicate who sees the post. Options range from everyone to an exclusive list you've created—or even just a handful of individuals. Your close friends can see your trip of a lifetime, and your other Facebook friends,

Ways to Keep Your Home Safe While You're Away

GOOD

Unplug window units, or turn the thermostat up to between 85° F and 90° F to lower A/C costs.

BETTER

Install smart thermostats with vacation scheduling, such as the Honeywell Lyric T5, \$100, a CR Best Buy.

GOOD

Monitor your home remotely for leaks and flooding by installing a smart water-shutoff valve and/or leak detectors.

BETTER

Turn off your home's main water line before you leave.

GOOD

Use timers on a few interior and exterior lights to mimic your daily routine.

BETTER

Swap out a few bulbs with smart lightbulbs that can mimic your routine but also randomize it a bit.

many simply acquaintances, don't know you've left the house.

Protect Your Privacy

Public WiFi networks are notoriously unsafe; a hacker in the crowd may be able to intercept information going to and from your device. There are three solutions. Avoid doing sensitive things, such as checking account balances, on public WiFi. Use a cellular connection instead of WiFi—nothing is perfectly safe, but it's much more difficult to hack a cellular connection. Or use a virtual private network (VPN), a service that can encrypt your internet traffic and mask which sites you go to. CR doesn't rate VPNs, but one cited by security pros is TunnelBear, starting at \$5 per month. (A free version limits you to 500 megabytes per month.)
—Jerry Beilinson

GOOD

Use this time to do a routine test of your smoke detectors. Replace batteries, if necessary.

BETTER

Install a smart smoke detector, which can alert you—or someone back home—to trouble via smartphone.

Great Gear on the Go

The sounds and sights of the open road are best enjoyed free of screens and digital distraction. But when it's time to snap a photo or enjoy some music, you'll want gear that's lightweight and affordable.

POOLSIDE

Fujifilm FinePix XP120 \$145

50

Waterproof, shock-resistant, and affordable—this camera is everything you (or your kids) need in a knock-around shooter for the pool or beach.

IN THE BACKSEAT

Amazon Fire HD 8 2017 \$80

69

You can buy four of these recommended tablets—for you and three passengers—for the price of a single lower-end iPad, and you'll still have money for games or movies.

AT THE HOTEL

Phiaton BT 100 NC \$90

69

Noise-canceling headphones can help keep the peace in the car or hotel room. This model is compact and costs one-third as much as certain competitors.

IN THE THICK OF IT

Canon PowerShot SX720 HS \$280

63

With this camera and its 40x zoom for recording wildlife or a baseball game up close, you're getting strong image quality for the money.

FOR A PICNIC

Bose SoundLink Color II \$130

60

The Bluetooth speaker brings music to a roadside picnic in a small, lightweight, and affordable package.

ON THE TRAIL

Scosche SportFlex 3 \$20

76

Bend-to-fit earclips coupled with very good sound quality make these inexpensive headphones a logical choice for an early morning run before you hit the road. —Jerry Beilinson

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

GETTING CASH ALONG THE WAY

If you withdraw cash from an ATM that isn't in your bank's network, you could end up paying extra fees. The combined out-of-network withdrawal fee can be as high as \$5 per transaction.

There are ways to avoid the fees.

1. About 30 percent of banks offer accounts that allow you to use any ATM free of charge. The downside: You may have to maintain a minimum average monthly balance.
2. Many credit unions are members of Co-Op Financial Services, a network of 30,000 ATMs that connects to credit unions across the country. There's no fee for withdrawing funds.
3. Choose an online-only bank that allows you to use ATMs at many other banks at no cost.
4. Brokerage firms such as E-Trade, Fidelity, Schwab, and TD Ameritrade offer checking and savings accounts that often have no minimum-balance requirements. The brokerage will give you a bank card and reimburse you for any ATM fees you're charged.
5. When checking out at some supermarkets and pharmacies, use your debit card and ask for cash back.

—Nikhil Hutheesing

GOOD

Check that all exterior doors and windows are locked.

BETTER

Beef up each exterior door lock with a stronger deadbolt (such as the Medeco Maxum 11*603) and a box strike plate with 2- or 3-inch screws.

GOOD

Ask a trusted neighbor to keep an eye on your home.

BETTER

Keep a virtual eye on your home by installing a wireless security camera or video doorbell (see page 8).
—Daniel Wroclawski

The Road Tripper's Guide to Roadside Assistance

Having your car break down when you're on a road trip hundreds of miles from your trusted mechanic or a familiar dealership can be a real headache. That's when having a roadside-assistance plan is essential. If you don't already have one, lots of plans are available from auto clubs, car insurers, and others, with prices starting around \$60 per year, depending on how much protection you want. They usually cover you in the U.S. and Canada. If you already have a plan (check to see whether one was given to you, perhaps as part of a car warranty), you should review it to be sure it has the coverage you need when traveling.

When considering a plan, be sure you know the fine-print exceptions. For example, if your idea of vacation fun is to do a lot of off-roading, you may find that you're not covered unless you're on public roads. Here are six questions to consider:

What is the trip-interruption benefit?

An important feature for long-distance travel, the trip-interruption benefit applies if you have a breakdown or an accident that stops you in your tracks or, in some cases, if your car is stolen. Depending on the plan, it reimburses you for unforeseen expenses such as a hotel room, meals, and alternative transportation, whether it's a car rental or a flight home. The trip-interruption benefit included with the Volvo roadside-assistance plan, for

example, reimburses you for up to \$500 in expenses you incur during the first three days after a vehicle disablement, but only if you're more than 150 miles from home. AAA's plan kicks in at 100 miles. Reimbursement amounts vary by plan, but we've seen them as high as \$1,500.

Is there a towing distance limit?

If you live in a densely populated area, a basic plan that tows you 5 miles or so is probably adequate. But if you intend to venture into the wilderness, you might consider a premium plan that allows you more miles before you incur extra per-mile charges. For instance, AAA's basic Classic membership plan, available from one AAA affiliate for \$66 for the first year, provides up to four 5-mile tows during the membership period. The \$101 Plus plan increases the towing distance to 100 miles. The Premier plan, \$127, allows for one 200-mile tow and three 100-mile tows. Car manufacturer plans usually will haul your vehicle only to a nearby authorized dealer or approved repair facility.

What if I'm driving a rental car?

If you're renting a car, find out whether your plan applies. If coverage comes with your car warranty, it's probably in effect only if you're driving that vehicle. Some car rental companies provide extra-cost roadside assistance for nonmechanical problems. (The rental company

will cover mechanical problems automatically.) That can include running out of gas and locking the keys in the vehicle.

What if my RV breaks down?

Covering your recreational vehicle often requires a special plan, such as AAA Plus RV or AAA Premier RV. Good Sam specializes in RV coverage. You're also likely to need extra coverage if you're towing a trailer or doing your "Easy Rider" imitation and hitting the vacation trail on a motorcycle. And a special note for cyclists: The Better World Club will even cover your bicycle.

What if service isn't available?

Find out whether a plan will reimburse you if you have to seek out service help independently. This may be necessary if no in-network service provider is available where you happen to be or if local laws limit which companies can provide emergency service on the road you're on. The Better World Club reimburses \$50 or \$100, depending on the plan.

Are there other benefits?

Some roadside service plans offer extras. Among them are free map services and directions, rental car and hotel discounts, and even bail bond and legal services reimbursement in case a driving incident lands you in the county jail. —Anthony Giorgianni

YOUR TRAVEL FIRST-AID KIT

Start with a prepacked kit, such as those sold by the Red Cross for \$20 at redcross.org/store. These give you a variety of bandages, gauze, tape, and more for treating wounds, cuts, and burns. We recommend adding:

1. Your health and hospital insurance cards.
2. Enough of your Rx medications to last you the length of your trip—and a few days more just in case.
3. An antihistamine, such as diphenhydramine (Benadryl Allergy and generic) or loratadine (Claritin and generic), for an unexpected allergic attack.
4. A pain reliever, such as acetaminophen (Tylenol and generic), ibuprofen (Advil and generic), or naproxen (Aleve and generic).
5. Antidiarrheal remedies, such as loperamide (Imodium and generic) and bismuth subsalicylate (Kaopectate, Pepto-Bismol, and generic), and antacids.
6. Insect repellent and tweezers for tick removal.
7. Sunscreen, aloe gel, hydrocortisone cream, or calamine lotion to prevent sunburn or soothe bites.
8. Antiseptic wipes, hand sanitizer, and an antibiotic ointment, such as Neosporin, for infected wounds.
9. Lubricating eye drops.
10. A thermometer.

—Catherine Roberts

Protecting Your Pets

If pets are coming along for the ride, give them the special attention they need, says Lori Bierbrier, D.V.M., a veterinarian

and medical director of the American Society for the Prevention of Cruelty to Animals' Community Medicine Department.

Pets should be kept in a harness or well-ventilated crate to prevent injury—to

themselves or passengers—in a crash. Don't let dogs stick their heads out an open window, so they don't get hit by rocks or debris.

Make time for walks and feeding to maintain their routine. Bierbrier

recommends packing a block of ice in a bowl for cold water.

Never leave a pet in a parked car, even with the windows down, because rising temperatures in the car can be deadly.

Call in advance to

see whether hotels are pet-friendly. Take a blanket from home to make the room feel familiar.

In case of emergency, have the contact information and location of a veterinary clinic or an emergency

clinic near your destination.

Bear in mind that older animals might not adapt well to the stress of a change in their environment and routines. Consider an at-home pet sitter you trust.

—Keith Barry

**Ford
F-150 XLT**
86
ROAD-TRIP-
WORTHY
SCORE



DON'T LET THE BED BUGS BITE

If your plans involve a hotel stay, make sure you don't check out with an infestation.

■ Stow your luggage in the shower stall or tub—an unlikely hangout for bed bugs. Strip the bed and scan the mattress (the top and underside) and box-spring seams for bugs, which are flat and oval-shaped, with reddish-brown bodies, roughly the size of an apple seed. Watch for adults, nymphs, and eggs, as well as exoskeletons (casings that the bugs leave behind when they molt) and rust-colored (crushed bugs) or dark (feces) spots.

■ If you see an infestation and you can't move to an entirely different hotel, ask for a new room as far away as possible because the bugs are likely to be in adjoining rooms as well.

■ If all appears to be clear, move your suitcases to a luggage rack or hard-surface closet shelf.

■ If you pick up bed bugs on your travel clothes or luggage, expose them to temperatures at or below 0° F or at or above 113° F. If you have a large chest freezer, store your entire suitcase there for four days before taking it into the house. Or you can tumble your clothes in a hot dryer for 30 minutes and steam clean your luggage. Store your empty luggage in the garage or basement.

—Julia Calderone

IF YOU GET SICK WHILE ON THE ROAD

It's awful to become ill or get injured on vacation. It's even worse if you get hit with a big medical bill when you get home.

If you have a medical crisis that requires a trip to the emergency room while traveling in the U.S., "your plan should cover you regardless of location," says Sean Malia, a senior director at eHealth, an online site for buying health insurance. But if you have a more minor problem, how the bill is covered can depend on where you seek care and the type of insurance you have, says Cathryn

Donaldson, director of communications at America's Health Insurance Plans, a trade association for insurance companies. Your insurer may treat it as an out-of-network claim, and you could be on the hook for a larger portion of the cost or the whole bill.

To protect yourself from a surprise medical bill, put these tasks on your pretrip to-do list.

1. Make sure you have an up-to-date insurance card in your wallet. Put your healthcare providers' contact info in your phone in case you need a referral. Also, take a

list of your medications and dosages.

2. If your current stock of Rx drugs won't last your trip, ask your insurer for a "vacation override" so that you can get an early refill. If you run out while you're away, call your doctor. Most insurers contract with national retail drugstore chains.

3. Ask your insurer ahead of time how it defines an emergency and what will be covered if you need treatment away from home. Request a list or see whether your insurer has a mobile app so that you can find ERs, urgent care centers, pharmacies,

and doctors covered along the way.

4. If you have a chronic condition, contact your physician before you travel and ask for a referral to doctors who could treat you at your destination.

5. Take advantage of telemedicine. Most insurers offer telehealth services, which allow you to do a video consultation with a doctor via your smartphone, computer, or tablet. Telemedicine usually costs less than seeing a doctor in person, and some teledocs can prescribe short-term medication.

—Donna Rosato

Rx for a Healthy Driver

Long car trips can literally be a pain. Remain physically comfortable with these tips.

Stay alert. Drowsy driving can be fatal. Don't push yourself to drive late into the night, when you are usually asleep. Switch drivers if you start to fade. If you're the only driver, get a hotel room.

Pull over every 2 to 3 hours. "Sitting too long is hard on the lower back due to that constant flexed position," says Lynn Millar, Ph.D., chair of the department of physical therapy at Winston-Salem State University in North Carolina. It may compress the discs between your vertebrae, potentially leading to pain, numbness, or tingling in the legs. Your neck and hips could get

tight, too. Getting out of the car and walking around a bit can help.

Stretch your back. On your driving breaks, stand tall and circle your shoulders back five times. Then reach arms overhead and arch back slightly. Hold for 5 seconds, then lower arms and repeat once or twice.

Uncramp your legs. Try this calf and hip-flexor stretch: Stand with feet staggered in a lunge, left knee bent in front and right leg straight behind so that your heel touches the ground. With hands on hips (or holding on to something for balance), clench the right side of your gluteal muscles. Hold for 30 seconds, then switch legs and repeat.

Relax your shoulders.

Keeping your chin parallel to the ground, slowly draw your head back as far as you can. You might feel a stretch along your upper spine and shoulders. Repeat six times.

Flex your feet. Trips longer than 4 hours increase your risk of deep vein thrombosis, a clot that forms, usually in the lower leg or thigh, says Mary Cushman, M.D., a spokesperson for the American Heart Association. Stopping to walk around helps. Passengers in the car should do ankle rolls and alternate flexing and pointing their feet one at a time every half hour or so. —Janet Lee

Smart Snacks to Pack

Packing your own food can be a much healthier option than stopping at most rest-stop grab and goes. To keep your energy up and your appetite satisfied, make your snacks a combination of carbs (grains, vegetables, and fruit) and protein.

FOR YOUR COOLER

Water

Staying hydrated helps keep you awake and alert, plus it boosts mood and helps prevent headaches.

BelGioioso Fresh Mozzarella Snacking Cheese

A lower-fat, lower-calorie cheese that's a good protein partner for fruits and veggies.

Peeled Hard-Boiled Eggs

Just 70 calories each and a good source of protein.

Sliced Grilled Chicken or London Broil

Cook and slice these ahead of time to use for sandwiches (we recommend whole-wheat wraps); these meats are lower in sodium than deli meats.

Single-Serve Cups of Hummus and/or Guacamole

Use as a condiment on sandwiches or as a dip for veggies and crackers.

Fruits and Veggies

Apples, bananas, blueberries, grapes, broccoli florets, carrots, cucumber slices, cherry tomatoes, and sugar snap peas are easy to handle in a car.

Siggi's Mixed Berries Whole Milk Icelandic Style Yogurt

Creamy, slightly sweet, and packed with protein.

⬆️ NUTRITION ⬆️ TASTE

NO COOLER NEEDED

Angie's Boomchickapop Sea Salt Popcorn

⬇️ NUTRITION ⬆️ TASTE

Nabisco Triscuit Reduced Fat Crackers

⬆️ NUTRITION ⬆️ TASTE

Pure Organic Wild Blueberry Bars

⬇️ NUTRITION ⬆️ TASTE

Epic Bar Turkey Almond Cranberry

Krave Bar Cranberry Thyme Turkey

These two bars are relatively low in sodium and are made with no-antibiotic turkey.

Almonds/Mixed Nuts (1 ounce is a serving)

The protein and fat in nuts keep you full.
—Trisha Calvo



How to Find the Cheapest Gas

Where you choose to gas up can have a big impact on your long-distance trip's bottom line. When we checked in April, the gas price tracking website GasBuddy found a gap of 92 cents per gallon between two Chicago gas stations just a few blocks apart. That's an \$18 difference if you're filling a 20-gallon tank. Similarly, because states tax gasoline differently, filling up on the wrong side of a border can be an expensive mistake.

So how do you know where the best-priced stations are, especially if you're in

unfamiliar territory? Download one or more of the widely available gas apps—such as Fuel Finder, GasBuddy, and Gas Guru—to your smartphone. They're available for Android and iOS devices. Many are free. (The Android version of Fuel Finder costs \$1.99.) You can filter results by fuel grade and sort by distance and price, as well as get GPS-guided directions to the station you choose. GasBuddy and Fuel Finder also let you check stations for amenities such as ATMs, restaurants, and car washes. GasBuddy has station reviews, which



might tell you, for instance, which restrooms to avoid. And Gas Guru lets you save your favorite stations, so you can remember where to stop on your way back.

The Google Maps and Waze apps, which many people use for real-time traffic alerts and driving directions, also offer gas-price info.

—Anthony Giorgianni

CONSIDER RENTING FOR THE ROAD TRIP

If you fully load up kids and cargo only once or twice a year, think about renting a big SUV rather than owning one year-round. Compare a family sedan (2018 Honda Accord EX) with a three-row SUV (2018 Chevrolet Traverse 3LT), both with the features that today's shoppers desire:

PRICE

The Traverse costs \$15,835 more than the Accord, and assuming a \$5,000 down payment, a 2.9 percent rate, and a five-year loan, you'd pay more than \$1,000 in additional interest. And your monthly payment would be \$294 more for the Traverse.

ANNUAL GAS COST

The Traverse gets 20 mpg overall; the Accord gets 31 mpg. Assuming you'd drive 12,000 miles a year and gas costs \$2.75 per gallon, you'd spend \$1,650 on gas for the SUV, vs. \$1,065 for the sedan.

CR'S TAKE

In the end, the few hundred extra dollars it will cost to rent a Traverse for your road trip will easily be covered by the thousands you would spend otherwise. And renting would keep all those miles and wear and tear off your everyday vehicle.

—Patrick Olsen

CREDIT CARDS THAT GO THE DISTANCE

Along your journey, you'll probably be spending money on restaurant meals, hotel stays, and gas. Rather than using just one rewards credit card, you can maximize your cash back by using different cards that offer the best rewards in dedicated spending areas. Finding that just-right card combo can be complicated,

however, given fees, waivers, rebate rules, and bonuses. So we did the work for you, using our proprietary Credit Card Adviser Comparison Tool. It calculated the costs and benefits of 53 cash-back credit cards to point you to the ones that will most generously reward your unique mix of spending activity. You just have to

remember to use the right card in the right situation. Put a little note in your wallet to remind yourself which card to use for gas, dining, and hotels. (For all other purchases, you can use a card that offers a higher-than-average flat cash-back reward; we recommend the Citi Double Cash card.)

TOP PICK FOR GAS ^①

Citi ThankYou Premier

Unlimited 3 percent cash back on gas

TOP PICK FOR TRAVEL ^②

Citi ThankYou Premier

Unlimited 3 percent cash back on travel

TOP PICK FOR DINING ^①

TIE Capital One Savor TD Cash Visa

Unlimited 3 percent cash back on dining

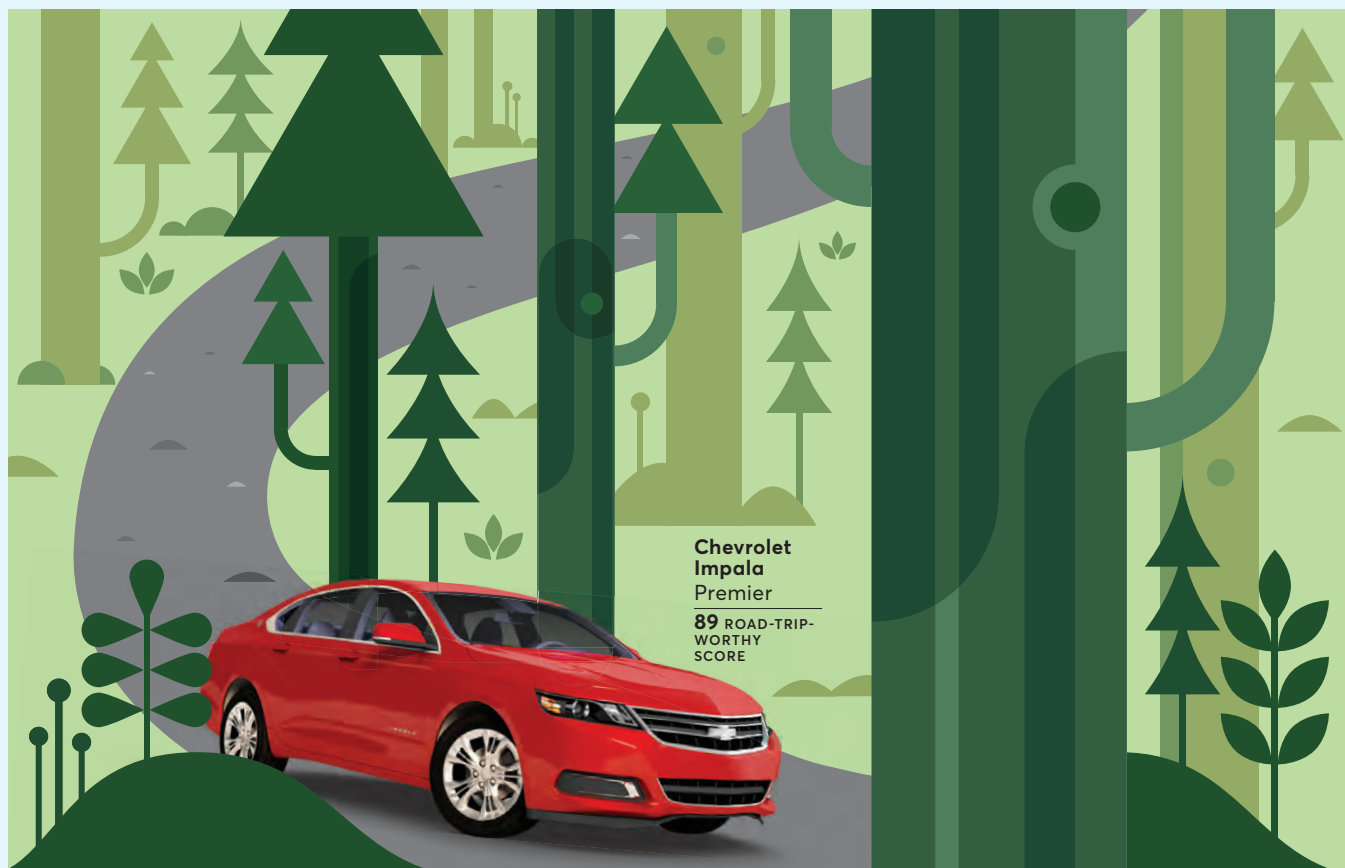
TOP PICK FOR ALL ELSE

Citi Double Cash

Unlimited 2 percent cash back on all purchases

^① We evaluated the card programs over a three-year period because some cards offer a generous sign-on bonus but more limited rewards in subsequent years. We also assumed that cardholders don't carry balances, because finance charges can swallow up any rewards.
^② Different cards treat travel differently. The Citi ThankYou Premier counts airfare, hotels, cruises, public transportation, taxis, tolls, parking, rental cars, and travel agencies as travel expenses.

Best Road-Trip Vehicles



WHAT'S THE PERFECT set of wheels for your much-anticipated journey? Don't leave it to chance. Use our first-ever Road-Trip-Worthy Scores of 50 vehicles across six categories. We mined data from our proprietary vehicle testing (for performance, comfort, fuel efficiency, and more), plus reliability and satisfaction surveys, and safety features to craft this new score. (Third-row seating comfort is part of our Overall Score for SUVs and minivans. Maximum seating capacity is not part of this score, but that information is provided here for guidance.) All vehicles that made our list are culled

from CR's recommended models, which means they meet our high standards for safety, reliability, and performance.

We recommend that you take into account good ride quality, the quietness of the cabin, and front- and rear-seat comfort. You and your passengers will be in the vehicle for a good amount of time, and you don't want the journey to feel like punishment. You'll want a vehicle that gets decent fuel economy and has good range to limit your refueling stops.

And of course, any vehicle that doesn't have the cargo space you need isn't the right choice for you. Happy trails!

See our 50
**ROAD-TRIP-
WORTHY**
picks on the
next page.

Ratings ➤ **Road-Trip Warriors** Using our exclusive data, we assembled this list of vehicles that perform well in key categories for long trips and assigned them a Road-Trip-Worthy Score. Price and seating capacity aren't part of the score but are provided for guidance.

Make & Model	Price as Tested		Road-Trip-Worthy Score	Road-Test Results							
		Maximum seating capacity		Highway mpg	Highway range	Ride comfort	Noise	Front-seat comfort	Rear-seat comfort	Trunk/cargo space	Cargo volume, cu. ft.
SUVs											
Toyota Highlander Hybrid Limited	\$50,875	8	81	32	↓	↑	↑	↑	↑	↓	40.5
Honda Pilot EX-L	\$39,585	8	80	28	↓	↑	↑	↑	↑	↑	48.0
Toyota Highlander XLE (V6)	\$41,169	8	80	31	↓	↑	↑	↑	↑	↓	40.5
Ford Edge SEL (2.0T)	\$39,755	5	80	31	↓	↑	↑	↑	↑	↓	39.0
Hyundai Santa Fe SE (V6)	\$36,290	7	77	29	↓	↑	↑	↑	↑	↓	40.5
Toyota Sequoia Limited	\$54,005	8	77	21	↓	↓	↑	↑	↑	↑	61.0
Kia Sorento EX (V6)	\$37,915	7	76	30	↓	↑	↑	↑	↑	↓	37.5
Honda CR-V EX (1.5T)	\$28,935	5	74	37	↓	↓	↑	↑	↑	↓	36.0
Subaru Crosstrek Premium	\$25,905	5	73	39	↑	↑	↑	↓	↑	↓	27.5
Nissan Murano SL	\$42,065	5	73	29	↓	↑	↑	↑	↑	↓	33.5
Subaru Forester 2.5i Premium	\$27,145	5	73	35	↓	↓	↓	↑	↑	↓	35.5
Toyota RAV4 XLE	\$29,014	5	71	32	↓	↑	↑	↓	↑	↓	37.0
Hyundai Santa Fe Sport (4-cyl.)	\$28,370	5	70	30	↓	↑	↓	↑	↑	↓	35.5
Mazda CX-5 Touring	\$29,530	5	70	33	↓	↑	↑	↑	↑	↓	30.5
LUXURY SUVs											
Audi Q7 Premium Plus	\$68,695	7	87	28	↑	↑	↑	↑	↑	↓	35.5
Lexus RX 350L	\$56,518	7	82	30	↓	↑	↑	↑	↑	↓	31.0
BMW X5 xDrive35i	\$70,050	7	81	28	↑	↑	↑	↑	↑	↓	34.5
BMW X3 xDrive30i	\$53,745	5	80	36	↑	↑	↑	↑	↑	↓	32.0
Lexus RX 450h	\$57,565	5	79	33	↓	↑	↑	↑	↑	↓	30.0
Audi Q5 Premium Plus	\$51,570	5	77	34	↑	↑	↑	↑	↑	↓	27.0
Porsche Macan S	\$63,290	5	73	26	↓	↓	↑	↑	↑	↓	29.0
Lexus NX 300	\$43,284	5	70	33	↓	↓	↑	↑	↑	↓	28.5
MINIVANS											
Toyota Sienna XLE	\$38,424	8	83	30	↑	↑	↑	↑	↑	↑	70.5
Honda Odyssey EX-L	\$40,300	8	83	33	↑	↑	↑	↑	↑	↑	71.5
Chrysler Pacifica Touring L	\$38,245	8	81	33	↑	↑	↑	↑	↑	↑	66.0

Make & Model	Price as Tested		Road-Trip-Worthy Score	Road-Test Results							
				Highway mpg	Highway range	Ride comfort	Noise	Front-seat comfort	Rear-seat comfort	Trunk/cargo space	Luggage space, suitcases-duffels

CARS

Chevrolet Impala Premier (V6)	\$39,110	5	89	34	⬆️	⬆️	⬆️	⬆️	⬆️	⬆️	4+2
Kia Cadenza Premium	\$36,945	5	86	36	⬆️	⬆️	⬆️	⬆️	⬆️	⬆️	4+0
Kia Optima EX (2.4L)	\$25,860	5	85	40	⬆️	⬆️	⬆️	⬆️	⬆️	⬆️	3+2
Hyundai Sonata SEL (2.4L)	\$25,845	5	85	42	⬆️	⬆️	⬆️	⬆️	⬆️	⬆️	3+2
Subaru Legacy 2.5i Premium	\$24,837	5	85	39	⬆️	⬆️	⬆️	⬆️	⬆️	⬆️	3+1
Toyota Camry LE (4-cyl.)	\$26,364	5	85	49	⬆️	⬆️	⬆️	⬆️	⬆️	⬆️	3+1
Toyota Camry Hybrid LE	\$28,949	5	84	53	⬆️	⬆️	⬆️	⬆️	⬆️	⬆️	3+1
Honda Accord EX (1.5T)	\$28,345	5	83	42	⬆️	⬆️	⬆️	⬆️	⬆️	⬆️	4+1
Volkswagen Passat SE (4-cyl.)	\$27,485	5	83	39	⬆️	⬆️	⬆️	⬆️	⬆️	⬆️	3+1
Mazda6 Sport	\$23,590	5	78	44	⬆️	⬆️	⬆️	⬆️	⬆️	⬆️	3+2
Nissan Altima 2.5 SV	\$26,890	5	78	42	⬆️	⬆️	⬆️	⬆️	⬆️	⬆️	3+2
Toyota Prius Prime Premium	\$29,889	4	76	62	⬆️	⬆️	⬆️	⬆️	⬆️	⬆️	2+0
Ford Fusion Titanium (2.0T)	\$33,180	5	76	33	⬆️	⬆️	⬆️	⬆️	⬆️	⬆️	3+1
Kia Forte LX	\$19,570	5	75	49	⬆️	⬆️	⬆️	⬆️	⬆️	⬆️	3+1

LUXURY CARS

BMW 530i xDrive	\$65,210	5	90	40	⬆️	⬆️	⬆️	⬆️	⬆️	⬆️	3+1
Genesis G90 Premium (3.3T, AWD)	\$71,550	5	88	28	⬆️	⬆️	⬆️	⬆️	⬆️	⬆️	3+0
Audi A6 3.0 Premium Plus Quattro	\$56,295	5	85	34	⬆️	⬆️	⬆️	⬆️	⬆️	⬆️	3+1
Genesis G80 3.8 (AWD)	\$52,450	5	84	30	⬆️	⬆️	⬆️	⬆️	⬆️	⬆️	3+1
Lexus ES 300h	\$44,017	5	83	44	⬆️	⬆️	⬆️	⬆️	⬆️	⬆️	3+1
Lexus ES 350	\$43,702	5	83	35	⬆️	⬆️	⬆️	⬆️	⬆️	⬆️	3+2
Mercedes-Benz E300 (4Matic)	\$69,585	5	81	36	⬆️	⬆️	⬆️	⬆️	⬆️	⬆️	2+2
Lexus GS 350	\$58,858	5	81	32	⬆️	⬆️	⬆️	⬆️	⬆️	⬆️	3+1
Lincoln MKZ Reserve (2.0T)	\$41,990	5	81	34	⬆️	⬆️	⬆️	⬆️	⬆️	⬆️	3+2

PICKUP TRUCKS

Ford F-150 XLT (2.7T)	\$52,535	6	86	26	⬆️	⬆️	⬆️	⬆️	⬆️	⬆️	NA
Honda Ridgeline RTL	\$36,480	5	75	29	⬆️	⬆️	⬆️	⬆️	⬆️	⬆️	NA

HOW WE TEST: All models featured are recommended by Consumer Reports, meaning they received a high enough Overall Score, which factors road-test results, and predicted reliability and owner-satisfaction scores taken from surveys. A vehicle's assessment of

safety, which includes crash-test results and the availability of front-crash prevention features, is also factored in.

The **Road-Trip-Worthy Score** is a composite of the Overall Score plus other pertinent factors, including **Highway mpg**, **Highway range**, **Ride comfort**, **Noise**, **Front-seat comfort**, **Rear-seat comfort**, **Trunk/cargo space**, and **Cargo volume** or **Luggage space**. The results

for these new cars and pricing are based on the specific models CR has tested, each representing a typically equipped version. Readers with a Digital or All-Access membership can go to [CR.org/cars](https://www.consumerreports.org/cars) for complete ratings.



Reapply every 2 hours or after swimming or sweating.



"Water-resistant" sunscreens must maintain their SPF level for either 40 or 80 minutes of swimming or sweating.



Use a sunscreen with an SPF of 40 or higher and be cautious of mineral formulations, which we found to be less effective.

Shop Smarter for Sunscreen

If you're still confused about whether SPF is meaningful, "broad-spectrum" matters, or "natural" formulations work at all, CR's expertise will lead you to the best choices. Plus, heed our advice about how much sunscreen you need to apply, and how often—even if you're nowhere near a beach!

by Julia Calderone

WHETHER YOU HAVE fair or dark skin, you hit the beach every day or only on vacation, or you're 16 or 60, you need to use sunscreen if you'll be in the sun for longer than a few minutes. But with bottles and tubes covered with claims, "it's really hard to make sense of what all the terminology means," says Roopal V. Kundu, M.D., an associate professor of dermatology at the Northwestern University Feinberg School of Medicine who researches how people buy and use sunscreen.

Here, then, is the help you need: seven common terms and what they actually mean—and don't. The federal government requires sunscreen claims to be "truthful and not misleading." But only three of the main claims consumers see—"SPF," "broad-spectrum," and "water-resistant"—are strictly regulated by the government and therefore have agreed-upon definitions. So explore our ratings of 73 lotions, sprays, and sticks (based on our scientific testing) to make sure you're less likely to get burned at the checkout counter—or on the beach.

SPF

Government-Regulated? YES

SPF, or sun protection factor, is a measure of how well a sunscreen guards against ultraviolet B (UVB) rays, the chief cause of sunburn and a contributor to skin cancer. You might think that an SPF 30, for example, is twice as protective as an SPF 15. But the SPF 15 shields you from 93 percent of UVB rays and the 30 blocks 97 percent.

There's still good reason to choose the sunscreen with a higher SPF. Recent Consumer Reports testing (which differs slightly from the test



No matter what your skin type, the sun can cause damage.



Wearing a swim shirt in the water helps protect your skin—and potentially the environment, because less sunscreen is applied.

the Food and Drug Administration requires sunscreen manufacturers to do) has found that many sunscreens don't meet the SPF level printed on the package. So if you can't find one of the higher-scoring sunscreens in our ratings, we've found that your best chance of getting a product with at least an SPF 30—the minimum our experts recommend—is by choosing a sunscreen (a chemical one, not mineral) labeled SPF 40 or higher.

Broad-Spectrum

Government-Regulated? YES

Products with this label protect against ultraviolet A (UVA) and UVB rays. UVA rays penetrate more deeply into the skin's layers than UVB and cause damage that can lead to skin aging and, as with UVB, skin cancer. But while it's easy to tell how well a broad-spectrum sunscreen protects against UVB rays (just check its SPF), you can't tell how well it protects against UVA rays. The FDA-required broad-spectrum test is pass/fail. So a sunscreen providing stellar UVA coverage can be labeled broad-spectrum the same way one just barely skating by can, and there's no way to know the difference. That's why we designed our test to show which sunscreens provide additional UVA protection beyond the minimum required.

Very Water-Resistant

Government-Regulated: YES

The FDA requires "water-resistant" and "very water-resistant" sunscreens to maintain their SPF levels for 40 or 80 minutes of sweating or swimming, respectively. You won't see a product sporting a "waterproof" claim; the FDA doesn't allow it because there's no such thing. The minute you jump into a pool or begin to sweat, says Kundu, sunscreen starts to run off your skin. That's why even water-resistant products need to be reapplied as soon as you come out of the water.



Does Sunscreen Expire?

It's time to head to the pool, but the only sunscreen you can find is the half-used tube at the bottom of last summer's beach tote. Will it still protect you? Maybe.

Sunscreen is formulated to remain effective for at least three years, according to Food and Drug Administration regulations—but not forever. Check the expiration date on the container and toss it if it has passed. If there's no date on the tube and you can't remember when you bought it, play it safe and buy a new one. Write the purchase date on the new container with a permanent marker.

Remember, too, that even with a new bottle of sunscreen, heat can accelerate its breakdown, so avoid storing it in places where the temperature can spike, such as in your car. The FDA also recommends that you keep sunscreen out of direct sunlight by swaddling it in a towel or stashing it in the shade or even in a cooler when you carry it with you on outings.

Sport

Government-Regulated: NO

This means that the product probably works like a water-resistant or very water-resistant sunscreen, says Kundu. But check the label to make sure one of those terms is on the package, too. If not, you can't be sure you'll be protected when you sweat or swim.

Dermatologist Recommended

Government-Regulated: NO

Just because a sunscreen is stamped with this claim (or "doctor tested") doesn't make the product superior to one without it, Kundu notes.

"'Recommended' may mean that at some point a clinician was consulted," she says. As for the "tested" claim, you have no way of knowing what the product was tested for or how extensive the testing was. Because manufacturers aren't required to adhere to strict definitions for these terms, it's impossible to know whether any of the claims are meaningful.

Natural or Mineral

Government-Regulated: NO

There are no standards for these terms, but they're commonly used for sunscreens that contain the minerals titanium oxide, zinc oxide, or both as active ingredients. These so-called physical sunscreens protect against UV rays by deflecting them, while chemical sunscreens, such as avobenzone, absorb UV light.

But just because a sunscreen has mineral ingredients doesn't mean it's better for you than a chemical one. Titanium dioxide and zinc oxide, for example, aren't just plucked from the earth and plopped into your sunscreen; they're processed and refined, too.

Dermatologists often recommend titanium and zinc formulas for children and people with sensitive skin. However, in the past six years of sunscreen testing, we haven't found a mineral product that offers both

Sunscreens You'll Want to Wear

Sunscreen can be sticky and greasy or leave you looking pasty or smelling like you crashed into a vat of Tropicana-themed cocktail mix. But there are also products that feel great and smell good, too.



Apply It the Right Way

Put on sunscreen 15 minutes before you go out so that it's absorbed by your skin before the UV rays hit you.

Use about an ounce—an amount that should fill your entire palm—to cover your swimsuit-clad body from head to toe.

Be sure to also cover your ears, upper back, the back of your hands, and the top of your feet. These are spots people commonly miss. And swipe on a lip balm with SPF.

Reapply every 2 hours, or after swimming or sweating.



Fragrance-Free

✓ **LA ROCHE-POSAY ANTHELIOS 60 MELT-IN SUNSCREEN MILK**
\$7.20/oz.

100 OVERALL SCORE

Our top-rated lotion is fragrance-free, although it does have a very slight plasticky smell. It's lightweight and absorbs quickly.

Nongreasy

✓ **CVS HEALTH BEACH GUARD CLEAR SPRAY SPF 70**
\$1.54/oz.

90 OVERALL SCORE

Leaves just a trace of film on your skin and smells floral and fruity. The nozzle sprays in a wide pattern, allowing for easy and quick coverage.

✓ **AVEENO PROTECT + HYDRATE LOTION SPF 30**
\$2.67/oz.

82 OVERALL SCORE

Sheer, with a light, fruity aroma.

Best Beachy or Tropical Scent

✓ **TRADER JOE'S SPRAY SPF 50+**
\$1.00/oz.

100 OVERALL SCORE

Has a very slight classic beachy aroma, a combination of floral and citrus. Leaves an oily sheen on skin.

✓ **BANANA BOAT SUNCOMFORT CLEAR ULTRAMIST SPRAY SPF 50+**
\$1.33/oz.

96 OVERALL SCORE

Slight piña colada scent and a barely-there feel.

Won't Irritate Eyes

✓ **UP & UP (TARGET) KIDS SUNSCREEN STICK SPF 55**
\$6.67/oz.

84 OVERALL SCORE

Sunscreen sticks are less likely to run because of their waxy consistency. This one has a faint plasticky scent and a slightly tacky, waxy texture.

top-notch UVA and UVB protection and meets its labeled SPF, says Susan Booth, the project leader for our sunscreen testing. If you still want a mineral sunscreen, we suggest California Kids #Supersensitive Lotion SPF 30+ or Badger Active Unscented Cream SPF 30. Both received an Overall Score of 55 (Good) in our ratings, with California Kids providing better UVB protection than Badger and Badger providing better UVA protection than California Kids.

Reef Safe

Government-Regulated? NO

Some of the ingredients in sunscreen can damage delicate coral reef systems, which in turn can affect the health of the oceans. Up to 6,000 tons of sunscreen are estimated to wash into coral reefs around the globe each year.

But you can't be sure you're making an environmentally friendly choice by using a sunscreen labeled "reef safe." Sunscreen manufacturers aren't required to test and demonstrate that

such products won't harm aquatic life, says Craig A. Downs, Ph.D., executive director of the Haereticus Environmental Laboratory, a nonprofit scientific research organization.

And research supports the evidence that oxybenzone, a commonly used chemical sunscreen ingredient, contributes to coral bleaching, a condition that leaves coral vulnerable to infection and prevents it from getting the nutrients it needs to survive. As a result, Hawaii has banned the sale of sunscreens with oxybenzone beginning in 2021, and some retailers, such as REI, are implementing policies against carrying products that contain it.

But oxybenzone isn't the only damaging ingredient. "There are 11 chemicals that we know from the scientific literature that pose an environmental threat," says Downs.

If you plan to go into the water at the beach, a better environmental bet may be to cover most of your body with UPF (ultraviolet protection factor)

clothing—or even just a plain old T-shirt, which previous CR testing has found to offer excellent protection. You'll still have to apply sunscreen to exposed skin, but you'll need far less—up to half the amount, Downs says—than you would if you were in a bathing suit. "From an environmental perspective," he says, that's a "massive victory."

Mineral sunscreens with zinc oxide or titanium dioxide appear to be safer for coral reefs than chemical ones, according to the National Park Service. But mineral sunscreens generally aren't highly rated by CR for screening out harmful UV light. The two mineral sunscreens listed in the previous section fared well in our tests.

Another option is to use an oxybenzone-free chemical sunscreen. The two highest-scoring of these sunscreens in each category in our test were Well at Walgreens Moisturizing Lotion SPF 50 (No. 12 in lotions) and Hawaiian Tropic Island Sport Ultra Light Spray SPF 30 (No. 10 in sprays).

Better Protection for a Lower Price

Super sun protection doesn't have to come with a hefty price tag. We paired products with similar claims to show that you can actually get a higher-scoring product for less money.

CHEAPER

TRADER JOE'S
SPRAY SPF 50+

100 OVERALL
SCORE



\$1.00
per oz.
\$6.00/
6 oz.

HAWAIIAN TROPIC
SILK HYDRATION
WEIGHTLESS
SPF 30

69 OVERALL
SCORE



\$2.06
per oz.
\$10.50/
5.1 oz.

EQUATE
(WALMART)
SPORT LOTION
SPF 50*

99 OVERALL
SCORE



\$0.63
per oz.
\$5.00/
8 oz.

PRICIER

BANANA BOAT
SUNCOMFORT
CLEAR
ULTRAMIST
SPRAY SPF 50+

96 OVERALL
SCORE



\$1.33
per oz.
\$8.00/
6 oz.

KIEHL'S
ACTIVATED SUN
PROTECTOR
WATER-LIGHT
LOTION SPF 30

65 OVERALL
SCORE



\$5.80
per oz.
\$29.00/
5 oz.

COPPERTONE
SPORT SPF 50
LOTION

68 OVERALL
SCORE



\$1.14
per oz.
\$8.00/
7 oz.

CR'S TAKE

Our two highest-ranked sprays are also among the lowest cost.

These two are well-matched, but the Hawaiian Tropic is about one-third the price per ounce.

Equate ranks second overall in our lotion ratings and is one of the most affordable.

Ratings ➤ **Applying Our Findings** We tested sunscreens labeled SPF 30 or higher and, unless otherwise noted, had claims of water resistance for 80 minutes. Recommended products scored 81 or higher overall and received Excellent or Very Good scores for UVA and UVB protection and variation from SPF.

		Brand & Product	Overall Score	Price	Cost Per Ounce	Package Size (oz.)	Test Results		
Recommended	Rank						UVA protection	UVB (SPF) protection	Variation from SPF
LOTIONS									
✓	1	La Roche-Posay Anthelios 60 Melt-In Sunscreen Milk ^①	100	\$36.00	\$7.20	5	⬆	⬆	⬆
💰	2	Equate (Walmart) Sport Lotion SPF 50 ^{①②}	99	\$5.00	\$0.63	8	⬆	⬆	⬆
✓	3	BullFrog Land Sport Quik Gel SPF 50 ^①	95	\$8.50	\$1.70	5	⬆	⬆	⬆
✓	4	Coppertone WaterBabies SPF 50 Lotion ^{①②}	95	\$9.00	\$1.13	8	⬆	⬆	⬆
✓	5	Coppertone Ultra Guard SPF 70 Lotion ^①	94	\$10.00	\$1.25	8	⬆	⬆	⬆
💰	6	Equate (Walmart) Ultra Protection Lotion SPF 50 ^{①②}	92	\$7.50	\$0.47	16	⬆	⬆	⬆
✓	7	Aveeno Protect + Hydrate Lotion SPF 30 ^①	82	\$8.00	\$2.67	3	⬆	⬆	⬆
	8	Coppertone Defend & Care Ultra Hydrate SPF 50 Lotion ^①	79	\$8.00	\$1.60	5	⬆	⬆	⬆
	9	Neutrogena CoolDry Sport Lotion SPF 30 ^①	78	\$8.00	\$1.60	5	⬆	⬆	⬆
	10	CVS Health Ultra Protection Sun Lotion SPF 70 ^①	76	\$9.00	\$1.13	8	⬆	⬆	⬆
	11	Neutrogena Ultra Sheer Dry-Touch Lotion SPF 45 ^①	76	\$11.00	\$3.67	3	⬆	⬆	⬆
	12	Well at Walgreens Moisturizing Lotion SPF 50	74	\$9.00	\$1.13	8	⬆	⬆	⬆
	13	Hawaiian Tropic Sheer Touch Ultra Radiance Lotion SPF 50	70	\$10.00	\$1.25	8	⬆	⬆	⬆
	14	Hawaiian Tropic Silk Hydration Weightless SPF 30	69	\$10.50	\$2.06	5.1	⬆	⬆	⬆
	15	Coppertone Sport SPF 50 Lotion	68	\$8.00	\$1.14	7	⬆	⬆	⬆
	16	Banana Boat SunComfort Lotion SPF 30	67	\$7.50	\$1.25	6	⬆	⬆	⬆
	17	Hawaiian Tropic Sheer Touch Ultra Radiance Lotion SPF 30	66	\$10.00	\$1.25	8	⬆	⬆	⬆
	18	No-Ad Baby Lotion SPF 50 ^①	65	\$9.00	\$0.69	13	⬆	⬆	⬆
	19	Kiehl's Activated Sun Protector Water-Light Lotion SPF 30 ^①	65	\$29.00	\$5.80	5	⬆	⬆	⬆
	20	Shiseido Ultimate Sun Protection WetForce Lotion SPF 50+	61	\$40.00	\$12.12	3.3	⬆	⬆	⬆
	21	California Kids #Supersensitive Lotion SPF 30+ ^③	55	\$20.00	\$6.90	2.9	⬆	⬆	⬆
	22	Badger Active Unscented Cream SPF 30 ^{③④}	55	\$17.00	\$5.86	2.9	⬆	⬆	⬆
	23	No-Ad Sport Lotion 50 ^①	51	\$9.00	\$0.56	16	⬆	⬆	⬆
	24	Blue Lizard Australian Sunscreen Regular Lotion SPF 30+ ^①	50	\$18.00	\$3.60	5	⬆	⬆	⬆
	25	Goddess Garden Everyday Natural Lotion SPF 30 ^{③④}	50	\$18.00	\$3.00	6	⬆	⬆	⬆
	26	Trader Joe's Refresh Face & Body Lotion SPF 30 ^①	43	\$6.00	\$1.00	6	⬆	⬆	⬆
	27	Thinkbaby SPF 50+ Lotion ^③	41	\$13.00	\$4.33	3	⬆	⬆	⬆
	28	Coppertone Defend & Care Sensitive Skin SPF 50 Lotion	41	\$11.00	\$1.83	6	⬆	⬆	⬆

① Contains oxybenzone. ② Manufacturer is reformulating the product later this year, but the one tested was still available at press time. ③ Contains only the mineral active ingredients titanium dioxide, zinc oxide, or both. ④ Water resistance is 40 minutes.

		Brand & Product	Overall Score	Price	Cost Per Ounce	Package Size (oz.)	Test Results		
Recommended	Rank						UVA protection	UVB (SPF) protection	Variation from SPF
LOTIONS <i>Continued</i>									
	29	Badger Sport Cream SPF 35 ^③	40	\$17.00	\$5.86	2.9	⬆️	⬇️	⬇️
	30	Coppertone Defend & Care Ultra Hydrate SPF 30 Whipped	40	\$14.00	\$2.80	5	⬆️	⬇️	⬇️
	31	Vanicream Lotion SPF 50+ ^③	36	\$19.00	\$4.75	4	⬆️	⬇️	⬇️
	32	The Honest Company Mineral Lotion SPF 50+ ^③	35	\$14.00	\$4.67	3	⬆️	⬇️	⬇️
	33	Sunology Natural Body Lotion SPF 50 ^③	34	\$15.00	\$7.50	2	⬇️	⬇️	⬇️
	34	Tom's of Maine Baby Lotion SPF 30 ^③	33	\$13.50	\$4.50	3	⬆️	⬇️	⬇️
	35	CeraVe Face Lotion SPF 30 ^{③④}	32	\$14.00	\$5.60	2.5	⬇️	⬇️	⬇️
	36	Coppertone WaterBabies Pure & Simple Mineral Based SPF 50 Lotion	32	\$9.00	\$1.50	6	⬇️	⬆️	⬇️
	37	Thinkspport Safe Lotion SPF 50+ ^③	32	\$24.00	\$4.00	6	⬆️	⬇️	⬇️
	38	True Natural Baby & Family Lotion SPF 30 ^{③④}	31	\$19.00	\$5.59	3.4	⬆️	⬇️	⬇️
	39	CVS Health Baby Sun Lotion SPF 50	29	\$9.00	\$1.13	8	⬇️	⬇️	⬇️
	40	MDSolarSciences Mineral Moisture Defense Lotion SPF 50 ^③	25	\$39.00	\$9.75	4	⬆️	⬇️	⬇️
	41	CeraVe Body Lotion SPF 50 ^{③④}	24	\$16.00	\$5.33	3	⬇️	⬇️	⬇️
	42	Babyanics Mineral-Based Lotion SPF 50+	22	\$10.00	\$1.25	8	⬇️	⬇️	⬇️
SPRAYS									
💰	1	Trader Joe's Spray SPF 50+ ^①	100	\$6.00	\$1.00	6	⬆️	⬆️	⬆️
✓	2	Banana Boat SunComfort Clear UltraMist Spray SPF 50+ ^①	96	\$8.00	\$1.33	6	⬆️	⬆️	⬆️
✓	3	CVS Health Beach Guard Clear Spray SPF 70 ^①	90	\$10.00	\$1.54	6.5	⬆️	⬆️	⬆️
💰	4	Equate (Walmart) Sport Continuous Spray SPF 30 ^①	83	\$5.00	\$0.83	6	⬆️	⬆️	⬆️
✓	5	Neutrogena Beach Defense Water + Sun Protection Spray SPF 70 ^①	82	\$12.50	\$1.92	6.5	⬆️	⬆️	⬆️
	6	Panama Jack Continuous Spray SPF 30 ^①	79	\$12.00	\$2.00	6	⬆️	⬆️	⬆️
	7	Caribbean Breeze Continuous Tropical Mist SPF 70 ^①	78	\$16.50	\$2.75	6	⬆️	⬆️	⬆️
	8	No-Ad Sport Continuous Spray SPF 30 ^①	76	\$9.00	\$0.90	10	⬆️	⬆️	⬆️
	9	Up & Up (Target) Sport Spray SPF 30 ^①	76	\$8.00	\$0.67	12	⬆️	⬆️	⬆️
	10	Hawaiian Tropic Island Sport Ultra Light Spray SPF 30	75	\$8.00	\$1.33	6	⬆️	⬆️	⬆️
	11	BullFrog Water Sport InstaCool Spray SPF 50 ^①	74	\$8.50	\$1.42	6	⬆️	⬆️	⬆️
	12	Australian Gold Continuous Clear Spray SPF 30 ^①	72	\$8.00	\$1.33	6	⬆️	⬆️	⬆️
	13	Neutrogena Wet Skin Spray SPF 30 ^①	72	\$9.00	\$1.80	5	⬆️	⬆️	⬆️

① Contains oxybenzone. ② Manufacturer is reformulating the product later this year, but the one tested was still available at press time.
 ③ Contains only the mineral active ingredients titanium dioxide, zinc oxide, or both. ④ Water resistance is 40 minutes.

		Brand & Product	Overall Score	Price	Cost Per Ounce	Package Size (oz.)	Test Results		
Recommended	Rank						UVA protection	UVB (SPF) protection	Variation from SPF

SPRAYS *Continued*

	14	Alba Botanica Hawaiian Coconut Clear Spray SPF 50	72	\$12.00	\$2.00	6	⬆	⬆	⬇
	15	Daylogic (Rite Aid) Sport Continuous Spray SPF 30 ⓘ	70	\$8.00	\$1.33	6	⬆	⬇	⬆
	16	Well at Walgreens Sport Spray SPF 30 ⓘ	69	\$13.00	\$1.18	11	⬆	⬇	⬆
	17	Banana Boat Sport Performance CoolZone Spray SPF 30 ⓘ	65	\$9.00	\$1.50	6	⬆	⬇	⬆
	18	Coppertone Sport Wet Protect Spray SPF 30 ⓘ	64	\$10.00	\$1.67	6	⬆	⬇	⬇
	19	Banana Boat Sport Performance Clear UltraMist PowerStay Technology Spray SPF 50+	63	\$8.00	\$1.33	6	⬆	⬇	⬇
	20	Banana Boat Sport Performance Clear UltraMist PowerStay Technology Spray SPF 100 ⓘ	63	\$8.00	\$1.33	6	⬆	⬆	⬇
	21	Ocean Potion Sport 50 Continuous Spray ⓘ	61	\$9.00	\$1.50	6	⬆	⬇	⬇
	22	Coppertone Sport Spray SPF 30 ⓘ	49	\$9.50	\$1.58	6	⬆	⬇	⬇
	23	Coola Sport Unscented Spray SPF 50	45	\$36.00	\$4.50	8	⬇	⬇	⬇
	24	Supergoop Antioxidant-Infused Mist SPF 50	43	\$19.00	\$3.17	6	⬇	⬇	⬇
	25	Kiss My Face SPF 50 Spray Cool Sport	36	\$16.00	\$2.67	6	⬇	⬇	⬇
	26	EltaMD UV Aero Continuous Spray SPF 45	27	\$31.00	\$5.17	6	⬇	⬇	⬇

STICKS AND LIP BALMS

✓	1	Up & Up (Target) Kids Sunscreen Stick SPF 55 ⓘ	84	\$8.00	\$6.67	1.2	⬆	⬆	⬆
	2	Neutrogena Beach Defense Water + Sun Protection Stick SPF 50+ ⓘ	76	\$10.00	\$6.67	1.5	⬆	⬆	⬆
	3	Banana Boat Ultra Defense Sunscreen Stick SPF 50 ⓘ	68	\$5.00	\$9.09	0.55	⬆	⬆	⬆
	4	Aquaphor Lip Protectant + Sunscreen SPF 30 ⓘ	58	\$4.00	\$11.43	0.35	⬆	⬇	⬆
	5	Up & Up (Target) Sport Lip Balm SPF 50 ⓘ	53	\$3.00	\$10.00	0.3	⬆	⬇	⬇

HOW WE TEST: To check for UVB protection, a standard amount of each sunscreen is applied to small areas of our panelists' backs. Then they soak in a tub of water. Afterward, each area is exposed to six intensities of UVB light from a sun simulator for a set time. About a day later, a trained technician examines the areas for redness. The resulting UVB protection ratings reflect each product's actual effectiveness after water immersion and are based on an average of our results for each sunscreen. To test for UVA protection, we smear sunscreen on plastic plates, pass UV light through, and measure the amount of UVA and UVB rays that are absorbed. That information is then used to calculate our UVA score.

SCORES IN CONTEXT

UVA Protection

All of the products performed well enough in our tests that they would have passed a critical wavelength test, which is required for a sunscreen to be labeled "broad spectrum." That is a pass/fail test. We use a UVA test that allows us to determine the degree of UVA protection a sunscreen provides, ranging from Excellent to Poor.

UVB (SPF) Protection

This rating is based on the SPF range found in our tests.

- ⬆ Tested UVB/SPF ≥40
- ⬆ Tested UVB/SPF 30-39
- ⬇ Tested UVB/SPF 20-29
- ⬇ Tested UVB/SPF 10-19
- ⬇ Tested UVB/SPF 0-9

Variation From SPF

This rating is a measure of how closely a sunscreen's tested SPF matched the SPF on the label.

- ⬆ Tested 85% or above labeled SPF.
- ⬆ Tested 70%-84% labeled SPF.
- ⬇ Tested 60%-69% labeled SPF.
- ⬇ Tested 50%-59% labeled SPF.
- ⬇ Tested 49% or below labeled SPF.



Heart Surgery Safety Guide



Every year hundreds of thousands of Americans undergo heart surgery. Though these operations are becoming safer, when something goes wrong, it can be catastrophic. Follow these strategies and use our hospital ratings to make the best, most informed choices for you and your loved ones. **by Lauren F. Friedman**

Lifesaving Surgery

Doctors replace a faulty heart valve at the University of Alabama at Birmingham Health System. It's one of only 18 hospitals in the U.S. that earned top ratings in both valve replacement and bypass surgery.



The actor Bill Paxton entered Cedars-Sinai Medical Center in Los Angeles last February for surgery to fix a faulty heart valve and a bulge in a major artery. But after 11 days, Paxton, then 61, died. Now, in a lawsuit against the surgeon and the hospital, his family alleges that his death stemmed not from the underlying heart problems but from complications linked to the procedures meant to correct them.

The lawsuit also claims that the surgery wasn't necessary and that the surgeon used a "maverick" technique, failed to disclose potential risks, and left the operating room too soon, leading to delays in treating those complications. (A spokesperson from Cedars-Sinai said it could not comment on Paxton's case due to patient privacy.)

While only a small percentage of heart surgery patients die during the operation, all put their lives in the hands of the surgeon and the hospital. Indeed, as Paxton's lawyers write in the lawsuit, there's a power imbalance between doctors, who are "learned, skilled, and experienced in medical procedures and conditions," and patients and their families, who know "little or nothing" about the operation.

With our guide for heart surgery patients, you can begin to right that imbalance: to learn when to ask the hard questions, what to anticipate, and what to guard against. And you can use our ratings, which start on page 56, to choose a hospital with a proven record of success.

Knowledge Is Powerful

Open heart surgery is no small matter. Surgeons often saw through the breastbone to open the chest, connect the patient to a heart-lung machine, stop the heart, then repair it. Despite the complexity, doctors performed more than 200,000 such procedures in the U.S. in 2015.

PHOTO, PREVIOUS SPREAD AND OPPOSITE PAGE: COURTESY UAB



5 Common Heart Procedures



1. Coronary artery bypass grafting (CABG). Plaque that grows in the heart's arteries can prevent the organ from getting enough oxygen-rich blood. To fix the problem, a surgeon takes healthy sections of a vein or artery from your leg

or chest wall and uses them to bypass blockages in up to four arteries.

2. Percutaneous coronary intervention (PCI). Sometimes doctors use this less invasive procedure to treat blockages by inserting and inflating

a tiny balloon in an artery, often propping it open with a stent.

3. Aortic valve replacement (AVR). The aortic valve is designed to open as the heart pumps, allowing blood out, and to close between beats, preventing

blood from flowing back in. But some people are born with a faulty valve or develop one over time. Surgeons can repair a bad valve or replace it with a mechanical one or one made from human or animal tissue. When AVR is

For experienced surgeons, the procedures can sometimes seem almost routine. But for patients and their families, the prospect of heart surgery can be scary.

When Sharran Greenberg, an attorney in Chicago, learned that she needed a heart valve replaced, she decided to face that fear head on. She learned as much as she could about the procedure, researching it extensively and peppering her surgeon with questions.

All that helped calm her nerves. “I was much better off knowing what was in store for me than worrying about what could happen,” Greenberg says.

Fight Fear With Facts

Ask to see where you’ll have surgery. Here, the University of Alabama at Birmingham Health System, a top-rated hospital.



Insist On an Open Exchange

When you’re considering heart surgery, nothing about the operation should be a mystery. “The biggest fear patients have is of the unknown,” says Suzanne Fredericks, Ph.D., graduate program director in the school of nursing at Ryerson University in Toronto, who has conducted extensive research on cardiac care.

At her hospital, patients can see where they will have surgery and where they will recover, and connect with former patients, she says.

Doctors should also discuss the potential benefits of the surgery but be honest about the risks, too, so patients can make fully informed decisions.

The Society of Thoracic Surgeons (STS), the main professional group that represents heart surgeons, provided Consumer Reports with the data used in our heart hospital ratings and has a risk calculator at riskcalc.sts.org. Use it with your doctor’s help, and ask him or her to carefully review the results with you.

From her research, Greenberg was prepared to face the post-op pain, which actually proved reassuring. When waking up from surgery, she remembers thinking with relief, “Well, I can’t be dead, because I am in terrible pain.”

More important, she knew that her pain would soon diminish and that in time she would be stronger, with the prospect of many vigorous years ahead.

too risky, surgeons can perform transcatheter aortic valve replacement (TAVR), a less invasive but less proven surgery that is performed through a catheter inserted in the leg or groin and threaded up to the heart.

4. Aneurysm repair. When an artery wall weakens and begins to bulge, surgeons can patch or bypass the weakened part before it bursts.

5. Arrhythmia treatment. A heart that beats too slowly, too quickly,

or irregularly is sometimes controlled with one of two permanently implanted devices. A pacemaker uses electric impulses to regulate the heartbeat. An implantable cardioverter defibrillator (ICD)

shocks the heart when it detects a dangerous rhythm, resyncing it. In rare cases, rhythm disorders must be corrected through an open heart surgery known as a maze procedure, which reroutes the electrical pathways in the heart.

Hospitals That Don’t Share Data

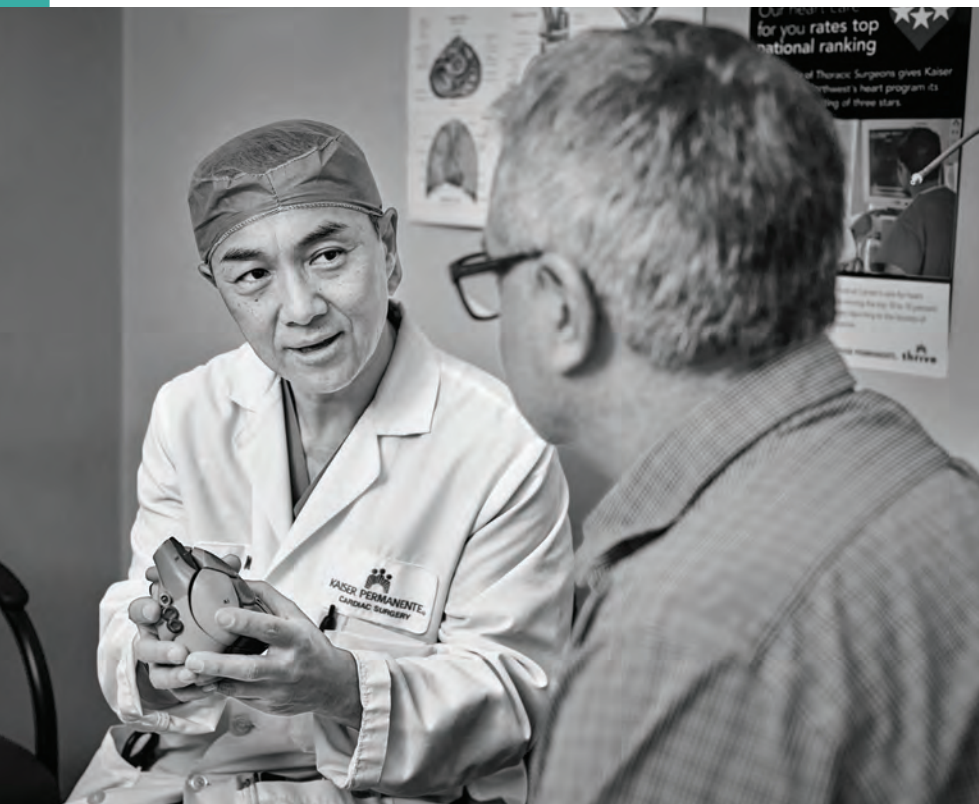


OF THE more than 1,000 U.S. hospitals that do adult heart surgery, about 65 percent share their mortality and complication rates with Consumer Reports or the Society of Thoracic Surgeons (STS), a professional group for heart surgeons. Last year 30 large hospitals didn’t share that data with CR or STS. This year, 12 didn’t:

- **Arkansas Heart Hospital,** Little Rock
- **Baptist Memorial Hospital-** Memphis, Tennessee
- **Forrest General Hospital,** Hattiesburg, Miss.
- **Kansas Heart Hospital,** Wichita
- **Leesburg Regional Medical Center,** Florida
- **Methodist Hospital,** San Antonio
- **Mount Sinai Medical Center,** Miami Beach, Fla.
- **New Hanover Regional Medical Center,** Wilmington, N.C.
- **OhioHealth Riverside Methodist Hospital,** Columbus
- **Providence Sacred Heart Medical Center & Children’s Hospital,** Spokane, Wash.
- **Saint Francis Hospital and Medical Center,** Hartford, Conn.
- **St. Vincent’s Medical Center** Riverside, Jacksonville, Fla.

A few hospitals, including Cedars-Sinai Medical Center in Los Angeles and New York-Presbyterian Hospital in New York City, allow STS to publish their heart data, but not Consumer Reports. You can look up their ratings at publicreporting.sts.org. —Catherine Roberts

3 Questions to Ask Before You Have Heart Surgery



Have an Open Dialog

Patients should feel comfortable asking even tough questions. Yong Shin, M.D., of the Kaiser Sunnyside Medical Center in Clackamas, Ore., consults with a patient.

Do I Really Need This Operation?



WHEN YOUR cardiologist says you need heart surgery, you might hesitate to question his or her judgment. But asking tough questions is important because the stakes are so high, says Rita Redberg, M.D., a cardiologist and editor of JAMA Internal Medicine.

The first thing to know is that there may be more time than you realize to make a decision. Unless you've just had life-threatening symptoms, heart surgery rarely needs to be done immediately. So you have time to think through options and make informed choices, Redberg says.

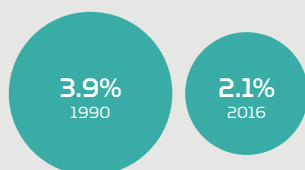
And with heart disease, you often do have choices, says Yong Shin, M.D., who heads the cardiothoracic surgery department at the Kaiser Sunnyside Medical Center in Clackamas, Ore., one of only 18 hospitals across the country that earned top scores in CR's ratings of both bypass and valve replacement surgery.

For example, heart disease symptoms such as chest pain and shortness of breath can sometimes be treated not just through bypass surgery but also with a less invasive procedure known as percutaneous coronary intervention (PCI). That technique involves inflating a tiny balloon in a clogged artery to widen the blockage, often leaving a metal stent behind to prop it open. In other cases, heart disease can be controlled



Safer Heart Surgery

MORTALITY RATES
DURING HEART SURGERY,
1990-2016



The percentage of people who die during or soon after heart bypass surgery—the most common heart surgery in the U.S.—has been cut nearly in half since 1990. This improvement is even more impressive given that patients today are having heart surgery at an older age.

Source: The Society of Thoracic Surgeons Adult Cardiac Surgery Database.

with a combination of blood pressure, cholesterol, and other drugs. Talk with your doctors—your cardiologist as well as your surgeon—about those options.

Also be sure to consider how the surgery will affect your quality of life. For example, possibly extending life by 20 years with bypass surgery might be less important to someone in their 80s than to a younger person. An older person might opt for the easier recovery of angioplasty or even just stick with meds. “The decision is rarely black and white,” Shin says. “Most of the time we’re in the gray zone,” which makes patient preferences especially important.

How Do I Choose a Hospital and Surgeon?



FIRST CHECK the hospital ratings on the following pages, which are based on such factors as survival and complication rates. The data are provided to us by the Society of Thoracic Surgeons (STS), the professional group that represents heart surgeons.

The ratings cover the two

most common types of heart surgery—bypass and valve replacement—and reflect how well an entire surgical team works together, says David Shahian, M.D., vice president of the Center for Quality and Safety at Massachusetts General Hospital, who oversees the STS data.

If a hospital you’re considering has a low rating, ask your surgeon why, how well it did in the past, and what it’s doing now to improve.

And if the hospital doesn’t appear in our ratings, ask what percentage of its patients die within 30 days of the surgery or have serious complications, such as developing a chest infection. If he or she won’t share that information, consider looking for another hospital and another surgeon, Shahian says.

Unless your procedure is urgent, try to visit at least two hospitals and meet with more than one surgeon before you make up your mind.

How to find the best possible surgeon? You can look up our ratings of surgical groups at CR.org/heartsurgeons.

For a specific surgeon, ask directly about his or her mortality and complication rates, says Sara Pereira, M.D., a cardiothoracic surgeon at the University of Alabama at Birmingham Health System, a top-rated heart hospital.

Also ask about experience. While there’s no set number of procedures a surgeon should have done, you don’t want to be among the first.

If a doctor won’t answer those questions, that’s a red flag.

What Happens After the Procedure?



KNOWING WHAT to expect after surgery can make your recovery go more smoothly.

Most patients stay in the ICU for one night, Pereira says. As you’re emerging from anesthesia, you might be given a sedative so that you’re calm when you wake up and while the staff removes your breathing tube, which can be unsettling.

Expect the first few days to be uncomfortable. Even breathing can hurt when you have temporary drainage tubes in your chest and your surgical wound is healing. But within the first 24 hours, hospital staff will encourage you to get up and move around. And after four or five days, most patients are ready to go home.

To make sure everyone is on the same page, it’s important that your surgeon or the hospital’s discharge planner get in touch with your cardiologist and your primary care provider. And that should happen before you leave the hospital, Shahian says.

Those doctors, who will care for you once you get home, should know how the operation

went and be aware of any special steps you may need to take during your recovery.

You or someone caring for you should ask about any special equipment you might need when you get home, such as a shower chair, and special dietary requirements.

And be sure that you leave the hospital with prescriptions for all of the medication you’ll need, often including low-dose aspirin to prevent blood clots, a blood-pressure drug, and a cholesterol-lowering statin drug, all of which you’ll probably take indefinitely.

To manage post-surgery discomfort, you should expect a short-term prescription for a pain reliever, though after a few days you should be able to manage with an over-the-counter one.

Over the next six to eight weeks, you’ll be asked to gradually increase how much you walk each day until you’re strong enough to begin cardiac rehab. These carefully supervised exercise programs, which are designed to rebuild muscle strength and aerobic fitness, have been found to extend lives after bypass surgery.

The psychological effects of the surgery—fears that something else will happen to your heart, as well as post-op depression—can last longer than the physical effects. But Pereira says that enrolling in cardiac rehab and knowing that your heart is working better than before the operation can help the fear subside.

—Michele Lent Hirsch

Ratings ➤ **Surgery Success** Below are hospitals that share their data with CR and did well in both heart bypass and aortic other factors. Hospitals with top scores for both are listed first. For ratings of more than 500 hospitals nationwide,

NORTHEAST



Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont

Hospital	Location	Coronary Artery Bypass Surgery	Aortic Valve Replacement Surgery
Massachusetts General Hospital	Boston, MA	⬆️	⬆️
Morristown Medical Center	Morristown, NJ	⬆️	⬆️
St. Joseph's Hospital	Syracuse, NY	⬆️	⬆️
St. Peter's Hospital	Albany, NY	⬆️	⬆️
Steward St. Elizabeth's Medical Center	Brighton, MA	⬆️	⬆️
The Mount Sinai Hospital	New York, NY	⬆️	⬆️
Beth Israel Deaconess Medical Center	Boston, MA	⬆️	⬇️
Catholic Medical Center	Manchester, NH	⬆️	⬇️
Excelsa Health Westmoreland Hospital	Greensburg, PA	⬆️	⬇️
Forbes Hospital	Monroeville, PA	⬇️	⬆️
Penn State M.S. Hershey Medical Center	Hershey, PA	⬆️	⬇️
Robert Wood Johnson University Hospital	New Brunswick, NJ	⬇️	⬆️
St. Luke's University Hospital	Bethlehem, PA	⬆️	⬇️
Tufts Medical Center	Boston, MA	⬇️	⬆️
UMass Memorial Medical Center	Worcester, MA	⬆️	⬇️
Vassar Brothers Medical Center	Poughkeepsie, NY	⬇️	⬆️
Yale-New Haven Hospital	New Haven, CT	⬇️	⬆️

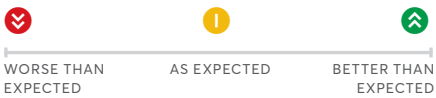
SOUTH



Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia, Washington, D.C.

Cone Health-Moses Cone Memorial Hospital	Greensboro, NC	⬆️	⬆️
Emory Saint Joseph's Hospital	Atlanta, GA	⬆️	⬆️
MedStar Heart Institute MedStar Washington Hospital Center	Washington, DC	⬆️	⬆️
Memorial Regional Hospital	Hollywood, FL	⬆️	⬆️
Oklahoma Heart Hospital	Oklahoma City, OK	⬆️	⬆️
Orlando Health	Orlando, FL	⬆️	⬆️
Sarasota Memorial Health Care System	Sarasota, FL	⬆️	⬆️
TriStar Centennial Medical Center	Nashville, TN	⬆️	⬆️
University of Alabama at Birmingham Health System	Birmingham, AL	⬆️	⬆️
Baylor University Medical Center	Dallas, TX	⬆️	⬇️
Citrus Memorial Hospital	Inverness, FL	⬆️	⬇️
Heart Hospital of Austin, a campus of St. David's Medical Center	Austin, TX	⬇️	⬆️
Inova Fairfax Hospital	Falls Church, VA	⬆️	⬇️
Kings Daughters Medical Center	Ashland, KY	⬆️	⬇️
Lynchburg General Hospital	Lynchburg, VA	⬆️	⬇️
Mission Hospital Inc.	Asheville, NC	⬆️	⬇️
Naples Community Hospital	Naples, FL	⬆️	⬇️
Rex Hospital	Raleigh, NC	⬆️	⬇️
Saint Thomas West Hospital	Nashville, TN	⬆️	⬇️
St. Elizabeth Healthcare	Edgewood, KY	⬆️	⬇️

valve replacement in terms of complications, mortality, and go to [CR.org/hospitalratings](https://www.credentialed.org/hospitalratings).



SOUTH *Continued*

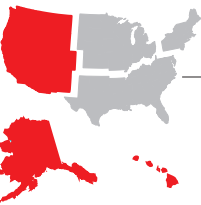


MIDWEST



Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin

WEST



Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming

Hospital	Location	Coronary Artery Bypass Surgery	Aortic Valve Replacement Surgery
The Heart Hospital Baylor Plano	Plano, TX	↓	↑
Vidant Medical Center	Greenville, NC	↓	↑
Winchester Medical Center	Winchester, VA	↑	↓
Winter Haven Hospital	Winter Haven, FL	↑	↓
St. Cloud Hospital	Saint Cloud, MN	↑	↑
Bryan Medical Center	Lincoln, NE	↑	↓
Centegra Hospital-McHenry	McHenry, IL	↑	↓
Fairview Hospital	Cleveland, OH	↑	↓
Franciscan Health Indianapolis	Indianapolis, IN	↓	↑
Henry Ford Macomb Hospital	Clinton Township, MI	↑	↓
Mayo Clinic Hospital-Rochester	Rochester, MN	↓	↑
Missouri Baptist Medical Center	Saint Louis, MO	↓	↑
Springfield Regional Medical Center	Springfield, OH	↑	↓
St. Vincent Heart Center of Indiana LLC	Indianapolis, IN	↑	↓
The Ohio State University Wexner Medical Center	Columbus, OH	↓	↑
University Hospitals Cleveland Medical Center	Cleveland, OH	↓	↑
Kaiser Foundation Hospital-Los Angeles	Los Angeles, CA	↑	↑
Kaiser Sunnyside Medical Center	Clackamas, OR	↑	↑
El Camino Hospital	Mountain View, CA	↓	↑
Kaiser Foundation Hospital San Francisco	San Francisco, CA	↓	↑
Kaiser Permanente Santa Clara Medical Center	Santa Clara, CA	↓	↑
Mercy General Hospital	Sacramento, CA	↑	↓
MountainView Hospital	Las Vegas, NV	↑	↓
Ronald Reagan UCLA Medical Center	Los Angeles, CA	↓	↑
Saint Joseph Hospital	Denver, CO	↑	↓
St. Joseph Medical Center	Tacoma, WA	↓	↑
Sutter Medical Center Sacramento	Sacramento, CA	↓	↑

HOW WE RATE HOSPITALS: The data come from the Society of Thoracic Surgeons for hospitals that have agreed to share their information with us. **Coronary Artery Bypass Surgery:** This rating reflects a hospital's performance in isolated coronary artery bypass graft surgery between July 2016 and June 2017. The rating is a composite of four measures: survival (percentage of patients who leave a hospital and survive at least 30 days after surgery); complications (percentage of patients who avoid the most serious complications, including

needing a second operation, developing a deep chest infection, suffering a stroke or kidney failure, and requiring prolonged ventilation); best surgical technique (percentage of patients who receive at least one graft from an internal mammary artery, located under the breastbone, which improves survival); and the right drugs (percentage of patients who receive beta-blockers before and after surgery to control blood pressure and heart rhythm, aspirin or similar drugs to prevent blood clots, and a drug to lower cholesterol). **Aortic Valve**

Replacement Surgery: This rating reflects a hospital's performance in surgical aortic valve replacement between July 2014 and June 2017. It doesn't include data for a newer procedure, transcatheter aortic valve replacement. The valve replacement rating is a composite of two measures: survival (percentage of patients who leave a hospital and survive at least 30 days after surgery); and complications (percentage of patients who avoid the most serious complications, which are the same as for bypass). For details, go to [CR.org/howweratehospitals](https://www.credentialed.org/howweratehospitals).

WHAT MEMORIE

Are your favorite videos and photos trapped in old technologies such as 8 mm film and VHS tapes—or even



**BACK
TO THE
FUTURE**

Preserving your memories can seem like a daunting task, but our experts share easy ways to recapture the magic. ↗

shoeboxes? Our primer shows you how to convert them to today's easy-to-use formats. **by Laura Murphy**



We all know the moments that are instantly enshrined in our hearts: Our wedding vows, a child's first steps, a high school graduation, a family vacation to Italy. These priceless life narratives have been captured in pictures and on film for generations, but today many of us have moldering stockpiles trapped in old technology, and we wonder how we will ever enjoy them again. Here, we explain how to salvage and preserve your memories for years—or even decades—to come, whether you want to do the work yourself or hire a service.

VINTAGE FILM ROLLS

16 mm, 8 mm, and Super 8

ALTHOUGH KODAK RELEASED 16 mm Kodachrome film in 1935, then 8 mm (aka Regular 8) film a year later, home movies didn't really take off until the 1960s, when Kodak released Super 8.

If you have old reels of film in the attic packed in iconic yellow Kodak boxes, they're probably Regular 8 or Super 8 film. "Regular 8 film is about as wide as a pencil on a small reel about 3 inches in diameter," says Howard Besser, professor of cinema studies at New York University and founding director of the NYU Moving Image Archiving and Preservation Program. Super 8 film will be a similar size. Each 3-inch reel contains about 50 feet of film, good for only a few minutes of action. If the film strip is roughly two pencils wide—and on a reel that looks like the kind you might see in a documentary about the Golden Age of Hollywood—it's probably 16 mm.

Once you've identified the kind of film you have, you can turn it into a digital format—but it's going to take some time and money. The good news: "Film is a pretty sturdy medium," says Ashley Blewer, an archivist, developer, and moving-image specialist, "so old home movies on 8 mm, 16 mm, or Super 8 reels are likely to be in decent shape."

Do it yourself: There are two DIY methods. First, you can buy a film-to-video converter, which looks like a compact version of an old-fashioned reel-to-reel projector. These machines

can be expensive—the Wolverine Data Film2Digital Moviemaker Pro, for example, costs about \$400, though you might find others for closer to \$100.

As the film runs, the new files are recorded to a small SDHC memory card, just like the one you find inside digital cameras. This is an analog process: If you have 5 hours of film, the conversion will take 5 hours.

"There is another way, but it's a bit of a project," says Elias Arias, Consumer Reports' project leader for audio/video testing. You'll need a film-reel projector, a digital video camera, and a clean white wall or a projector screen. In a dark room, set the projector and video camera up next to each other. Project the film evenly onto the wall or screen, then adjust the viewfinder in your digital camera so that the image being projected fills the whole view. Then press Play on the projector and Record on the camera to capture your footage. "The problem with this method is that you need to work with a very clean white sheet or wall," Arias says, "and even with a pristine projection surface, you could end up with lower contrast than the original, color shifts, or a softer image. The final quality of the recording will also be limited by your video camera's capability."

Hire a service: Though film conversion services aren't cheap, most people will find using one preferable to the DIY methods described above. In addition to local film specialists, major retailers such as Costco and Walgreens have conversion services for 16 mm,

8 mm, and Super 8 film formats. You'll need to take your media to a store. Expect to pay a base price, plus a fee for additional feet—which can add up quickly. For example, a single 5-inch reel of Super 8 or 8 mm, which contains about 12 to 14 minutes of action on 200 feet of film, would cost about \$27 at Costco. Time is also a factor: The process takes roughly three weeks. Afterward, you'll get back your original materials, two DVDs of content (Walgreens charges an extra fee for these), and online access to the digital files.

SHOEBOXES OF PHOTOS

Prints and Negatives

IF YOU or a family member was a prolific photographer back in the day, you may have a number—okay, scores—of photo albums or shoeboxes full of loose prints stuffed into closets. Sadly, these start to feel like unwieldy clutter and can't be easily shared with relatives, copied, or organized the way digital photos can be.

Do it yourself: All you'll need is a scanner—a feature built into many home printers these days. (In the market for a new printer? We recommend the Epson WorkForce Pro WF-4630, \$280, which produces excellent-quality scans.) If your family photographer also took the time to add names, dates, or notes to the back of photos, consider purchasing a two-sided scanning printer. Bear in mind that it does take time and patience to scan one photo at a time.

Hire a service: Costco, Walgreens, and local photo shops have services for converting photo prints—and, in some cases, negatives—to digital. Costco, for example, charges \$20 for the first 62 images, then 32 cents per image. The cost includes two DVDs and online access to digital files. Additional DVDs cost \$7.

VIDEOCASSETTE TAPES

VHS, Hi8, DV, and Betamax

IN 1983 SONY RELEASED its consumer camcorder, called Betamovie, which

used a small Betamax cassette tape and gave consumers instant access to their recordings—no processing fees required. As tape formats proliferated through the '80s and '90s, consumers had myriad affordable video formats to choose from, including VHS tapes; smaller, higher-quality Hi8 tapes; and digital video (DV) tapes made for handheld camcorders. The rest is home video history.

“Tape is considered ‘at-risk media’ because it’s vulnerable to deterioration and the technology you can view it on is starting to disappear,” Besser says. So converting your old tapes to a digital format is a more pressing task than converting old film, Blewer says. Luckily, there are still a few options for transferring your old home videotapes to digital.

Do it yourself: This may be one of the easiest conversions to do yourself if you have the time and the right equipment. If you have a DV camcorder, your “tapes” are probably already digital files, but you’ll need a FireWire cable (and a computer with a FireWire port) to transfer them from the camcorder to your computer. If you have analog tapes, such as Betamax, Hi8, and VHS, you’ll need a VCR that plays the type of tapes you have. If you don’t have a VCR, try sites such as Craigslist, eBay, and Freecycle to find a low-cost one.

You’ll also need to acquire an analog video-capture dongle, starting around \$13 online, which has a USB connector on one end and audio and video inputs on the other. Check the manufacturer’s specifications to make sure the dongle is compatible with your computer. Some, such as the Elgato Video Capture, also come with recording and editing software.

Before you start converting, check your tape player to see whether it needs to be cleaned. Connect it to your TV and insert a professionally recorded video, such as an old Disney movie, to see whether the picture appears snowy. If it does, clean it using a kit, about \$10

THE FASTEST WAY DOWN MEMORY LANE



If you have a large variety of media—Betamax tapes, photo prints, and 8 mm film—direct-to-consumer services can digitize everything for you at once. **Legacybox** (above), for example, is a service offering kits at flat rates based on how much and how many types of media you want to convert.

HOW IT WORKS

After you select your kit, the company will ship you a box with labels that you can use to tag your film, tapes, and/or photos. Once you’ve labeled all your items, put them in the box and mail it back to Legacybox using the prepaid shipping label. About six weeks later you’ll receive your originals back and your choice of a thumb drive full of your media, a DVD set, or a digital download, at additional cost.

WHAT IT COSTS

Legacybox starts at \$72 for a starter box to convert up to three tapes, three films, or three sets of 25 pictures. The price increases based on how much media you want to convert. It’s more expensive than Costco’s conversion services, but its ease of use makes it a great gift idea. Still, it’s smart to shop around: Southtree, Legacybox’s sister company, offers a similar service at a lower cost but doesn’t provide shipping materials. Forever and Got Memories are also worth a look.

online; YouTube how-to videos can help.

It’s a good idea to clean your old tapes, too. Simply dust any exposed tape and manually twirl the spokes to loosen them up before trying to play a tape.

Next, connect your computer to the tape player via the dongle, which will prompt you to install the video-recording software. The program will walk you through the process. When you’re ready, hit Record within the program and Play on your tape player. Just as with film, this is an analog process: An hour of video will take an hour to transfer.

Hire a service: This can be the more costly option, to be sure, but you’re paying for convenience. Costco and Walgreens offer transfer services for a number of video formats, including VHS, VHS-C, and the long-departed Betamax.

At Costco you’ll pay \$20 for up to 2 hours of VHS content. At Walgreens it costs \$35 for one tape-to-DVD conversion. (Blu-rays are more expensive.) You can start your order online, then take your tapes to a local store. The process takes about three weeks, and you get your original tapes back as well as the files on DVD. Digital files are included at Costco, but Walgreens charges an extra fee for them.

FUTUREPROOFING TIPS

Digital Images and Videos

SINCE THE LUMIÈRE BROTHERS showed what is believed to be the first motion picture, in 1895, film technology has evolved rapidly. And it’s likely that the media formats of today—advanced as they may seem now—will become the digital dust collectors of tomorrow. Make any future conversions easier by saving your files in well-labeled, easy-to-find places on your computer now—and backing them up to an external hard drive or a cloud storage service such as Dropbox, iCloud, or OneDrive. Or do both: Use a physical external hard drive in case of data loss on the cloud, and save to the cloud in case your hard drive gets lost or damaged.

Road Test

We conduct more than 50 tests on each vehicle at our 327-acre Auto Test Center. For complete road tests, go to CR.org/cars.



A Tale of Two Personalities

The plug-in hybrid **Honda Clarity** runs on electricity and gas, which results in two distinct driving experiences.

THE HONDA CLARITY works well in electric-only mode, but its loud gas engine and quirky gear selector and dashboard controls should give shoppers pause.

In electric-power mode, the car runs quietly and smoothly, providing quick acceleration, even when climbing hills. But if the driver punches the accelerator or when the vehicle switches over to gas-only because the battery is depleted, the four-cylinder engine awakens with a ruckus that's strikingly loud.

In our testing, the car went

48 miles on electric power, almost matching the category-leading Chevrolet Volt. The Clarity got 39 mpg overall on gas in CR tests. It has a mediocre combined range of a little more than 300 miles. (The car takes 2.5 hours on 240 volts and 12 hours on 120 volts to recharge.)

This four-door sedan has a comfortable ride, but handling is awkward because the body leans in corners and steering response is sluggish. It has more interior space than its rivals, but the front seat isn't very supportive because of a short cushion and limited adjustability.

Controls are confusing, including the fussy push-button gear selector. The Clarity comes standard with forward-collision warning, automatic emergency braking, and lane-keeping assist. It uses a distracting video feed along the passenger side instead of a more effective blind-spot warning system that covers both sides.

HYBRID/PLUG-IN HYBRID CARS

Honda Clarity

OVERALL SCORE

72

ROAD-TEST SCORE 72

HIGHS

Acts as an EV for short distances, ride comfort, interior room

LOWS

Clumsy handling, front-seat comfort, confusing controls, noisy engine

POWERTRAIN

212-hp, 1.5-liter four-cylinder hybrid engine; continuously variable transmission; front-wheel drive

FUEL

48-mile electric range
39 mpg on regular fuel

PRICE AS TESTED

\$34,290



Diesel Fuel Savings Don't Add Up

The **Chevrolet Equinox** diesel offers impressive fuel mileage, but it isn't worth the extra cost.

DRIVERS WHO START UP this Equinox SUV are greeted by the typical clatter of a diesel engine. It fills the cabin, and the engine's vibrations are especially noticeable.

It has readily available power at low speeds, unlike the gas version we previously tested. But that power fades as the speed increases. The diesel's 0 to 60 mph time was slower than the gas version by a half-second.

But better fuel economy—not speed—is why you choose diesel technology, which gets more miles per gallon from its fuel-burning efficiency.

The Equinox diesel we tested was in its element on the highway, where engine noise was subdued and fuel economy was an impressive 41 mpg. For our overall mpg, which combines city and highway driving, the Equinox diesel achieved 31 mpg compared with 25 mpg for the gas version. That gives it a highway range of more than 600 miles. But the diesel's price is about \$2,000 more, and it would take more than a decade to recoup that cost from savings at the pump.

Unlike other diesel vehicles, there's no added towing capacity, which is limited to 1,500 pounds.

The Equinox diesel offers the same roomy cabin, user-friendly infotainment system, and comfortable ride as its gas-powered counterpart. But it also has the same dull, cut-rate interior. It's disappointing that forward-collision warning and automatic emergency braking are available only on the top trim.

COMPACT SUVs

Chevrolet Equinox diesel

OVERALL SCORE

63

ROAD-TEST SCORE 75

HIGHS

Fuel economy, roomy interior, comfortable ride, easy-to-use controls and infotainment system

LOWS

Leisurely acceleration, engine noise, drab interior

POWERTRAIN

137-hp, 1.6-liter turbodiesel engine; 6-speed automatic transmission; all-wheel drive

FUEL

31 mpg on diesel fuel

PRICE AS TESTED

\$35,580



Bare-Bones Transportation

The new **Hyundai Accent** suffers from many of the shortcomings common in this segment.

THE ACCENT REINFORCES the idea that subcompact cars are designed as basic, economical transportation. In the Accent's case, buyers also get fuel economy and simplified, user-friendly controls. At the same time, the Accent we tested suffered from the slow acceleration and stiff, choppy ride that's common in this category. That's a strong argument for shoppers to either look for a better subcompact or move up in class to a compact car.

For example, a Toyota Corolla with a basic options

package costs about \$1,000 more than the Accent we tested. (See the Kia Rio review for more details.)

During our testing, the Accent's engine noise was unobtrusive most of the time. But its sluggish acceleration required the driver to mash the gas pedal to get any significant action. At high revs, the engine sounded coarse. The Accent, with its six-speed automatic transmission, returned 33 mpg overall in our tests, which is on a par with some larger compact cars.

Simply put, there's no escaping the Accent's entry-level feel. Passengers experience most bumps and ruts, and road noise fills the cabin. However, the controls are easy to read at a glance, and the touch-screen infotainment system has clear text and simple knobs.

Forward-collision warning and automatic emergency braking aren't offered on the SE and SEL trims but are standard on the top Limited trim.

SUBCOMPACT CARS

Hyundai Accent

OVERALL SCORE

62

ROAD-TEST SCORE 64

HIGHS

Controls, fuel economy, braking

LOWS

Stiff ride, loud cabin, seat comfort, interior room

POWERTRAIN

130-hp, 1.6-liter four-cylinder engine; 6-speed automatic transmission; front-wheel drive

FUEL

33 mpg on regular fuel

PRICE AS TESTED

\$18,435



Small Car, Big Sacrifices

Despite its low price, the **Kia Rio** is no bargain.

THE RIO IS almost a twin to the Hyundai Accent (above), sharing its strengths and weaknesses. However, compared with the Accent, the Rio has slightly longer stopping distances and less handling agility. At first, the Rio's low \$15,000 starting price (including the automatic transmission) might sound tempting. But to rise above the basic amenities with options means increasing the price to more than \$19,000.

Shoppers who want to stretch that budget even a smidge could choose a larger compact car that has

more substance, verve, and refinement, and also comes with standard safety gear, all without sacrificing fuel economy.

For example, a 2018 Toyota Corolla L is only about \$200 more than a top-of-the-line Rio EX, which costs \$19,295. The larger Corolla's 32 mpg overall nearly matches the Rio's fuel economy, it's quieter and roomier, and it has a more comfortable ride. Plus, every Corolla comes standard with forward-collision warning (FCW) and automatic emergency braking (AEB).

For about \$940 more than the Rio EX, the Mazda3 Sport is more fun to drive than either the Rio or Corolla, delivers the same 33 mpg overall, and has standard FCW and AEB.

And because small cars are not as popular as they used to be, shoppers should be able to haggle and cut a better deal.

In addition, both FCW and AEB are standard on only the top Rio EX trim.

SUBCOMPACT CARS

Kia Rio

OVERALL SCORE

59

ROAD-TEST SCORE 61

HIGHS

Controls, fuel economy

LOWS

Stiff ride, loud cabin, seat comfort, interior room

POWERTRAIN

130-hp, 1.6-liter four-cylinder engine; 6-speed automatic transmission; front-wheel drive

FUEL

33 mpg on regular fuel

PRICE AS TESTED

\$17,220

Ratings ➤ **Fuel Efficiency** You can get higher mpg through advanced technology, as with hybrid or plug-in electric vehicles or ones powered by diesel engines. You can also opt for a subcompact car.

	Make & Model	Overall Score	Price	Survey Results		Safety	Overall MPG		Road-Test Results										
Recommended			As tested	Predicted reliability	Owner satisfaction	Front-crash prevention	Gas	Electric (MPGe)	Road-test score	Acceleration 0-60 mph, sec.	Dry braking 60-0 mph, ft.	Avoidance-maneuver speed, mph	Routine handling	Ride	Noise	Seat comfort front/rear	Controls	Luggage, suitcases+duffels/cargo volume, cu. ft.	
HYBRIDS/PLUG-IN HYBRIDS																			
✓	Toyota Camry Hybrid LE	89	\$28,949	⬆	⬆	Std./⬆	47	-	89	7.8	138	54.5	⬆	⬆	⬆	⬆/⬆	⬆	3+1	
✓	Ford Fusion SE Hybrid	77	\$28,290	⬆	⬆	Opt.	39	-	80	8.3	140	52.0	⬆	⬆	⬆	⬆/⬆	⬆	2+3	
✓	Toyota Prius Prime Premium	77	\$29,889	⬆	⬆	Std./⬆	50	133	74	10.8	139	55.0	⬆	⬆	⬆	⬆/⬆	⬆	2+0	
✓	Hyundai Sonata Hybrid SE	75	\$26,950	⬆	⬆	Opt.	39	-	80	8.2	140	51.0	⬆	⬆	⬆	⬆/⬆	⬆	3+2	
✓	Honda Clarity Plug-in Hybrid	72	\$34,290	⬆	⬆	Std./⬆	39	110	72	8.3	141	53.0	⬆	⬆	⬆	⬆/⬆	⬆	3+2	
	Chevrolet Malibu Hybrid	68	\$30,735	⬆	⬆	Opt.	41	-	79	8.0	135	55.0	⬆	⬆	⬆	⬆/⬆	⬆	1+2	
	Chevrolet Volt LT	59	\$35,890	⬆	⬆	Opt.	38	105	70	8.0	133	52.5	⬆	⬆	⬆	⬆/⬆	⬆	2+0	
COMPACT SUVs																			
✓	Subaru Forester 2.5i Premium	84	\$27,145	⬆	⬆	Opt.	26	-	85	8.7	127	52.0	⬆	⬆	⬆	⬆/⬆	⬆	35.5	
✓	Honda CR-V EX (1.5T)	83	\$28,935	⬆	⬆	Opt.	28	-	82	8.2	137	52.0	⬆	⬆	⬆	⬆/⬆	⬆	36.0	
✓	Toyota RAV4 Hybrid XLE	81	\$29,753	⬆	⬆	Std./⬆	31	-	74	8.7	136	49.5	⬆	⬆	⬆	⬆/⬆	⬆	30.0	
✓	Nissan Rogue SV	73	\$29,920	⬆	⬆	Std./⬆	24	-	74	9.5	134	54.0	⬆	⬆	⬆	⬆/⬆	⬆	31.5	
✓	Mazda CX-5 Touring	72	\$29,530	⬆	⬆	Std./⬆	24	-	80	8.6	133	54.0	⬆	⬆	⬆	⬆/⬆	⬆	30.5	
✓	Kia Sportage LX (2.4L)	71	\$26,720	⬆	⬆	Opt.	23	-	78	9.6	128	52.5	⬆	⬆	⬆	⬆/⬆	⬆	29.5	
✓	Ford Escape SE (1.5T)	69	\$29,630	⬆	⬆	Opt.	23	-	75	10.1	132	50.0	⬆	⬆	⬆	⬆/⬆	⬆	34.0	
	Volkswagen Tiguan SE	65	\$31,645	⬆	⬆	Opt.	25	-	84	10.3	131	52.0	⬆	⬆	⬆	⬆/⬆	⬆	33.0	
	Chevrolet Equinox LT (1.5T)	65	\$33,730	⬆	⬆	Opt.	25	-	78	9.6	132	53.0	⬆	⬆	⬆	⬆/⬆	⬆	32.0	
	Chevrolet Equinox LT (diesel)	63	\$35,580	⬆	⬆	Opt.	31	-	75	10.1	135	53.0	⬆	⬆	⬆	⬆/⬆	⬆	32.0	
	GMC Terrain SLE (2.0T)	57	\$36,950	⬆	⬆	Opt.	22	-	67	7.2	128	54.0	⬆	⬆	⬆	⬆/⬆	⬆	33.0	
	Hyundai Tucson SE (2.0L)	56	\$25,920	⬆	⬆	Opt.	24	-	76	11.0	129	54.0	⬆	⬆	⬆	⬆/⬆	⬆	29.5	
	Jeep Compass Latitude	50	\$30,870	⬆	⬆	Opt.	24	-	56	9.8	137	53.5	⬆	⬆	⬆	⬆/⬆	⬆	27.5	
SUBCOMPACT CARS																			
✓	Toyota Yaris iA	68	\$17,570	⬆	⬆	Std./⬆	35	-	60	10.3	139	55.0	⬆	⬆	⬆	⬆/⬆	⬆	3+0	
✓	Honda Fit EX	64	\$19,025	⬆	⬆	Opt.	33	-	67	10.0	132	55.0	⬆	⬆	⬆	⬆/⬆	⬆	2+2	
✓	Chevrolet Sonic LT (1.8L)	63	\$17,290	⬆	⬆	Opt.	28	-	66	9.3	128	54.0	⬆	⬆	⬆	⬆/⬆	⬆	3+0	
	Hyundai Accent SEL	62	\$18,435	⬆	⬆	Opt.	33	-	64	9.9	128	57.5	⬆	⬆	⬆	⬆/⬆	⬆	2+3	
	Kia Rio S	59	\$17,220	⬆	⬆	Opt.	33	-	61	9.6	131	54.5	⬆	⬆	⬆	⬆/⬆	⬆	2+3	
	Nissan Versa SV	52	\$15,490	⬆	⬆	NA	32	-	56	10.6	140	54.5	⬆	⬆	⬆	⬆/⬆	⬆	4+0	
	Ford Fiesta SE	42	\$16,595	⬆	⬆	NA	33	-	64	10.9	142	52.5	⬆	⬆	⬆	⬆/⬆	⬆	3+1	
	Mitsubishi Mirage ES	37	\$16,050	⬆	⬆	NA	37	-	29	12.1	138	52.5	⬆	⬆	⬆	⬆/⬆	⬆	1+1	

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](https://www.crg.org/cars) for complete, up-to-date ratings.



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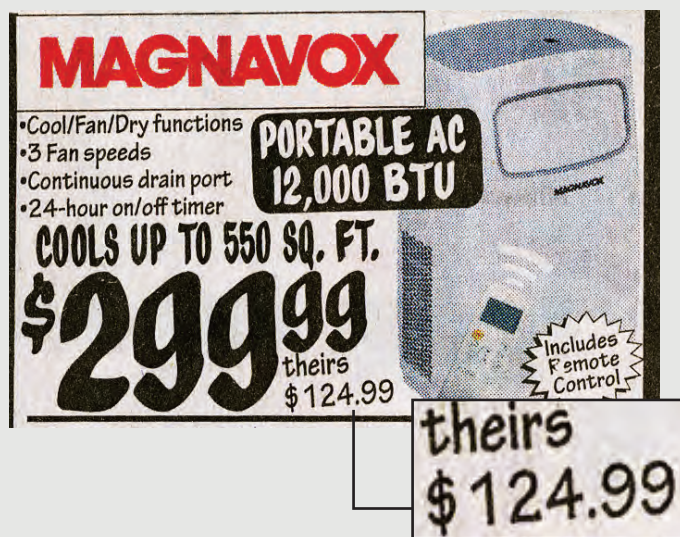
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Summer Fun Fizzles

These may seem like hot deals on the surface, but a closer look may cool you off

A Lot of Hot Air

We're cool with "their" price, thanks.
Submitted by Russell Connors, Atglen, PA



MAGNAVOX

- Cool/Fan/Dry functions
- 3 Fan speeds
- Continuous drain port
- 24-hour on/off timer

**PORTABLE AC
12,000 BTU**

COOLS UP TO 550 SQ. FT.

\$299.99

theirs \$124.99

Includes Remote Control

theirs \$124.99

Living Large

Perhaps this is a special edition for the chef with eyes way bigger than his stomach?
Submitted by Hank Nyquist, Damascus, OR



FOR SPRING

SAVE \$20

179.97

Megamaster 6 Burner Gas Grill 60,000 BTUs, 753 sq. ft. cooking area porcelain-coated cast iron cooking grids. ELB 199.97

753 sq. ft. cooking area

She's a Man-Eater

This shopper swears she's a victim of abbreviation! She actually bought a mango smoothie. Submitted by Carol Janet via email



Buckhead Books
CR2-C27

Sales Receipt

Transaction #: 1521738

Date:

Cashier: **Naked Mighty Man**

Item	Description	Amount
08269266015	Naked Mighty Man	\$3.99



Michael's
MAKE CREATIVITY HAPPEN

DOLLAR DEAL

3 \$3

3 \$3 FOR 3

Shoe on the Wrong Foot?
Forgive us if we drag our heels on this deal.
Submitted by Lori Liker, Chesterfield, VA



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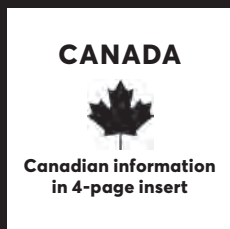
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You can use this section in either of two ways: Start with the main report, read about the products that interest you, and turn to this section to find whether they're sold—and for what price—in Canada.

Or start here, find products sold in Canada whose price and overall score appear promising, and read more about them in the main report and full ratings chart; page numbers appear with each Canadian report. (For some products, the Canadian model designation differs slightly from the one used in the U.S.)

In most cases, the prices we list here are the approximate retail in Canadian dollars; manufacturers' list prices are indicated by an asterisk (*). The symbols shown at right

identify CR Best Buys or recommended products in the U.S. ratings. "NA" in a chart means that information wasn't available from the manufacturer. We include, in the Contact Info list on page 34d, the manufacturer's web address in Canada so that you can go online to get information on a model you can't find in the stores. (Many products that aren't available in Canadian stores can be bought online.)

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CR Best Buy

Recommended models that offer the best combination of performance and price.

Recommended

Models that perform well and stand out for reasons we note.

Thermostats

Sixteen of the tested thermostats are available, including five of the recommended models.

Report and ratings, pages 17-21




Lux TX9600TS
75
OVERALL SCORE






Schneider Electric WiserAir 10BLKUS
69
OVERALL SCORE

		Brand & Model	Overall Score	Price
Rec.	Rank			

THERMOSTATS WITHOUT REMOTE ACCESS


				
	2	Lux TX9600TS	75	\$115
	4	Honeywell RTH7500D	70	\$45
	5	Honeywell Touchscreen RTH8500D	69	\$110
	6	Honeywell RTH6350D	68	\$110

SMART THERMOSTATS

				
	1	Nest Learning Thermostat	83	\$330
	2	Nest Thermostat E	83	\$230
	3	Schneider Electric WiserAir 10BLKUS	69	\$260

		Brand & Model	Overall Score	Price
Rec.	Rank			

SMART THERMOSTATS *Continued*

				
	4	Honeywell Lyric T5 RCHT8610WF	65	\$180
	5	Ecobee 4 Smart WiFi*	60	\$330
	6	Ecobee 3 EB-STATe3-02	60	\$300
	7	Emerson Sensi UP500WC	60	\$140
	8	Honeywell Lyric RCH9310WF5003	59	\$250
	9	Lux Geo-WH-003	57	\$220
	11	Ecobee Lite EB-STATe3L-01	49	\$220
	12	Honeywell RTH9580WF	47	\$230
	13	Venstar ColorTouch T7900	42	\$220

*Has built-in Amazon Alexa.

Window Air Conditioners

Five of the tested window air conditioners are available, including two of the recommended models. **Report and ratings, pages 17-21**

		Brand & Model	Overall Score	Price
Rec.	Rank			
5,000 TO 6,500 BTU/HR. (COOLS 100-300 SQ. FT.)				
✓	5	Frigidaire FRE0633S1	75	\$300
	7	Frigidaire FFRA0511R1	71	\$170
	10	Friedrich CP06G10B	63	\$500

*Has a slide-out chassis, which eases installation.

		Brand & Model	Overall Score	Price
Rec.	Rank			
7,000 TO 8,500 BTU/HR. (COOLS 250-400 SQ. FT.)				
	10	Frigidaire FFRE0833S1	67	\$350
9,800 TO 12,500 BTU/HR. (COOLS 350-650 SQ. FT.)				
\$	1	LG LW1216ER*	82	\$400



RECALLS

2012-2016 TESLA

On certain vehicles, the bolts that attach the power steering gear assist motor to the gear housing may corrode and fracture. The power steering gear assist motor could move, causing the belt to slip and resulting in a loss of power steering assist. **Affected:** 4,275 Model S vehicles.

What to do: Tesla service centers will replace the aluminum mounting bolts with coated-steel bolts and will apply a corrosion-preventative sealer around the gear housing and connecting bolts. If bolts are found to be broken or break during the removal process, Tesla will also install a new steering gear.

2013-2017 AUDI MODELS

On certain vehicles equipped with a 2.0L TFSI engine, the electric coolant pump could experience a short circuit and/or overheat, increasing the risk of a fire.

Affected: 47,704 2013-2015 A6; 2013-2016 A4 and Allroad; and 2013-2017 A5 and Q5 vehicles.

What to do: Dealers will replace the electric coolant pump in all affected vehicles and install updated coolant pump software on vehicles that do not already have the updated software (software available under recall code 2017-002/19M1).

2014-2017 RANGE ROVER AND LAND ROVER MODELS

On certain vehicles originally sold or currently registered in areas of heavy road salt usage during winter months (Ontario, Quebec, New Brunswick, Nova Scotia, Prince Edward Island, and Newfoundland and Labrador), the bolts that attach the power steering gear assist motor to the gear housing may corrode and fracture. The power steering gear assist motor could move, causing the belt to slip and resulting in a loss of power steering assist.

Affected: 6,384 2014-2017 Range Rover Evoque and 2015-2017 Land Rover Discovery Sport vehicles.

What to do: Dealers will replace the aluminum mounting bolts with coated-steel bolts and will apply a corrosion-preventative sealer around the gear housing and connecting bolts. If a bolt is found to be broken or breaks during the course of the repair, a replacement steering gear will be installed.

2017-2018 FORD MODELS

On certain vehicles, a clip that locks the gearshift cable to the transmission may not be fully seated. This could allow the transmission to be in a different gear from that selected by the driver. The driver may be able to move the shifter to Park and remove the ignition key when the transmission gear is not actually in Park. **Affected:** 51,742 F150, F650, and F750 vehicles.

What to do: Dealers will inspect the shift cable locking clip and reseal it as necessary.

2018 BMW X3

On certain vehicles, the rear spoiler may not have been properly attached during assembly, which could allow the rear spoiler to detach while the vehicle is moving. **Affected:** 4,189 vehicles.

What to do: Have the dealer inspect the rear spoiler for any missing fasteners and install new ones as necessary.

2018 HYUNDAI MODELS

On certain vehicles, the steering wheel assembly may contain a manufacturing defect and could separate from the steering column while driving.

Affected: 8,456 Santa Fe and Santa Fe Sport vehicles. **What to do:** Dealers will inspect and, if necessary, install a revised steering wheel assembly.

Grills

Six of the tested grills are available.
Report and ratings, pages 22-27

		Brand & Model	Overall Score	Price
Rec.	Rank			

BARREL GRILLS

✓	1	Dyna-Glo DGN576DNC-D	81	\$415
	4	Char-Broil 1632038	71	\$180
	7	Nexgrill 810-0025	69	\$150

KETTLE GRILLS

✓	5	Weber 22" 14402001	67	\$220
	8	Weber 18" 441001	58	\$110
	9	Char-Broil Kettleman 16301878	58	\$190



Weber 22"
14402001

67
OVERALL
SCORE

Nexgrill
810-0025

69
OVERALL
SCORE



Char-Broil
1632038

71
OVERALL
SCORE



Autos

All of the tested vehicles are available in Canada. **Report and Ratings, pages 62-64**

		Acceleration (sec.)				Fuel Economy (liters per 100 km)			Electric Efficiency (liters per 100 km)		
Make & Model	Price Range	0-50 km/h	0-100 km/h	80-100 km/h	500 Meters	City Driving	Highway Driving	Overall	City Driving	Highway Driving	Overall
PLUG-IN HYBRID											
Honda Clarity	\$39,900–\$43,900	3.7	8.7	3.7	19.1	7.5	5.2	6.1	2.1	2.1	2.1
COMPACT SUV											
Chevrolet Equinox	\$25,500–\$38,000	3.7	10.8	4.5	20.4	10.8	5.7	7.6	—	—	—
SUBCOMPACT CARS											
Hyundai Accent	\$14,599–\$21,099	3.9	10.5	4.8	20.1	10.5	5.1	7.1	—	—	—
Kia Rio	\$14,795–\$23,745	3.8	10.2	4.3	19.9	10.5	4.9	7.0	—	—	—

HONDA CLARITY
PRICE AS TESTED
\$34,290
(U.S.)

72
OVERALL
SCORE



HYUNDAI ACCENT
PRICE AS TESTED
\$18,435
(U.S.)

62
OVERALL
SCORE



CHEVROLET EQUINOX
PRICE AS TESTED
\$35,580
(U.S.)

63
OVERALL
SCORE



KIA RIO
PRICE AS TESTED
\$17,220
(U.S.)

59
OVERALL
SCORE



Contact Info

How to reach manufacturers in Canada.

Char-Broil
charbroil.ca

Dyna-Glo
ghpgroupinc.com

Ecobee
ecobee.com

Emerson
emersonclimate.com

Friedrich
friedrich.com

Frigidaire
frigidaire.ca

Honeywell
yourhome.honeywell.com

LG
lg.ca

Lux
luxproducts.com

Nest
nest.com

Nexgrill
Nearest Home Depot

Schneider Electric
schneider-electric.com

Venstar
venstar.com

Weber
weber.com