

**BEST+WORST** INFOTAINMENT  
SYSTEMS FOR CARS

**RECALL RISKS IN USED CARS**

JUNE 2019

# CR Consumer Reports®

## REVIEWS & RATINGS

- Chevy Blazer
- Food Processors
- Portable Grills
- Cordless Drills
- Window Air Conditioners

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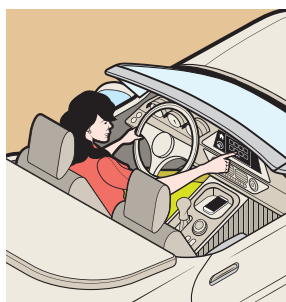
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# Set a Course for Safer Driving



IN AN AGE when cars—like so many of the products we use—are growing increasingly complex, it has never been more important for drivers to be vigilant about the choices they make before they get behind the wheel. Years ago, that sort of judgment was limited to the physical safety, performance, and reliability of a vehicle. Today, however, threats to our safety and comfort on the road can come from poorly designed

software just as they might from worn-out brakes or a faulty transmission. Our cars are now routinely equipped with sophisticated dashboard panels, touch screens, voice recognition systems, and other technologies that we rely on for navigation, entertainment, and communication.

This month, CR members offer feedback on their infotainment systems to help shine a light on the ever-expanding world of in-car technology. We all know that a more responsive touch screen or an intuitive display can make the split-second difference between tech that serves our needs and tech that puts us at risk. If the routing app frequently crashes, if our request to “call Bob” gets interpreted as “call boss,” or if it takes an unwieldy swipe and three clicks to skip to the next song, it makes it all the more likely that we’ll take our focus away from the road.

In a separate investigation, we examine how car recalls aren’t adequately communicated to people when they shop for used vehicles. Millions of defective, dangerous vehicles remain on the market, putting consumers at risk. (Find out whether your car has a recall with CR’s Car Recall Tracker: [CR.org/carrecalltracker](https://www.consumerreports.org/carrecalltracker).) In a world of rising complexity, CR wants to help you keep your eyes on the choices that matter most—so you can keep your focus on the road ahead.

*Marta Tellado*

**Marta L. Tellado,**  
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President and CEO Marta L. Tellado

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Deputy Directors, Content Development Christopher Kirkpatrick, Ellen Kunes

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Editorial Director, Digital Erle Norton

Special Projects Joel Keehn, Director; Lisa L. Gill,

Rachel Rabkin Peachman, Deputies; Ryan Felton, Writer

Senior Director, Product Testing Maria Rerecich

## Cars

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Jennifer Stockburger, Directors

Product Testing: Michael Bloch,

Steve Elek, Kelly Funkhouser, John

Ibbotson, Chris Jones, Anita Lam,

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Mike Quincy, Gabriel Shenhar, Shawn

Sinclair, Emily A. Thomas,

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## Electronics

Jerry Beilinson, Content Lead

Editors/Writers: Nicholas De Leon, Bree

Fowler, Thomas Germain, Christopher

Raymond, Allen St. John, James K. Willcox

Product Testing: Richard Fisco,

Robert Richter, Testing Leads;

Elias Arias, Antonette Asedillo,

Claudio Ciacchi, Charles Davidman,

Cody Feng, Richard Sulin, Maurice

Wynn Policy Lead: Justin Brookman

## Health & Food

Editors/Writers: Trisha Calvo,

Lauren F. Friedman, Kevin Loria,

Catherine Roberts, Diane Umansky

## Home & Appliance

Eric Hagerman, Content Lead

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Hope, Kimberly Janeway, Sara Morrow,

Haniya Rae, Daniel Wroclawski

Product Testing: John Galeotafore,

Emilio Gonzalez, James Nanni,

Testing Leads; Peter Anzalone, John

Banta, Susan Booth, Tara Casaregola,

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Bernard Deitrick, Cindy Fisher, Rich

Handel, Misha Kollontai, Ginny

Lui, Joan Muratore, Joseph Pacella,

Christopher Regan, Frank Spinelli,

Dave Trezza, Michael Visconti

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Editors/Writers: Octavio Blanco,

Barbara Peterson, Donna Rosato,

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Food Safety James E. Rogers, Director; Sana Mujahid;

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Product Safety Don Huber, Director; Doris Sullivan, Associate Director

Content Systems & Operations Strategy Peter Meirs, Director

Content Operations David Fox, Director; William Breglio; Anthony Terzo

Production Eric W. Norlander, Manager; Letitia Hughes, Terri Kazin

Photography John Powers, John Walsh Imaging Francisco Collado Mark Linder

Content Coordination Nancy Crowfoot, Associate Director;

Diane Chesler, Aileen McCluskey

Copy Editing Leslie Monahan, Copy Chief;

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Fact Checking David Schipper, Manager; Kathleen Adams, Tracy Anderman,

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Debra Kalensky, Martin Lachter, Jane Manweiler, John McCowen, Adam Troy

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## Helping Save More Money

### WHAT'S AT STAKE

Consumers are 15 times more likely to save for retirement if they can have the money deducted from their paychecks. But almost half of American private-sector workers—an estimated 87 million people—work for an employer that doesn't offer them that option.

That dynamic is partly to blame for our country's massive retirement savings shortfall. A recent Government Accountability Office report says nearly half of Americans approaching retirement have saved nothing at all.

New Jersey is the latest state to try tackling the problem. In March, Gov. Phil Murphy signed a law requiring businesses with 25 or more employees that currently don't offer a retirement plan to enroll their workers in the new NJ Secure Choice Retirement Savings Program.

The 1.7 million workers who may be eligible will be able to contribute to Roth individual retirement accounts (IRAs) through automatic paycheck deductions. They can select the type of investments and their contribution level—or decide to opt out altogether—but if they do nothing, 3 percent of their pay will go into investments tailored to their projected retirement date. The funds will be managed by the state, so the cost to businesses is minimal.

### HOW CR HAS YOUR BACK

CR advocated for the New Jersey program, circulating key information to legislators. And we successfully supported the enactment of a similar retirement savings program in New York in 2018. Ten states have now enacted laws to expand retirement savings options; six use an automatic IRA model.

### WHAT YOU CAN DO

For tips on saving for retirement without a 401(k), go to [CR.org/retirementsaving0619](https://CR.org/retirementsaving0619).

## Pushing for Efficiency

### WHAT'S AT STAKE

Refrigerators, microwaves, lightbulbs. These and other household goods and appliances are often designed to meet federal energy standards, which end up saving Americans a lot of money on utility bills—about \$63 billion in 2015, says the Department of Energy.

And those efficiencies pile up even as the products we buy deliver more features and performance. Today, for example, the average new refrigerator uses a quarter of the energy it did in 1973, while offering 20 percent more capacity.

But today's DOE has fallen behind on updating and strengthening many of these standards, and it proposed a rule that could slow or freeze further updates for some appliances.

### HOW CR HAS YOUR BACK

CR has advocated for efficiency standards for decades. When the federal government dragged its feet on them in the 1980s, we joined a lawsuit to push for implementation.

Now we're taking our case to Capitol Hill. In February, David Friedman, CR's vice president of advocacy, urged Congress to reject efforts to weaken the standards, citing DOE's own data showing that the average consumer saves \$321 a year—thanks to efficiency standards. The DOE projects that if the standards are properly updated, that number will reach \$529 by 2030. "Updating and enforcing these standards is required by law and is in the best interest of U.S. consumers," Friedman said.

### WHAT YOU CAN DO

Check out our latest appliance ratings—including how they rate for energy efficiency—at [CR.org/appliances](https://CR.org/appliances).

## Digging Into Drug Prices

### WHAT'S AT STAKE

A nationally representative 2017 CR survey revealed what consumers do when the price of their prescription drugs goes up: About 1 in 3 spends less on groceries, 1 in 3 takes on additional debt, and 1 in 8 delays retirement. In short, even modest variations in the cost of drugs can have a huge impact on consumers' lives.

That's why the results of a recent CR investigation (published in the January 2019 issue) were so troubling. It found that the amount consumers pay for medications using Medicare Part D insurance coverage can vary by hundreds and even thousands of dollars a year, depending on which pharmacy a consumer uses and whether he or she makes a small mistake in the online sign-up process.

### HOW CR HAS YOUR BACK

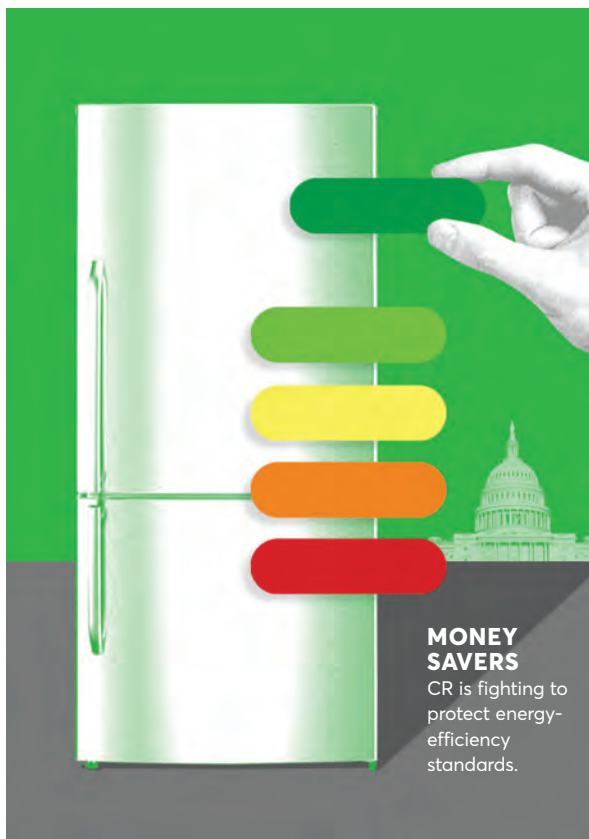
Our investigation involved sending dedicated CR "secret shoppers" to price five common medications in six U.S. cities. We used the Medicare Plan Finder Tool to identify the three drug plans that would offer the least expensive retail drug costs in each city, then compared what a consumer would pay under each plan at two area pharmacies.

The variations were staggering, as Lisa Gill, the CR journalist who led the investigation, said in her testimony before the U.S. Senate Special Committee on Aging in March. In Denver, for example, the annual cost of the five drugs at one pharmacy was \$688. At another just four miles away, the same plan charged \$1,687, or \$999 more, for the same drugs.

One result of our testimony: The Senate committee has asked the Centers for Medicare and Medicaid Services for changes to the Plan Finder Tool.

### WHAT YOU CAN DO

For a guide to picking the best Medicare Part D drug plan, go to [CR.org/drugprices0619](https://CR.org/drugprices0619).





Our April 2019 Annual Auto Issue fueled an important discussion with our readers on emerging safety technology, electric vehicles, and more. To join the conversation, go to [CR.org/autos0619](https://www.consumerreports.org/autos0619).

I READ “Making the World Safer for Pedestrians” in the April issue. I agree that phones cause a big distraction when driving. I also feel, though, that a big factor in accidents is the reduced visibility out of newer vehicles. Lots of things, including pedestrians, can be hidden momentarily by the corner pillars that go down the sides of the windshields.  
—C. Braker, Liberal, MO

**EDITOR'S NOTE** We are big proponents of unobstructed outward visibility, and that's why it's an integral part of our vehicle testing. Using a point system, cars that have good or

hampered visibility are rewarded or penalized, respectively, which is reflected in the scores of each vehicle we rate.

THIS FINE ARTICLE ON pedestrian safety outlined what the auto industry can and should do to improve pedestrian safety. But I also believe a major cause of injury and death is that the majority of pedestrians believe it's the responsibility of the driver of the 3,000-pound metal vehicle to see them and stop. The majority do not even glance to see whether a vehicle is approaching. If all pedestrians looked carefully before crossing, fatalities would be greatly reduced. All the technology in the world is no substitute for common sense.  
—Michael Raick, Bloomfield, MI

IN THE MARCH 30, 2016, Insurance Institute for Highway Safety report on

headlight ratings, only 1 out of 31 evaluated earned a Good rating, 11 were Acceptable, and 19 were either Marginal or Poor. I waited to see your April 2019 car issue, to address what I consider a major safety issue. In your article on pedestrian safety, you addressed many lighting issues and stated that 75 percent of pedestrians are hit at night. Amazingly, nowhere did you mention the function and quality of headlights.

—George de Riszner, Fullerton, CA

**EDITOR'S NOTE** At our track facility, we test headlights on every single vehicle—and our main criteria is safety, meaning how well the lights allow a driver to see what's ahead. You can go to [CR.org/headlights0619](https://www.consumerreports.org/headlights0619) for more details on our testing. Also, turn to our Road Report in this issue to learn about how headlights degrade over time and what you can do to stay safe.

## Better Braking

ONE DAY, I happened to be following a Palo Alto Police Department motorcycle and I noticed that every time the officer slowed down, his brake light would flash at different rates, depending on how quickly his bike was slowing. If he was slowing down at a low rate, the light would flash at a low rate. If he was slowing down at a fast rate, the brake light would flash fast. I followed him and was able to talk to him about his brake light. He said, “If every vehicle on the road had one of these flashing units on them, it would put the wrecking yards out of business.” For some reason, it never caught on. I can't understand why. Many accidents are “rear-enders.” I think this pulsing system should be mandatory on all vehicles. Since I know that CR is very interested in making driving safer, I would like to request that you try to help make this a requirement on all vehicles.

—James Adduci, McKinleyville, CA

**EDITOR'S NOTE** We agree that this is probably a smart idea, and we'll happily look into it.

YOUR “10 TOP PICKS” story says, “Only the most outstanding vehicles achieve a spot on our list.” However, the article then goes on to exclude any and all cars that do not have automatic emergency braking as a standard feature. Are there no outstanding cars without AEB? I'm sure everyone will agree that AEB is a great feature, and we look forward to the day when all cars have it, but don't publish an article masked as a top cars feature when it's really the magazine's effort to strong-arm the industry (albeit for good reasons) into making a change.  
—Alex C., Pittsburgh

**EDITOR'S NOTE** CR is a nonprofit that advocates for a fairer, safer marketplace for all consumers. As such, we test products not



WRITE

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only for performance but also for good value and safety for consumers. So we've long given extra credit to cars that get better fuel economy and have more advanced safety equipment that has been proved to reduce crashes and injuries. AEB has been shown to significantly cut crashes—and safety features that can reduce injuries or save lives should not be a luxury. So standard AEB is essential to be in our 10 Top Picks. Also, in the Auto Issue's New Car Profiles, you can read about all the cars we test, regardless of AEB offerings.

## EV Cars and More

IN THE TWO-PAGE spread about fuel economy ("Best + Worst Lists") in your most recent cars issue, there was no mention of electric vehicles. EVs are the efficiency champs, and yet they were not mentioned. Most EVs are more efficient than the most efficient gasoline vehicle you listed, and you need to make consumers aware.

—Barry Wolf, East Palo Alto, CA

**EDITOR'S NOTE** CR has been at the forefront of testing EVs and other alternative-fuel vehicles since the first mass-produced models arrived in 2011. There is no question that EVs are very efficient and benefit from low running costs. At the same time, we make sure to surface their limited range and slow charging times. Our job is not to promote any particular technology but to inform and empower consumers to make the right choice for their needs. We're working on a longer article on EVs, but for now, you can read more about this at [CR.org/ev0619](https://www.consumerreports.org/ev0619).

PLEASE STOP GIVING such high marks to electric cars such as Tesla. These cars are "fair weather," short-mileage cars. They cannot compete in bad weather or long-trip mileage with even the worst-rated gas-powered cars. When the ideal battery

comes along, electric cars will undoubtedly win, but the reality is that today they're only for the wealthy.

—Lou Totilas, Kimballton, IA

**EDITOR'S NOTE** You're right that an EV's range still can't compete with a gas vehicle's, but there are increasingly more brands and models to consider outside of those well-known Tesla vehicles. See Ask Our Experts, in this issue, where we discuss the new EVs we're testing and a few lower-cost options worth exploring.

IN NEW CAR RATINGS, I believe you incorrectly listed the Porsche Macan S as having a 0-to-60 acceleration time of 6.4 seconds. The manufacturer lists it as 5.1.

—Anthony Kulakusky, Oxford, MA

**EDITOR'S NOTE** Results from acceleration tests can vary significantly depending on the methodology used. CR tests are designed to simulate real-world conditions and not necessarily to produce the ultimate best times. We measure 0-to-60 mph acceleration from a complete standstill and without "torque braking" (revving the engine with a foot on the brake pedal).

THE THOROUGHNESS of your annual vehicle issue is superb, as always. However, the back-page article ("Driving by Gender") is indecipherable to me. As one of the 8 percent of the male population who are color-blind, I can't detect the color differences in the charts, like probably 150,000 others who get CR. Please keep color issues in mind as you continuously strive to improve, as I know you do.

—Frank Phillips, Caledonia, NY

**EDITOR'S NOTE** Going forward, we'll use a new technology to help us avoid color problems like the one you rightly point out. In the meantime, we've redesigned our "Driving by Gender" charts in new colors, which you can access at [CR.org/gender0619](https://www.consumerreports.org/gender0619).

## ON ELECTRIC VEHICLES

CR has been at the forefront of testing EVs since the first mass-produced models arrived in 2011.

—The Editors

## Drugstore Discounts

YOUR ARTICLE in the March 2019 issue titled "Get More From Your Drugstore" fails to mention an excellent source for medications. Veterans may be eligible for free medications at their local Veterans Affairs hospital or clinic.

—David Winter, Olmsted Falls, OH

**EDITOR'S NOTE** To explore your eligibility, you can go to [va.gov](https://va.gov) or call 877-222-8387.

## Dangerous Dressers

THANK YOU for shedding light on "Dangerous Dressers in Our Homes" (March 2019). I personally experienced these dangers three years ago, when my little brother, then 8, was trapped under a nearly empty 40-inch dresser that fell after he opened all four drawers. Luckily, he was old enough to call for help, and he escaped with only minor scrapes and bruises. I hope that your article can stir up action for mandatory safety standards for dressers.

—Gabrielle Haryanto, San Jose, CA

I READ the commentary on the danger of dressers tipping over and the lack of regulations for dressers shorter than 30 inches tall. Looking at the test results, it seems that the less-safe dressers have smaller depths. This was not pointed out.

—Da Papanastassiou, San Marino, CA

**EDITOR'S NOTE** We believe that you cannot determine the stability of a dresser based on its appearance or depth measurements alone—and it could be dangerous to assume otherwise. In our testing, two dressers with 20-inch or greater depth failed some of our tipping tests—and one 15.5-inch-deep dresser passed all our tests. As we mentioned in our article, the four characteristics that tend to identify a stable dresser are the distance that the drawer extends from the front face of the dresser, its depth, its overall weight, and the presence of a back-weight.

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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.*

## Fitness Trackers

**WE TESTED:** 25 models

**WE TEST FOR:** Ease of use, such as interacting with the device menu and interface; step-count accuracy; water resistance; readability of the screen; and more.

**ABOUT THE SCORES:**

Median: 79

Range: 50-89

**GPS Tracker & Easy-to-See Screen**

Samsung Gear Fit2 Pro  
\$150

89

OVERALL  
SCORE



**Stylish & Simple to Use**

Fitbit Charge 3  
\$150

84

OVERALL  
SCORE



**Nice for Tykes**

Garmin Vivofit jr. 2  
\$80

65

OVERALL  
SCORE



## Lightweight Laptops

**WE TESTED:** 113 models

**WE TEST FOR:** Performance while running applications, web browsers, and games; the size, color, brightness, and glare of display; portability; ergonomics; and more.

**ABOUT THE SCORES:**

Median: 64

Range: 32-84

**Long Battery Life**

LG Gram 13 (8th Gen)  
(13.3-inch screen, 2.1 lb.)  
\$950

79

OVERALL  
SCORE



**Most Lightweight of the Big Screens**

LG Gram 15Z980  
(15.6-inch screen, 2.4 lb.)  
\$1,600

78

OVERALL  
SCORE



**Petite Performer**

Apple MacBook MNYH2LL/A  
(12-inch screen, 2 lb.) \$1,265

77

OVERALL  
SCORE



## Ask Our Experts

**I have a sizable Blu-ray and DVD collection, but it's tough to find a laptop with a disc drive. What can I do?**



IN AN EFFORT to make laptops smaller, most brands no longer offer disc drives, which can be frustrating for consumers like you. A disc drive is especially handy if you don't have access to good broadband service for streaming. Dell and HP still produce a handful of models with DVD drives, says Nicholas De Leon, a CR electronics editor, but those models tend to be heavier and not as powerful as the models in our ratings without built-in drives.

A better solution is to choose a great laptop from our ratings, then buy an external drive, which plugs into any laptop's USB port. Asus and LG have models for about \$30 to \$100. That way, you won't sacrifice overall laptop performance for movie viewing.

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).

## Portable Grills

**WE TESTED:** 14 models

**WE TEST FOR:** Evenness of heating over the grill's surface, ease of use, how quickly a grill preheats, how wide a temperature range the grill offers, and more.

### ABOUT THE SCORES:

Median: 69  
Range: 59-81

**Great Griller (3 Burners)**  
Broil King Porta-Chef 320  
952654  
\$300

**81**  
OVERALL  
SCORE



**Quick to Preheat (2 Burners)**  
Cuisinart CGG-306  
\$200

**79**  
OVERALL  
SCORE



**Budget-Friendly (1 Burner)**  
Char-Broil TRU-Infrared  
Grill2Go X200 12401734  
\$130

**62**  
OVERALL  
SCORE



## Food Processors for \$100 or Less

**WE TESTED:** 16 models

**WE TEST FOR:** How well a model can chop onions and almonds, shred carrots and cheese, slice celery and mushrooms, purée peas and carrots, and more.

### ABOUT THE SCORES:

Median: 52  
Range: 35-69

**Small but Mighty**  
Oster Pro 1200 Plus Food  
Processor Attachment  
BLSTMB-CBF-000  
(5 cup)  
\$90

**69**  
OVERALL  
SCORE



**Super Shredder**  
Hamilton Beach 8-Cup Stack  
& Snap 70820  
\$100

**67**  
OVERALL  
SCORE



**Excellent Chopper**  
Cuisinart DLC-6 (8 cup)  
\$100

**66**  
OVERALL  
SCORE



## Snack Bars

**WE TESTED:** 33 bars

**WE TEST FOR:** Flavor and texture attributes. We also evaluate the nutrition of each bar based on calories, sodium, fats, sugars, dietary fiber, and more.

### ABOUT THE SCORES:

Median: 55  
Range: 40-72

**Best Overall, No Sodium**  
Pure Organic Wild Blueberry  
Fruit & Nut Bar  
\$2 per bar

**72**  
OVERALL  
SCORE



**Very Tasty & High Fiber**  
Kind Plus Cranberry  
Almond + Antioxidants With  
Macadamia Nuts Bar  
\$1.25 per bar

**65**  
OVERALL  
SCORE



**Low in Carbs & Sugars**  
LaraBar Nut & Seed Crunchy  
Bar Dark  
Chocolate  
Almond  
\$1.30 per bar

**61**  
OVERALL  
SCORE



## Dehumidifiers, Small-Capacity

**WE TESTED:** 3 models

**WE TEST FOR:** How many pints of water the model removes from the air per day in humid conditions, noise, energy efficiency, and more.

### ABOUT THE SCORES:

Median: 82  
Range: 74-85

**Deluxe Dehumidifier**  
Frigidaire FAD301NWD  
\$180

**85**  
OVERALL  
SCORE



**Stands Up to Cool Rooms**  
Whynter RPD-321EW  
\$175

**82**  
OVERALL  
SCORE



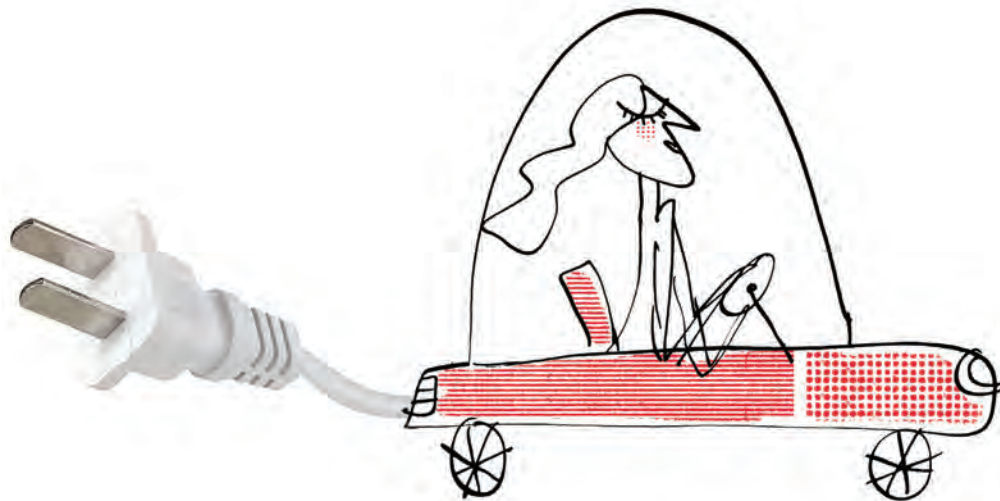
**Three Fan Speeds**  
Frigidaire FFAD3033R1  
\$190

**74**  
OVERALL  
SCORE



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

COMING NEXT MONTH String Trimmers & More



## I love the idea of an electric car, but are there options outside of a Tesla or the Chevy Bolt?

Tesla might be the brand most associated with electric vehicles (EVs), and CR recommends the affordable Chevrolet Bolt for its long range (250 miles) and quiet interior. But there are other choices that you may not have heard as much about—and even more EVs are on the way.

At the high end (ranging from \$44,000 to \$85,000), new models focus on luxury, sporty driving, and quick acceleration. We're testing the new Jaguar I-Pace—go to [CR.org/ipace](https://www.consumerreports.org/ipace) to read about our first drive—and hope to have an Audi E-Tron on our track soon. The BMW i3 is updated for 2019, and more upcoming models include the Porsche Taycan

and Mercedes-Benz EQC.

There are more affordable choices, too. Nissan is releasing a longer-range version of the Leaf, called the Leaf Plus, which Nissan says should be able to get 226 miles on a single charge. And the new Hyundai Kona EV (we're testing one now), Kia Niro EV, and Kia Soul EV all promise ranges longer than 230 miles; they are expected to offer versions under \$40,000 before any incentives. You may also want to consider plug-in hybrids, like the Toyota Prius Prime; these can run on battery power for short distances but still have a gas engine for longer trips. They are a good choice if you're anxious about running out of juice in an EV.

### I'm sick of white clothes that get dingy in the wash. Help!

Most people know to wash their whites separately from colors, but you may be guilty of other laundry sins that

are causing your whites to go dull or gray. Overloading your machine, which causes tangling and prevents effective cleaning, is a common one. Add a few items at a time, says Rico de Paz, the engineer who oversees our tests of laundry detergents. "This will allow all the items to tumble freely in the water, giving the soil the best potential to disperse," he says.

Another common culprit? Washing very dirty items with cleaner ones, which can spread the dirt around to all your whites. And resist the urge to economize on the amount of detergent; if you don't use the recommended amount for the size and soil intensity of your load, you won't get the benefit of detergent agents that help keep soil from redepositing on other clothes.

If graying is still a problem, use a detergent with bleaching components or a mild oxidizing agent in powder form, such as OxiClean or Borax. It's milder than chlorine bleach and can be used with most whites, such as cottons and cotton blends.

And now that warmer weather is here, don't forget to harness the sun's bleaching power: Line-drying clothes and sheets helps whiten them—and cuts down on your electricity bill.

## Is there a way to tell whether my produce is really organic?

Yes, if a packaged item carries the Department of Agriculture organic seal, it must meet the USDA's standards. Among other things, these require that crops be grown without most synthetic pesticides or fertilizers, or genetically engineered seed. Farms must be certified by a USDA-accredited certifier and include an annual inspection to make sure they are complying with the standards, says Charlotte Vallaey, M.S., CR's senior food and nutrition policy analyst.

But you often won't see the USDA seal on loose, unpackaged produce, such as apples. In that case, look for a sticker or band that has a price look-up (PLU) code. Conventional produce PLUs have four digits and organics have five—and the first number will always be 9 if the produce is organic. For example, apricots' PLU is 3422 for conventional and 93422 for organic. (Note that genetically engineered produce used to have PLUs that started with 8, but that isn't true anymore; PLUs no longer indicate this.)

Though PLUs aren't mandatory or regulated by the government, these numbers are used widely around the globe for pricing and inventory control, so they're generally reliable—and good for astute shoppers to know.



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.



# CR Insights



## 2019 MODELS

✓ <b>Honda CR-V</b>	VS.	✓ <b>Toyota RAV4</b>
\$24,150–\$34,050		\$24,510–\$36,250

<b>77</b>	OVERALL SCORE	<b>74</b>
<b>82</b>	ROAD-TEST SCORE	<b>72</b>
<b>^</b>	PREDICTED RELIABILITY	<b>^</b>
<b>28</b>	FUEL ECONOMY	<b>27</b>

### In the Know

## Which Small SUV Is Best?

THE HONDA CR-V and Toyota RAV4 are two very popular SUVs among Consumer Reports members. No surprise: They've both tested well for years.

**Where they're equal:** They're the same length, width, and height, and weigh within 60 pounds of each other. They're neck and neck on a number of performance metrics in our road tests, including fuel economy, front-seat comfort, handling, and

ride quality. Our members also tell us (in CR's exclusive Auto Survey) that each is very reliable and that their ownership experience has been positive. But these two models aren't identical twins. Here are key differences.

**Where the CR-V shines:** The Honda takes top honors for its quieter interior, ease of getting in or out, a more comfortable rear seat, and better interior fit and finish.

These attributes help the CR-V rack up a considerably higher road-test score than the RAV4.

**Where the RAV4 shines:** The Toyota has an ace up its sleeve: its advanced safety features. Every version of the RAV4 comes standard with forward collision warning and automatic emergency braking, as well as lane departure warning and lane keeping assist. The CR-V's Honda Sensing system has

those same four safety features, but they're not available on all trims. For instance, the base LX trim of the CR-V can't be equipped with them, not even as an option.

**CR's take:** The RAV4's standard safety features boost its Overall Score, but our road-test results give the CR-V the edge. Buyers of the CR-V should purchase an EX trim (starting at \$27,250) to get the safety equipment we recommend.

### MORE 2019 SUVs TO CONSIDER



**CITY-FRIENDLY**  
✓ **Subaru Crosstrek**  
\$21,895–\$34,995  
**87**



**FUN TO DRIVE**  
✓ **Mazda CX-5**  
\$24,350–\$36,890  
**82**



**SAFETY COMES STANDARD**  
✓ **Nissan Rogue**  
\$24,920–\$32,890  
**74**



**BEST FOR  
\$100  
OR LESS  
CORDLESS  
DRILLS**

Need a Father's Day gift for dad or hubby? These budget-friendly buys can get the job done—from simple fixes to heavy-duty work.

#### HEAVY-DUTY

✓ **Hercules HC91K1**  
\$100

**62** OVERALL SCORE

#### LIGHT-DUTY

✓ **Worx WX176L**  
\$100

**62** OVERALL SCORE

#### GENERAL USE

💰 **Ridgid R82005K** \$90  
(pictured above)

**59** OVERALL SCORE

#### SCORES FOR ALL 40 DRILLS WE TESTED:

Median: 58  
Range: 26-85

### CR Smart Solution

# Get Rid of Ants



#### ODOROUS HOUSE ANT

ABOUT 1/8 INCH LONG

This common species often nests outside—under timbers, mulch, or stone—but tends to come into your house when seeking alternate food sources.

Nobody likes an uninvited house guest—especially hundreds of them. Unfortunately, “by the time you start spotting a few ants, you may already have a colony,” says Jody Gangloff-Kaufmann, an entomologist at the New York State Integrated Pest Management program at Cornell University. But don’t reach for the spray, says CR senior scientist

Michael Hansen, Ph.D., a biologist and ecologist, because they can be ineffective or wear off—and some insect barrier sprays may contain chemicals harmful to humans. However, you can still prevent ants from marching into your home with these practical tips.

#### SEAL UP SUGARS

Keep food in airtight containers, and quickly

clean up spills like honey, maple syrup, and soda. House ants feed on sugar and protein. “Generally, a colony will send a few ants to scout—they’ll bring a sample of any food they find to the colony, and many others will follow them back into the house,” Gangloff-Kaufmann says. “In my experience, they gravitate towards sugary liquids.”

#### OUT, DAMP SPOT!

Both ant types listed above prefer damp areas to build satellite colonies in your home. That means showers, windows, and the basement are all places to watch. Carpenter ants will tunnel through any wood that has been damaged by water, so it pays to fix leaks quickly.

PHOTOS: BOTTOM FROM LEFT: CARRIER CORPORATION; CONSUMER REPORTS

## CR Time Traveler COOLING & A/C

**1902** Willis Haviland Carrier designs the first modern air conditioning system.



**1932** A/C units that can be placed on a window ledge hit the market, but they’re still too expensive to be widely purchased.

**1940** We test 47 electric fans and point out a safety concern: The back of blades can cause severe cuts, so guards on both sides of the fan are important.

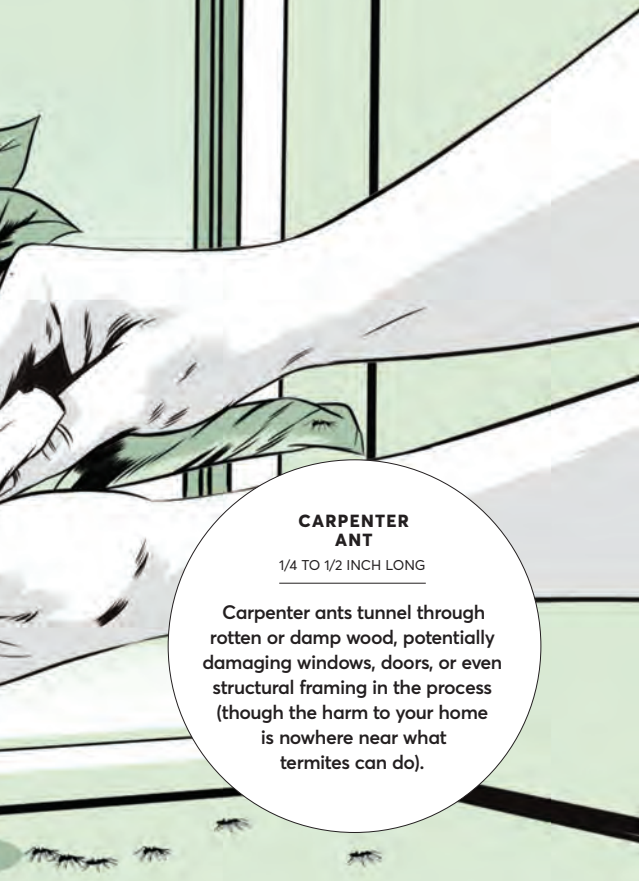


**1951** Two new types of electric fans are in stores: the floor air circulator (above left) and the high-velocity air circulator fan (above right). After testing 32 fans, we find that neither is as good as an oscillating fan.



**1960** In a test of 15 air conditioners, the top-rated GE model (below) is the fastest at cooling of all the models in our lab.





#### CARPENTER ANT

1/4 TO 1/2 INCH LONG

Carpenter ants tunnel through rotten or damp wood, potentially damaging windows, doors, or even structural framing in the process (though the harm to your home is nowhere near what termites can do).

#### SET ANT BAITS

This can be a very effective method for controlling an ant infestation—though you may need to try a few brands of baits until you find one that works. Not only will it kill ants that feed on the bait liquid, but scouts will bring bait back to other worker ants and larvae in the colony, which helps control the population.

#### WIPE OFF HOUSEPLANTS

Indoor houseplants, particularly tropical varieties, are very appealing to ants. Scale insects or aphids that live and feed on plants excrete a clear, sweet honeydew that ants like. Wipe leaves clean to help eliminate this food source and consider placing insect control plant spikes in the soil.

## Product Spotlight

# A Printer You Can Count On

IF YOU'RE FRUSTRATED by a balky or busted printer, CR's lead printer tester, Rich Sulin, can sympathize—but he isn't surprised. Tens of thousands of CR members responded to our most recent survey on printers, and many reported problems with major brands.

To help you find models that last, CR now uses survey data to incorporate predicted reliability and owner satisfaction into our Overall Scores for printers, and it has caused some big shifts in our ratings.

Because of consumer data we received about the poor reliability of Epson printers, we no longer recommend any Epson models, along with some types of printers from Samsung and HP. We also found that inkjets, though great for printing photos, tend to be more problematic than laser printers. If you need to print photos, your best bet is with a well-rated all-in-one inkjet model from Brother, Canon, or HP, which all earn Good brand reliability ratings (see right).

"Good" not good enough for you? There are some very reliable brands of color lasers, but they tend to be pricey and are better at printing color graphics than photos. If you need to print only text, go for an all-in-one, black-and-white laser printer from Brother, Canon, or HP instead; they rate Excellent for predicted reliability. You may have to pay more up front, but laser printers can save you money in the long run because toner cartridges last much longer than ink ones.

"If you can afford the initial cost, a reliable laser printer is the best choice for many people," Sulin says.

### PREDICTED BRAND RELIABILITY

#### ALL-IN-ONE BLACK-AND-WHITE LASERS

Brother	↑
Canon	↑
HP	↑
Samsung	↑
Dell	↓

#### ALL-IN-ONE COLOR LASERS

Brother	↑
HP	↑
Canon	↓
Dell	↓
Samsung	↓

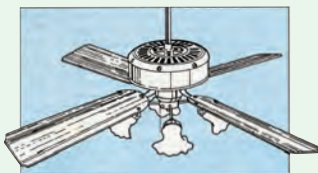
#### ALL-IN-ONE INKJETS

Brother	↓
Canon	↓
HP	↓
Epson	↓
Kodak	↓

Source: Consumer Reports' 2018 Survey.



**1973** We pit two similar-looking A/Cs against each other. The top-rated 5,500-Btu General Electric (below left) is a high-efficiency unit. But we estimate that the 5,000-Btu GE model (below right) uses about 30 percent more electricity.



**1989** A ceiling fan is "a romantic way to stir the air," we say. But it might not work well with low ceilings and can't dehumidify like an A/C.

**1992** The Environmental Protection Agency introduces Energy Star as a voluntary labeling program to identify and promote energy-efficient products.



**Whynter ARC-12SDH**  
\$460

**67**  
OVERALL SCORE



**2019** Along with window units, we test portable A/Cs. The unit above is a top portable performer.

**1967** Filter cleaning is the most frequent maintenance chore. In our testing, we discover that Quiet Kool's filter, in a slide-out frame, is the easiest to remove.







*Still Confused By ...*

# What's Really in Your Toothpaste?

IF YOU'VE BEEN concerned about your toothpaste having triclosan—an antibacterial that helps prevent gingivitis—the good news is that it's essentially gone from the market, though it's still technically permitted. Its removal is probably due to widespread circulation of research suggesting that triclosan may disrupt

some thyroid hormones and immunity, and contribute to antibiotic resistance overall, says Tunde Akinleye, a chemist in CR's food safety division. (Triclosan was banned from hand soaps and body washes in 2017.) Until a few months ago, Colgate Total was still including the ingredient. But it has now been updated to a triclosan-free

formula, renamed Colgate Total SF. That's good news for consumers, Akinleye says, "because triclosan is just not worth the risk." So if you have a tube of the old formula in your bathroom, we suggest tossing it. Wondering what else may be in your toothpaste? Here are a few words worth paying attention to.

## ADA SEAL OF ACCEPTANCE

A toothpaste bearing this seal from the American Dental Association must be safe and effective at whatever its label claims. It also must contain fluoride, have no ingredients that "cause or contribute to" decay, and must not harm teeth.



## ABRASIVES

Calcium carbonate and modified silica help to remove food debris and surface stains.

## BAKING SODA

Toothpaste with baking soda (sodium bicarbonate) shows some promise for reducing plaque and may slightly decrease gum bleeding with gingivitis compared with toothpaste that doesn't have it.

## DESENSITIZERS

Used regularly, ingredients such as sodium

citrate, casein phosphopeptide, and potassium nitrate may help relieve uncomfortable sensitivity. They "are effective in some people and not in others," says Richard Niederman, D.M.D., professor at the NYU College of Dentistry.

## FLUORIDE

This active ingredient comes in several different forms (including sodium fluoride and stannous fluoride) and helps protect teeth from

decay. "Fluoride is effective at reducing cavities by 20 to 30 percent," Niederman says. Stannous fluoride may also help with sensitivity and gum inflammation. You can buy fluoride-free toothpaste, but it probably won't help reduce cavities.

## SODIUM LAURYL SULFATE (SLS)

SLS is called a detergent, but it has little cleaning power. Instead, it creates foam to help circulate the toothpaste into nooks and crannies.

Some people may get canker sores or experience peeling of mouth tissue in as little as one use. If you're among them, look for SLS-free or "non-foaming" toothpaste.

## WHITENERS

Basic whiteners include hydrogen peroxide, which chemically lightens teeth, and polyphosphates like sodium hexametaphosphate, said to help with enamel staining. But some experts say these aren't

concentrated enough or in contact with tooth surfaces long enough to make a noticeable difference. And polyphosphates may cause mouth irritations.

## XYLITOL

Some small studies suggest that toothpaste with both fluoride and xylitol may be better at cavity prevention than a fluoride-only product. But experts say that even brushing several times daily is unlikely to deliver enough xylitol to provide a benefit.



## CR Money-Saver

# VACATIONING WITH YOUR PET

If you're a pet owner, it's no secret that dog sitters and kennels are a pricey addition to your vacation costs. But don't assume that bringing your schnoodle pup along will always be cheaper, our money experts say. Airlines usually charge around \$125 one way to fly with a small dog to most destinations. And because your pet—which must be in an airline-compliant carrier—counts as a carry-on item, you may need to pay to check your suitcase. (Larger dogs often need to fly in the cargo hold, which can cost up to \$1,000 each way.) Go to [pettravel.com](http://pettravel.com) or [bringfido.com](http://bringfido.com) to see what airlines charge and add up the costs before booking.

To save on fees, consider a road trip instead. Most car rental companies are pet-friendly and don't charge additional fees. Just put a sheet over the seat or quickly vacuum to avoid cleaning fees. And look for hotel chains that let pets stay free, such as Kimpton Hotels, Motel 6, and Red Roof Inn.

## Food Sleuth

# A Healthier Trail Mix

"TRAIL MIX" EVOKES images of buff people hiking on spectacular wooded trails. But some companies have been crowding their nutrient-dense ingredients with indulgences such as yogurt-coated raisins and candy-coated chocolates. Tasty though they are, they displace healthier ingredients and don't add valuable nutrients. "Yogurt coating, for example, can have hydrogenated oils and added sugars—things you want to

avoid," says Amy Keating, a registered dietitian at CR. And while yogurt itself packs bone-building calcium and gut-healthy probiotics, a bit of powdered yogurt on coated raisins is unlikely to contain much of either. To keep your mix maximized for healthfulness, look for an ingredients list of fruits and nuts or seeds. Our suggestions below all have a serving size of ¼ cup, except for the Planters mix, which is 3 tablespoons.



**NUT-FREE**  
**Enjoy Life Seed & Fruit Mix**  
**Mountain Mambo**

CALORIES	130
SUGARS	8 g
SODIUM	25 mg

**CONTAINS** Sunflower and pumpkin seeds, raisins, sweetened dried cranberries, chocolate chips, dried apples.

**NUTRITION NOTES** Modest amounts of dark and even milk chocolate may have some health benefits—so a small amount is okay.



**NO SODIUM**  
**Back to Nature Harvest Blend**

CALORIES	140
SUGARS	7 g
SODIUM	0 mg

**CONTAINS** Raisins, almonds, pumpkin seed kernels, sunflower seed kernels, dried apricots, pecans, sunflower oil.

**NUTRITION NOTES** A good choice if you want to cut back on sodium, this blend also has no added sugar but promises a "zesty" flavor.



**LOW IN SUGARS**  
**Trader Joe's Go Raw Trek Mix**

CALORIES	150
SUGARS	5 g
SODIUM	5 mg

**CONTAINS** Raisins, cashews, walnuts, almonds, filberts.

**NUTRITION NOTES** A winner for its simple ingredients, with a good amount of protein and without added sugars or salt. Also available in 1.5-ounce preportioned packets for on-the-go snacking.



**SWEET & SALTY**  
**Planters Nutrition Omega-3 Mix**

CALORIES	160
SUGARS	6 g
SODIUM	25 mg

**CONTAINS** Cashews, walnuts, raisins, dried apple pieces with sugar and cinnamon, peanut oil, sea salt, high oleic sunflower oil.

**NUTRITION NOTES** The apple, cinnamon, and raisin flavors may help satisfy a sweet tooth while still being relatively low in sugars.

**JUNE IS THE BEST TIME TO BUY ...**

### PRESSURE WASHERS

DIY stores often offer discounts on last year's models.

For more info, go to [CR.org/buy0619](http://CR.org/buy0619).

### SUNSCREENS

At the start of the season, "buy one, get one" sales will help you save on sun protection.

### DRILLS

Look for Father's Day deals in the first two weeks of the month.



## RECALLS

TO STAY INFORMED ABOUT RECALLS FOR YOUR VEHICLES, READERS WITH MEMBERSHIP CAN USE OUR FREE CAR RECALL TRACKER AT **CR.ORG/MORE**.



### SUBARU VEHICLES

Subaru is recalling 1,303,530 vehicles because the brake light switch could malfunction, preventing the light from turning on properly. It may also prevent keyless ignition vehicles from starting and CVT/automatic transmissions from being able to be shifted out of Park. Models included in the recall are certain 2014-2016 Forester SUVs, 2008-2016 Impreza sedans, 2012-2016 Impreza station wagons, 2008-2014 WRX sedans (including STi), and 2013-2017 Crosstrek SUVs.

**What to do:** Dealers will replace the brake light switch free of charge. Call Subaru at 844-373-6614 for more details. The number for this recall is WUE-90.

### RECHARGEABLE FLASHLIGHTS

Harbor Freight Tools is recalling about 500,000 80-lumen 12V rechargeable flashlights because they can overheat while charging and pose a burn hazard. The flashlights were sold at Harbor Freight Tools stores from August 2018 through January 2018 for \$2 to \$4.

**What to do:** Stop using the flashlight and return it to any Harbor Freight Tools store in exchange for a \$5 Harbor Freight Tools gift card. Call Harbor Freight Tools at 800-444-3353 or go to [harborfreight.com](http://harborfreight.com) for more details.

### PORTABLE GENERATORS

American Honda is recalling about 200,000 portable generators because they can leak gasoline from a fuel valve and pose fire and burn hazards. The generators were sold at Honda Power Equipment dealers and home improvement stores and online from February 2018 through February 2019 for about \$1,100 to \$1,300.

**What to do:** Stop using the generator and contact an authorized Honda Power Equipment service dealer to schedule a free repair. Call American Honda at 888-888-3139 or go to [powerequipment.honda.com](http://powerequipment.honda.com) for model details.

### PROPANE TORCHES

Harbor Freight Tools is recalling about 150,000 Greenwood-branded propane torches because the trigger that engages the flame can fail to disengage when the trigger is no longer pressed, posing a burn hazard. The torches were sold at Harbor Freight Tools stores and website from November 2013 through October 2018 for \$20 to \$30.

**What to do:** Stop using the torch and return it to any Harbor Freight Tools store for a free replacement torch. Call Harbor Freight Tools at 800-444-3353 or go to [harborfreight.com](http://harborfreight.com) for further details.

### LITHIUM-ION BATTERIES

HP is expanding a recall of lithium-ion batteries for HP commercial notebook computers and mobile workstations because the batteries can overheat and pose fire and burn hazards. This recall includes about 78,500 batteries, in addition to 50,000 already recalled in January 2018. The batteries were found in computers sold at HP and authorized dealers and online from December 2015 through April 2018 for \$300 to \$4,000, and were also sold separately between December 2015 and December 2018 for \$50 to \$90.

**What to do:** Go to [hp.com/go/batteryprogram2018](http://hp.com/go/batteryprogram2018) to see whether your battery is included in the recall, and if it is, to get instructions on how to enable "Battery Safety Mode." The batteries are not customer-replaceable, and HP is offering free battery replacement services to consumers. Call HP at 866-671-7362 for more details.

### ANESTHETIC CREAM

Clinical Resolution Laboratory is recalling about 26,500 packages

of Numb 100 Topical Anesthetic Cream because the packaging is not child resistant as required by the Poison Prevention Packaging Act. The cream contains lidocaine, which poses a risk of poisoning to young children if they put it on their skin or ingest it. The cream was sold at health and beauty stores and online from May 2017 through November 2018 for about \$18.

**What to do:** Put the cream out of reach of children. Call Clinical Resolution Laboratory at 877-566-9687 for details and to get a full refund or a free replacement cream or child-resistant cap.

### ANESTHETIC GEL

Biotouch is recalling about 8,500 packages of EZY Gel Topical Anesthetic because the package is not child resistant as required by the Poison Prevention Packaging Act. The gel contains lidocaine, which poses a risk of poisoning to young children. The gel was sold at Biotouch and other stores and online from August 2013 through August 2018 for about \$60.

**What to do:** Put the gel out of reach of children. Call Biotouch at 844-557-9023 or go to [biotouch.com](http://biotouch.com) for details and to get a full refund.

### SAUTÉ PANS

H-E-B is recalling about 12,000 Kitchen & Table 5.5-quart sauté pans with glass lid because the lid can crack or shatter during normal use and pose a risk of laceration. The pans were sold at H-E-B stores in Texas and at [heb.com](http://heb.com) from May 2018 through January 2019 for about \$30.

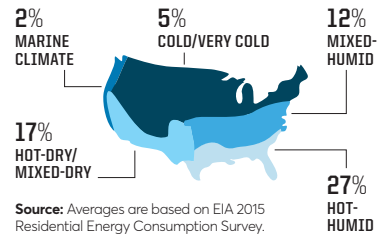
**What to do:** Stop using the pan. Call H-E-B at 855-432-4438 or go to [heb.com](http://heb.com) for details and instructions on how to return it for a full refund.



# Product Update

The latest ratings from our labs

How much of your home energy bill is spent on air conditioning?



## How to Beat the Heat

In search of better A/C? Don't sweat it. Our expert testing and advice will help you chill out on the hottest summer days without overspending.

by Mary H.J. Farrell



INSIDE  
CR'S LABS

Chris Regan, a senior test project engineer, moves an LG window A/C into CR's climate-controlled chamber.

**FEW THINGS CAN** suck the fun out of summer faster than a weak or fickle air conditioner—except, perhaps, a broken one. Whether it's central air conditioning or a window unit, we all want air conditioning that cools quickly, runs quietly, and soldiers on when we need it most.

To help you find a dependable cooling system, we put 22 window and portable air conditioning units through rigorous testing in our lab—starting with a simulated heat wave. In a climate-controlled chamber, we cranked up the temperature to 90° F, then measured how long it took a window A/C to lower the temperature by 10° F and a portable unit by 5° F. We checked thermostat accuracy by setting window units at 75° F and portables at 80° F. Then we gauged how noisy the units are and how well they operate and recover during brownout and blackout conditions when voltage is low or power is off.

But we didn't stop our evaluation

there. We also factored in predicted reliability and owner satisfaction ratings from our latest annual member survey of the owners of 6,729 room air conditioners. To calculate a brand's predicted reliability, we asked our members about the products they own, and used the data to make projections about how new models from a given brand would hold up over time. We also asked how likely members were to recommend their air conditioner, and then translated their answers into an owner satisfaction rating. We wrapped all of that testing and survey information into the Overall Scores you see in our A/C ratings on page 23.

The results yielded a cool surprise: Every brand of window A/C in our survey earns an Excellent rating for reliability. That makes them one of the most reliable products we test. Portable units also proved to be reliable, though some brands didn't fare quite as well. Three of 7 brands earn an Excellent for reliability.

## BEST WINDOW UNIT IN EACH CATEGORY



5,000 TO 6,500 BTU/HR.

✓ **LG LW6019ER**  
\$270

78

OVERALL  
SCORE



7,000 TO 8,500 BTU/HR.

✓ **Kenmore Elite 77087**  
\$310

78

OVERALL  
SCORE

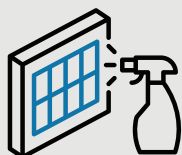


9,800 TO 12,500 BTU/HR.

✓ **SPT WA-12FMS1**  
\$340

80

OVERALL  
SCORE



## TLC for Your A/C

Dirt is the enemy of an efficient unit. If you keep it clean and maintain it year-round, you'll be rewarded with steady cooling for years and lower utility bills.

## WINDOW AND PORTABLE AIR CONDITIONERS

**Spring:** If you removed an air conditioner from a window last year, reinstall it following your owner's manual. If you left it in place, inspect the window seals around it to make sure air isn't passing through. If you notice leaks, reseal around the unit with weather stripping.

**Summer:** Take out the filter at least once a month, vacuum it with an upholstery brush, then wash it using a mild

solution of dishwashing liquid and warm water. Let it dry before putting it back.

**Fall:** Window units are built to withstand colder weather, so you don't need to remove them from windows if it's a hardship. "But doing so will extend the life of the product," says Tom Kelly, senior product manager for GE Appliances.

Whichever option you choose, make sure you clean the filter

one more time before shutting down the A/C for the season.

If you leave it in place, you can prevent cold air from wafting into your home by covering the indoor side with plastic or cloth covers sold online for about \$10 to \$20. Make sure the side panels are also properly insulated.

Portable air conditioners require one extra step: Drain the internal water tank before storing the unit.



With so many dependable options to choose from, start by looking for the products in our ratings that match the square footage of the room you want to cool. Don't just go for the highest Btu you can find. A unit that's too powerful will cool your space too quickly without removing enough humidity, making the air feel clammy.

"Then consumers should take a closer look at the owner satisfaction ratings when considering which one to buy," says Simon Slater, CR's associate director of survey research. Of nine window unit brands, only Friedrich earns a Very Good rating for satisfaction. Four brands earn a middling rating of Good, and four earn a score of Fair. (None rate Poor.) For portable units, most were reliable but not very well-liked.

Because the installation of central air conditioning differs from home to home—based on floor plans, ductwork, and other factors—CR doesn't test these systems. Instead,

we rate brands for reliability based on what our members tell us about the systems they purchased and had installed over the past decade. Our central-air reliability ratings include 21 national brands (see chart at right).

If you haven't shopped for a new air conditioner in a while, you'll be happy to know that newer models—both room and central—come with features that add convenience and save energy. More window units are WiFi compatible, allowing you to control them remotely from your smartphone (see "Smart Moves to Keep You Cool," on page 22). And by taking advantage of these smart features, you can enroll in utility programs designed to save money and energy (see "Can Your Utility Company Help Save You Money?" on page 22).

And no matter how you cool your home when it's hot, we've got simple maintenance tips to keep your system in top condition all year long.

## Considering Central Air?

You'll want a brand that's predicted to last and well-liked by owners. The brands below that earn an orange rating of Fair are more trouble-prone and aren't eligible to be recommended by CR. The more reliable brands also tend to have higher owner satisfaction ratings.

Brand	Predicted Reliability	Owner Satisfaction
Trane	⬆	⬆
Armstrong	⬆	⬆
Ducane	⬆	⬆
American Standard	⬆	⬆
Bryant	⬆	⬆
Lennox	⬆	⬆
Carrier	⬆	⬆
Payne	⬇	⬇
Rheem	⬇	⬆
Ruud	⬇	⬆
Arcoaire	⬇	⬇
Day & Night	⬇	⬇
Heil	⬇	⬇
Tempstar	⬇	⬇
Amana	⬇	⬇
Goodman	⬇	⬇
Coleman	⬇	⬇
Luxaire	⬇	⬇
York	⬇	⬇
Frigidaire	⬇	⬇
Maytag	⬇	⬇

Source: Consumer Reports' 2017 Fall Survey and 2018 Summer Survey, covering 21,770 units.

### CENTRAL AIR CONDITIONERS

**Spring:** Now is the best time to service your system. (If it's part of a central heating system, have it serviced again in the fall.) Hire a licensed professional to change or clean any filters, clean and flush the coils, inspect the condensate drain, and vacuum the blower compartments. The contractor should make sure that the system has the proper amount of refrigerant and that there are no leaks or mechanical problems.

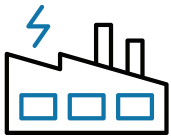
**Summer:** When there's heavy use, check and possibly change filters at least once a month. Make sure that shrubs and tree branches don't encroach on the outdoor condenser, which will affect the unit's efficiency. Keep vegetation at least 2 feet away.

**Fall:** Wondering whether your outside unit should be covered during the off-season? Usually not, according to Stewart

Unsdorfer, president of Central Heating & Air Conditioning in Cleveland. It's built to withstand the rain and snow, he says.

In fact, covering a unit traps moisture, which can lead to rust or mildew and provide a haven for rodents. But you can shield just the top of it in the spring and fall to prevent seedlings and leaves from dropping inside. (Be sure to remove the shield before you use the unit again.)





## Can Your Utility Company Help You Save Money?

**NEXT TIME YOU** open your electric bill, take time to read the notices stuffed in the envelope. It may save you money if you're willing to be flexible on your air conditioning preferences.

Utilities across the U.S. are offering incentives in exchange for the ability to adjust the temperature in your home during times of peak power demand.

The various programs, with such names as Cool Points, Peak Rewards, Smart Therm, and Bring Your Own Thermostat (BYOT), offer benefits that include free thermostats and rebates or credits on your bill if you use less energy when there's high demand.

Collectively called "demand response," these programs are designed to reduce stress on your local electric grid during the hottest times of the day by encouraging consumers to use less energy or to shift energy-intensive tasks to times when demand and rates are lower, often at night.

A hallmark of most programs is that they require you to register a smart thermostat or smart A/C with a utility, essentially giving it permission to take control of your air conditioning system on very hot days. That can mean turning your A/C off for a short time, but more typically it means adjusting the temperature upward.

"If you enroll in the program, when the grid is under stress we can bump up the temperature in your house from, say, 68 degrees to 71 degrees," says Shira Horowitz, manager of demand response for Con Edison in New York. "And when you use less energy, you save."

In addition to the savings you'll see on your bill, some utilities offer extra financial incentives for enrolling in a demand response program.

With Con Edison's BYOT program, for example, you get a one-time sign-up bonus of \$135: \$85 for

enrolling your thermostat and a \$50 energy-efficiency rebate. The company says that 25,000 of its customers have enrolled a total of 34,000 thermostats.

Before the advent of smart thermostats, taking advantage of these programs was more difficult because utilities usually had to go into homes to install demand response switches. But now most utilities allow people to enroll on company websites if they have a compatible smart thermostat, such as the Nest or Lyric.

"The idea that consumers can use their own thermostats has helped increase participation," says Jessie Mehrhoff, a research analyst at Navigant Research, which studies the energy sector.

Worried that you'll be sweating it out if you sign up? Joining may be less of an inconvenience than you'd imagine. Last year Con Edison adjusted home A/C temperatures during four peak power events in New York. Plus, if a utility nudges your temperature up at a time when you'd rather have it cooler, you still have the option to manually change it back to your desired temperature, Mehrhoff says. There's no penalty; you just won't see savings for that particular demand response event.

### SMART MOVES TO KEEP YOU COOL

Smart thermostats like the ones from Ecobee, Honeywell (Lyric), and Nest have made it easy to control a central air conditioning system from your smartphone.

But what about window units? Over the past few years we've seen more of them come equipped with smart capabilities. Haier, for example, which makes GE


air conditioners as well as its own, offers smart features on many of its A/C units.

A WiFi-enabled window unit costs about \$30 to \$50 more than one without smart capabilities, according to John Desmarais, senior marketing director at GE Appliances. "And they work on any connected platform, including Alexa, Apple, and Google Home," he says.

With a smart A/C you can turn it on and off remotely and also check and change the temperature, control modes and fan speeds, and set up a cooling schedule. In some cases, you can connect several air conditioners and run them at the same time. Some apps even monitor your energy use and send you alerts when your air filter needs cleaning.

Of the window A/Cs in our ratings, five have smart features or can be connected with an add-on kit. Although we didn't test every app, Chris Regan, who oversees our air conditioner tests, took a smart A/C home and said he appreciated the convenience of controlling it remotely. Even so, when shopping, first consider how well a unit actually cools.

**Ratings** ➤ **Cold Comforts** To help you find a quality air conditioner that lasts, our experts combined the cold, hard facts from our performance tests with data on predicted reliability and owner satisfaction.

		Brand & Model	Overall Score	Price	Survey Results		Test Results					Specs					
Rec.	Rank				Predicted reliability	Owner satisfaction	Comfort	Indoor noise, low	Indoor noise, high	Brownout	Ease of use	Btu/hour	EER	Min. window width (in.)	Max. window width (in.)	Weight (lb.)	Remote control
WINDOW AIR CONDITIONERS 5,000 TO 6,500 BTU/HR. (COOLS 100-300 SQ. FT.)																	
✓	1	LG LW6019ER	78	\$270	⬆	⬇	⬆	⬆	⬆	⬆	⬆	6,000	12.4	23	37	56	●
✓	2	Amana AMAP061BW	74	\$200	⬆	⬇	⬆	⬇	⬇	⬆	⬇	6,000	12.2	24	39	44	●
✓	3	SPT WA-6022S	74	\$200	—	—	⬆	⬆	⬇	⬆	⬇	6,000	11.2	23	39	45	●
✓	4	Kenmore 77060	73	\$220	⬆	⬇	⬆	⬆	⬇	⬆	⬇	6,000	12.2	23	39	45	●
	5	Toshiba RAC-WK0611CRU (Home Depot)	70	\$219	—	—	⬆	⬆	⬇	⬆	⬇	6,000	11.1	23	39	43	●
	6	Friedrich CP06G10B*	68	\$320	⬆	⬆	⬆	⬆	⬆	⬇	⬇	6,000	12.2	22	36	62	●
	7	Frigidaire Gallery FGRC0644U1	60	\$280	⬆	⬇	⬇	⬆	⬇	⬆	⬇	6,000	12.2	23	39	46	●
	8	GE AEW05LY (Walmart)	51	\$156	⬆	⬇	⬇	⬆	⬇	⬆	⬇	5,100	11.2	23	37	43	●

WINDOW AIR CONDITIONERS 7,000 TO 8,500 BTU/HR. (COOLS 250-400 SQ. FT.)																	
✓	1	Kenmore Elite 77087	78	\$310	⬆	⬇	⬆	⬆	⬇	⬆	⬆	8,000	12.1	23	37	58	•
✓	2	Kenmore 77080	76	\$270	⬆	⬇	⬆	⬇	⬇	⬆	⬇	8,000	12	23	39	52	•
	3	Whirlpool WHAW081BW	73	\$250	⬆	⬇	⬆	⬇	⬇	⬆	⬇	8,000	12.1	24	39	51	•
	4	Frigidaire FFRA0811U1	70	\$285	⬆	⬇	⬆	⬇	⬇	⬆	⬇	8,000	11	22	39	49	•

WINDOW AIR CONDITIONERS 9,800 TO 12,500 BTU/HR. (COOLS 350-650 SQ. FT.)																	
✓	1	SPT WA-12FMS1	80	\$340	—	—	⬆	⬇	⬇	⬆	⬆	12,000	12	24	37	68	•
✓	2	Frigidaire Gallery FGRC1244T1	76	\$470	⬆	⬇	⬆	⬇	⬇	⬆	⬇	12,000	12	24	36	74	•
✓	3	Kenmore 77120	75	\$370	⬆	⬇	⬆	⬇	⬇	⬆	⬇	12,000	12	23	38	70	•
	4	Toshiba RAC-WK1011ESCWU (Home Depot)	70	\$350	—	—	⬇	⬇	⬇	⬆	⬇	10,000	12	24	38	61	•

		Brand & Model	Overall Score	Price	Survey Results		Test Results				Specs					
Rec.	Rank				Predicted reliability	Owner satisfaction	Comfort	Indoor noise, low	Indoor noise, high	Brownout	Btu/hour	Electronic control with built-in timer	Auto-fan speed	Dirty filter indicator	Weight (lb.)	Remote control

PORTABLE AIR CONDITIONERS 9,000 TO 15,500 BTU/HR.																	
	1	Whynter ARC-14SH	67	\$450	⬆	⬇	⬇	⬇	⬆	14,000	●			80	●		
	2	Whynter ARC-12SDH	67	\$460	⬆	⬇	⬇	⬇	⬆	12,000	●			71	●		
	3	Honeywell HL12CESWB	64	\$550	⬆	⬇	⬇	⬆	⬆	12,000	●			67	●		
	4	Honeywell MM14CCS	62	\$600	⬆	⬇	⬇	⬇	⬆	14,000	●	●	●	74	●		
	5	LG LP1417SHR	61	\$650	⬆	⬇	⬇	⬇	⬆	14,000	●			77	●		
	6	Honeywell MN10CES	60	\$450	⬆	⬇	⬇	⬇	⬆	10,000	●	●	●	64	●		

**HOW WE TEST:** After installing a unit in a double-hung window in our test chamber, we measure how long it takes the A/C to cool a 90° F room. We also gauge temperature accuracy, whether each model

can recover after a brownout or blackout, and how loud each unit is. **Overall Score** combines test results with survey data for predicted reliability and owner satisfaction. **Predicted reliability** estimates the

likelihood that newly purchased models from a given brand will encounter problems within the first four years. **Owner satisfaction** is based on the proportion of CR members who are extremely likely

to recommend their A/C. In cases where we have insufficient survey data to provide a brand-level rating, as indicated by a gray dash (—), we assume the model has average reliability and satisfaction.

## REAL PAIN RELIEF, NOW!

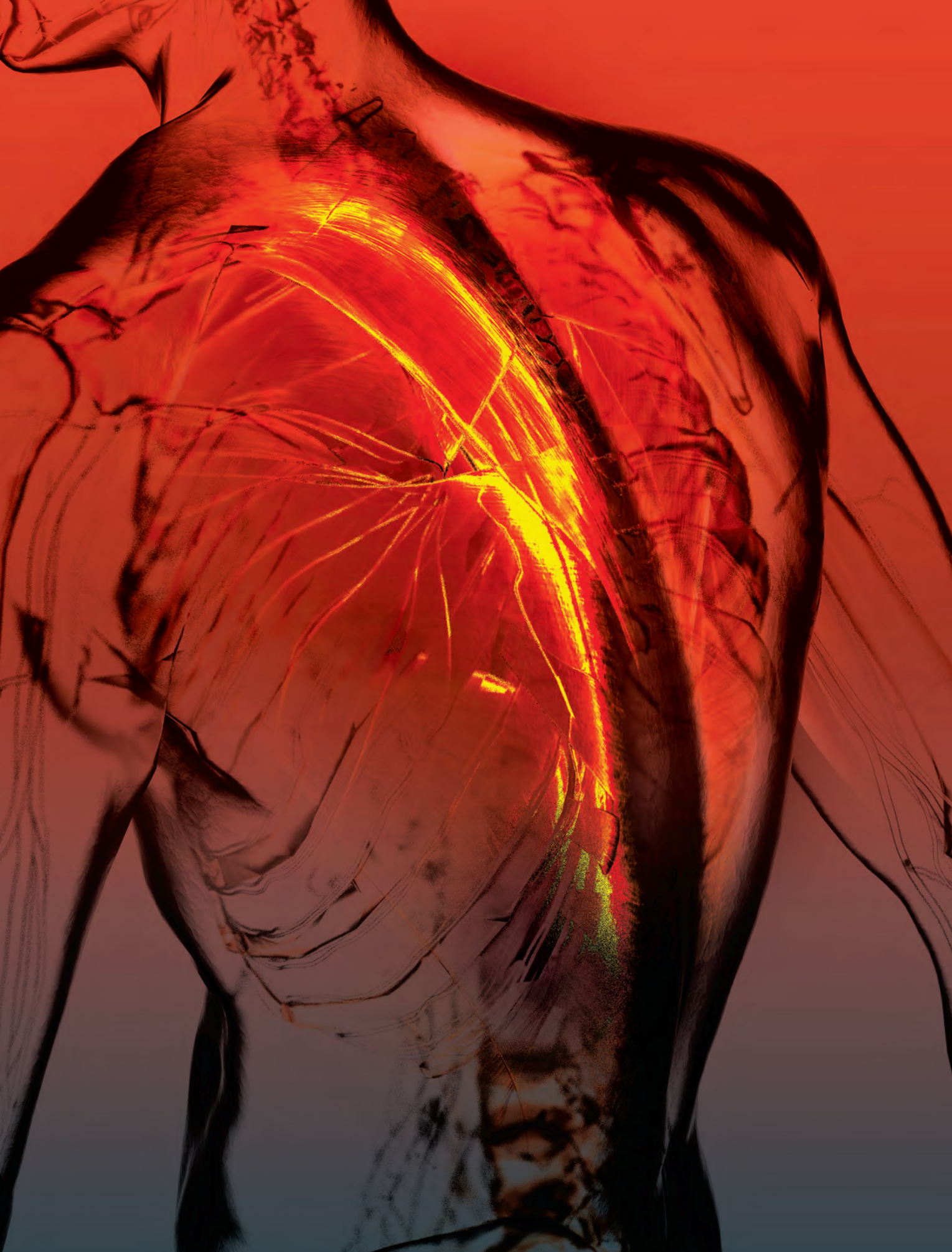
1 IN 5 AMERICANS

has chronic pain, and many are desperate for safe and effective treatments. As awareness of the dangers of opioids grows, we explore the latest research on supplements, massage, aquatic exercise, sleep, and more.

**BY TERESA CARR**

ILLUSTRATIONS BY BRYAN CHRISTIE DESIGN





## 1.

As a teenager, Michael Davis was a competitive soccer player, a runner, and “a bit of a daredevil.” Around this time, he remembers, a dull, throbbing ache took hold in his back. He didn’t think much of it at first. But after a few years, the ache had escalated to frequent headaches and shooting pain, first down his right leg, then into his neck and shoulders. His daily life was marked by chronic discomfort and pain.

Years after the first signs, X-rays revealed the culprit to be earlier, undiagnosed fractures in Davis’ lower vertebrae. The initial injury had healed, but the damage left nerves still signaling pain, which spread and worsened.

“I was an upbeat kid, but I became more of a pessimist,” says Davis, now 27, who lives in Dallas. “In my darkest moments, I just wanted to retreat from life.”

Chronic pain is a common problem for Americans, touching all age groups and demographics. A report from the Centers for Disease Control and Prevention last fall estimated that 1 in 5 adults—about 50 million Americans—reported hurting every day or almost every day in the previous six months. Nearly 20 million reported pain so severe it limited their ability to work, socialize, and even take care of themselves and their family.

Davis eventually found relief, using physical therapy, yoga, and other strategies we’ve detailed in this guide. But by the time he found a way out, pain had ruled his life for over a decade.

#### A SHORTAGE OF EXPERTISE

For years, Davis bounced around among healthcare providers as he searched for a way to stop the pain. Surgeons operated on his spine and shoulder. He underwent nerve-block treatments, and injections of steroids and blood platelets. Nothing helped.

Medications—including over-the-counter pain relievers, muscle relaxants, opioids, and others—provided some relief, he says, but the pain always came roaring back. “It was like putting a Band-Aid on a gunshot wound.”

People with chronic pain frequently have trouble accessing the right care, says Daniel Clauw, M.D., director of the Chronic Pain and Fatigue Research Center at the University of Michigan Medical School. “One problem is that there are far too few trained pain specialists,” he says.

According to one report prepared for Congress by a task force of 29 experts, “for every physician certified in pain care,

there are more than 28,500 Americans living with chronic pain.”

Many primary care doctors “learned to treat chronic pain the same way they treat short-term pain from surgery or an injury—with opioids,” Clauw says. But most evidence shows these potent drugs don’t work well against long-term pain, and they come with the risk of addiction, misuse, and overdose. From 2012 to 2017, as opioids came under increased scrutiny, the number of doctors writing new prescriptions dropped by nearly one-third, according to a recent analysis of insurance claims published in the *New England Journal of Medicine*.

Safer, more effective, often non-pharmaceutical alternatives are gaining favor. In a 2017 *JAMA* review, Clauw and colleagues outlined an approach for treating chronic pain that can include surgery and medication but relies primarily on other treatments, such as counseling, mindfulness and meditation, hands-on therapies, and exercise.

Mounting evidence shows that this combination of strategies, some of which are covered by insurance, works well against chronic pain.

### WHY THERE'S NO PERFECT PILL

Davis began to get his life back after he stopped looking for a silver-bullet cure, such as surgery or the perfect drug. Instead, he built a plan with pieces of what he had learned from practitioners—and trial and error—along the way.

Now an accountant at a large firm, Davis adjusted his workspace so that he wasn’t hunched over or straining. He also worked with a physical therapist to develop a regimen of exercises and stretches to fit in during short breaks in his workday. He started and ended each day with a few minutes of yoga, followed a healthy diet, and got enough sleep.

Gradually, his pain eased. After three or four months he stopped taking opioids—which he’d taken intermittently to control major spikes in pain—and now only occasionally takes an over-the-counter pain reliever. “I’ve

become more attuned to my body,” he says. “When I have a flare-up, I know the stretches that will help.” Today, while he still has some pain, “it’s levels down from where it used to be. Just to be able to run again—it’s amazing.”

Davis’ journey into and eventually out of chronic pain reflects the latest understanding of why pain can linger or increase after an injury has healed—and what it takes to get better, says David Tauben, M.D., chief of pain medicine at the University of Washington School of Medicine.

“Pain is an alert, a signal from the brain that there’s something really wrong you need to pay attention to for your survival, be that a rock in your shoe or a broken ankle,” he says. Typically, the pain fades after you address the problem and the body has a chance to heal. But sometimes the nervous system malfunctions, he says. “It gets stuck in the position of ‘I hurt and I’m in danger.’”

Medications can help ease the pain, but calming the nervous system requires nondrug measures, Tauben says. Treatment plans vary, he says, but they’re based on the same core elements: medical treatment for underlying health problems, physical activity to help restore function, and psychological counseling to help you identify and change thought patterns and behavior that can worsen pain.

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50  
million

Number of Americans who reported hurting every day (or almost every day) in the previous six months.

Source: CDC 2016 National Health Interview Survey.

### MAKE A PERSONALIZED PLAN

For many chronic pain sufferers, it can be challenging to find effective long-term care that is also covered by insurance. States are pushing insurers to cover more nondrug treatments, and patients can access some resources on their own through community centers, books, and apps. Still, “talking and listening to pain patients and working through all of the nondrug and non-opioid options” is time-consuming for doctors and not especially lucrative, Clauw says.

Even so, some medical professionals, particularly primary care physicians, are starting to focus on noninvasive and non-opioid options to treat pain. In 2017, the American College of Physicians, which represents primary care doctors, issued guidelines for treating back pain that recommended nondrug measures as the first option.

“Shop around until you find a doctor who will take time to listen to you,” says Jill Schneiderhan, M.D., co-director of integrative family medicine at the University of Michigan Medical School. If you can’t find a clinic that specializes in treating pain, Schneiderhan says a good primary care doctor can also help you find a network of practitioners with different areas of expertise—including a physical therapist, for example—who can collaborate on your treatment.

Our guide on the following pages examines the risks and benefits of three types of treatments: sleep, exercise, and hands-on therapies; drugs and supplements; and surgeries and injections. You should work with your doctor to figure out the combination of treatments that makes the most sense for you.

Schneiderhan also recommends talking to your doctor about how you’ll measure progress. Reducing pain is important, but the most important goal might be improving your ability to move through your daily activities. “Pain can vary widely,” she says. “If we just focus on that, we miss the bigger picture: that there’s this living we are trying to do.”





## Massage, Mindfulness, Sleep, Posture Therapies & More

**ANY SINGLE NONDRUG** approach to treating chronic pain, such as acupuncture or yoga, might offer only modest benefits. But research suggests that combining the treatments is the key to lasting pain relief. “The current state of treatment in chronic pain is that we have a lot of treatments that work a little bit,” says Clauw, at the University of Michigan.

As you and your doctor develop a treatment plan, don’t hesitate to discard a strategy that offers no improvement after a few weeks, he says. Move on and try something else.

### DON'T SKIMP ON SLEEP

Numerous studies have shown that poor sleep can worsen pain, in part because exhaustion can adversely affect brain function. “I can’t help you manage your pain if your brain is on fire,” says Tauben, the University of Washington doctor.

Tauben and other experts CR interviewed say that getting enough sleep can be challenging for people with chronic pain but that it should be one of the first goals in a treatment plan. A psychologist or counselor who specializes in chronic pain can help devise strategies for better sleep, such as sleeping in a dark, quiet room and limiting the use of devices and caffeine before bedtime.

### GET A MOVE ON

People’s instinctive reaction to pain can also set off a vicious cycle of worsening disability, says Beth Darnall, Ph.D.,

clinical professor of anesthesiology, perioperative and pain medicine at Stanford University in California. “They may move less for fear of increasing their pain, which allows muscles to atrophy and negatively impacts mood and sleep.” The way to keep from being dragged into that cycle—or to get out of it—is to incorporate appropriate types of movement into your daily routine.

Physical activity can reduce pain and improve people’s ability to move through their day, according to a Cochrane review of 264 studies involving nearly 20,000 adults with chronic pain. A physical therapist can offer strength and stretching exercises tailored to a person’s needs and abilities. And regular walking, aquatic exercise, and posture improvement programs, such as the Alexander Technique and the Feldenkrais Method, can help reduce pain and make movement easier.

Also consider forms of exercise that incorporate mindfulness, such as tai chi and yoga. In a 2017 Consumer Reports nationally representative survey of 3,562 back pain sufferers, 89 percent of respondents who went to a yoga or tai chi instructor for help said the advice or treatment was beneficial.

### TRY HANDS-ON HEALING

Last year, a comprehensive research review published by the Agency for Healthcare Research and Quality found good evidence that acupuncture helped with chronic back and neck pain and fibromyalgia, that massage helped with

chronic back pain and fibromyalgia, and that spinal manipulation helped with chronic back pain and tension headaches. And a 2017 review by the American College of Physicians found that heat can help ease back pain.

Hands-on therapies help in two ways, Schneiderhan says. A therapist with a solid understanding of anatomy and physiology can help address a physical problem that is triggering pain. For example, massage can break up scar tissue, improve circulation, and help relax tight muscles that may be putting pressure on nearby nerves.

These therapies also can help “bring people back into their bodies,” she says. People struggling with long-term pain tend to disconnect and no longer register cues about what doesn’t feel good. Hands-on treatments increase awareness of the many small factors that contribute to pain, such as slouching at a desk for hours.

### HARNESS BRAIN POWER

The gold standard for psychological treatment of chronic pain is cognitive behavioral therapy. Through a limited, goal-oriented set of CBT sessions—typically seven to 12—the therapist can teach a patient to identify thoughts and behaviors that worsen pain, and replace them with new thought patterns designed to calm the nervous system and relieve pain.

Ask your doctor for a referral or look for a therapist who has training and experience in treating chronic pain, Darnall says. You can search for providers through the Association for Behavioral and Cognitive Therapies ([findcbt.org/fat](http://findcbt.org/fat)) and the American Psychological Association ([locator.apa.org](http://locator.apa.org)). CBT for pain is generally covered by insurance, and sessions can take place in person, online, or by phone.

Other psychological approaches, such as progressive relaxation exercises, mindfulness, and meditation—alone or with CBT—also have been shown to reduce pain.

## 3.

## Fish Oil, Anti-Inflammatories, Muscle Relaxants & More

**THE GOAL OF** pills, patches, and creams is to take the pain down a couple of notches to allow for exercise, work, and socializing—activities vital to recovery. But set realistic expectations, says Clauw, the University of Michigan pain doctor, and always start with the safest option in the lowest dose that’s helpful. The risks of more potent drugs, such as opioids, often outweigh the benefits. “In the best-case scenario, one-third of people taking any single drug will reduce their pain level by half,” Clauw says. Most get far less relief.

### SUPPLEMENTS

There’s no solid data supporting most pain-relief supplements, including glucosamine and chondroitin. Marijuana may relieve certain types of pain. And while little research has been done in humans, preliminary findings suggest that cannabidiol (CBD), a cannabis compound found in marijuana, can reduce inflammation, which could alleviate pain. (See “CBD Goes Mainstream,” in the May 2019 issue of *CR*, or go to [CR.org/cbd](http://CR.org/cbd).) Fish oil reduces inflammation and helps some with rheumatoid arthritis pain. Research has linked vitamin B and D deficiencies to certain types of pain.

### OVER-THE-COUNTER DRUGS

Nonsteroidal anti-inflammatory drugs (NSAIDs), such as ibuprofen (Advil, Motrin, and generic) and naproxen (Aleve and generic), work primarily by reducing painful swelling. Acetaminophen (Tylenol and generic) reduces your brain’s perception of

pain. NSAIDs are typically better for muscle and joint pain, Tauben says; neither is very effective against nerve pain, such as that from shingles.

NSAIDs can be powerful. A 2017 JAMA study showed that patients who received ibuprofen plus acetaminophen for severe pain reported the same amount of pain reduction as those who received an opioid plus acetaminophen. Always check with your doctor before combining any drugs, taking more than the recommended dose, or continuing an OTC drug for longer than 10 days.

Side effects for ibuprofen can include heart attack or stroke, stomach bleeding and kidney disease; for acetaminophen: liver disease.

### TOPICAL PAIN RELIEVERS

Pain relievers in cream or patch form—OTC or prescription—may cause fewer side effects than pills because less of the drug is absorbed into the bloodstream. Their ingredients can help in one of three ways: by reducing pain and inflammation (NSAIDs or aspirinlike compounds called salicylates), by producing a feeling of heat or cold to keep nerves busy transmitting those sensations instead of pain (chili-pepper-derived capsaicin or cooling menthol), or by numbing the area (lidocaine).

“They can provide some relief from mild to moderate pain but not enough for severe symptoms,” Tauben says.

### PRESCRIPTION DRUGS

**Antidepressants.** The only anti-depressant approved for treating

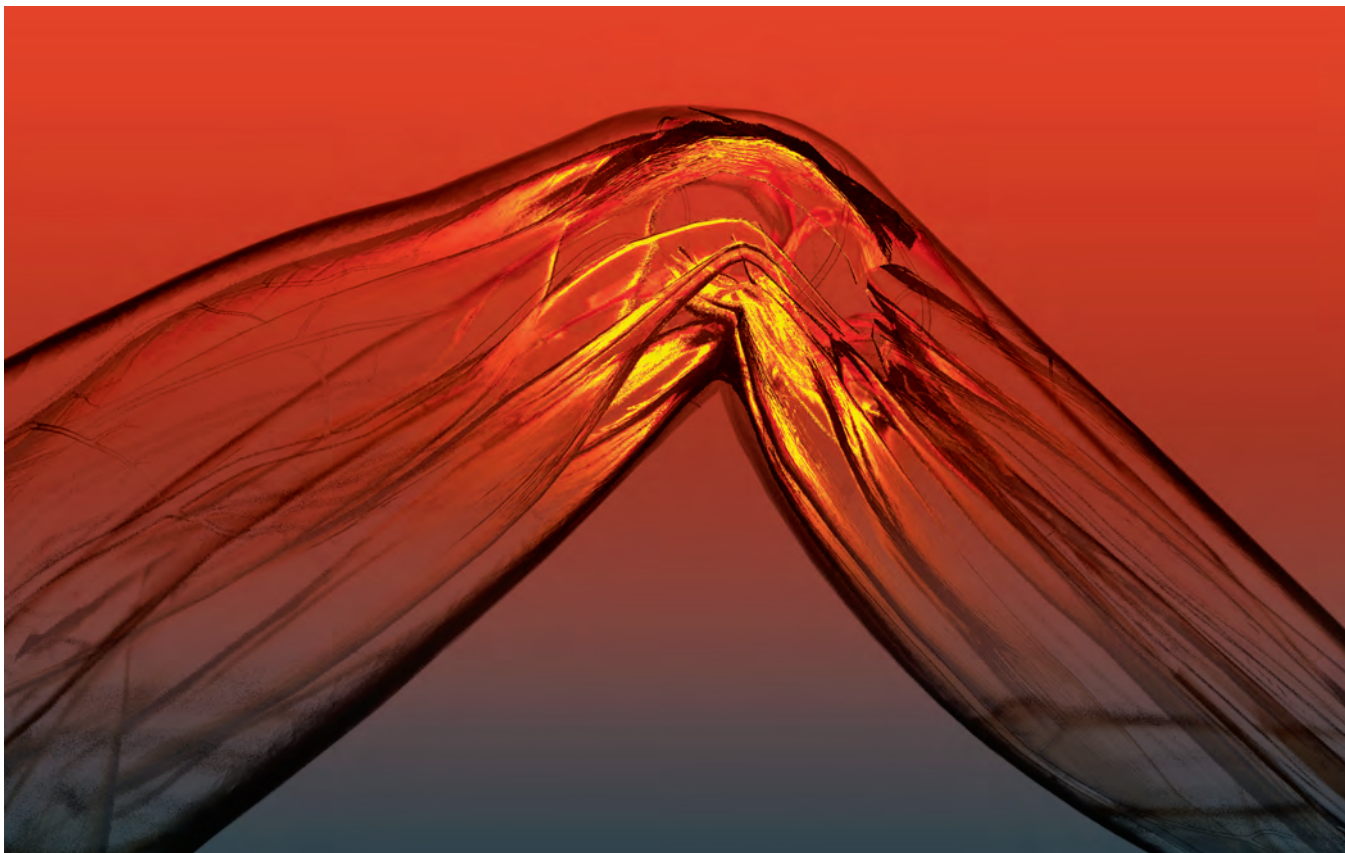
certain types of pain is duloxetine (Cymbalta and generic). But for years, doctors have prescribed other antidepressants off-label. Small doses can help with fibromyalgia, headache prevention, and pain due to nerve damage. The drugs affect brain chemicals that regulate pain and mood, so they can help even in people who aren’t depressed. But they can come with side effects, such as weight gain, constipation, and suicidal thoughts.

**Anti-convulsants.** Three drugs used to prevent seizures are also FDA-approved—and increasingly prescribed—for certain types of nerve pain: gabapentin (Neurontin and generic), pregabalin (Lyrica), and carbamazepine (Epitol and generic), which can cause deadly allergic reactions. Studies suggest they help with nerve pain but not common ills such as back pain. Side effects can include suicidal thoughts.

**Muscle relaxants.** Drugs such as cyclobenzaprine (Amrix and generic) can be useful against a pain flare-up. But there’s no evidence that taking them longer than three weeks is helpful, and feeling groggy can hinder recovery, Clauw says. Avoid carisoprodol (Soma) because it carries a high risk of abuse and addiction. And never take these alongside opioids.

**Opioids.** These drugs—which include codeine, oxycodone (OxyContin), and hydrocodone, and are sometimes combined with acetaminophen (Vicodin, Percocet)—should be considered only if no other treatments work and only if there are more benefits than risks for an individual patient, according to the American College of Physicians. They work well in the short term for severe pain from an injury or from surgery but not against chronic pain because they often lose effectiveness over time, can increase sensitivity to pain, and carry risks of addiction and overdose. Possible side effects include constipation, breathing problems, confusion, irritability, and sedation.





## 4.

### Steroids & Surgeries

**FIVE YEARS AGO**, Austin Kessler of Driftwood, Texas, was lifting a rock in his yard when he heard a loud pop. It was his back, and he fell to the ground in excruciating pain. The 66-year-old suffered a herniated, or slipped, disc. His primary care doctor referred him to an orthopedist, who recommended surgery. When Kessler's wife asked whether there were alternatives, the surgeon said no:

"You can try, but I guarantee it won't work and you will be back," Kessler remembers the doctor saying.

After a second opinion, Kessler decided against surgery, and his pain abated over time with physical therapy and exercise. This is not uncommon.

Orthopedic surgery has more people seeking second opinions than any other specialty, according to one study

of thousands of patients. More than a third of these second opinions lead to a change in treatment plan.

Surgeries and injections do help in certain cases. But they carry more risk than most other treatments, so you should generally seek a second opinion if a doctor is pushing surgery, says David Hanscom, M.D., an orthopedic spine surgeon at Swedish Medical Center in Seattle. Hanscom starts with "prehab," working with patients on sleep, stress, and exercise. Most improve enough that they don't need surgery, he says.

#### **STERIOD INJECTIONS**

For decades, doctors have commonly treated painful joints by injecting a corticosteroid to reduce inflammation and decrease pain. The shots don't speed healing, but they can provide modest short-term relief. These "can be

an excellent stopgap measure” if a pain flare-up is keeping you from moving, says Lisa Mandl, M.D., assistant research professor of medicine at Weill Cornell Medical College in New York City. But more than two or three shots a year may damage joint cartilage.

Steroid shots are also sometimes used in the epidural space outside the sac of fluid around the spinal cord, but a misplaced needle can cause rare but serious complications, including stroke, paralysis, and even death. These are safer in the buttocks or legs, Hanscom says, and can temporarily ease the pain of a slipped disk or sciatica.

## SURGERIES

Before proceeding with surgery, ask:

■ **Am I a good candidate?** Surgery is most likely to help when an underlying structural problem is the cause of the pain, Hanscom says. If the pain is widespread or severe despite only minor damage visible on an X-ray, a sensitized nervous system is more likely to be the problem, he says. “In that case, surgery won’t help.”

■ **Are there other options?** Surgery does not necessarily lead to better results than safer treatments. Arthroscopic knee procedures to repair cartilage are among the most common surgeries in the U.S., yet studies have shown that they don’t improve symptoms any better than physical therapy. Exercise and physical therapy work as well as, or better than, surgery for minor rotator cuff injuries and low back pain, according to research reviews. Surgery may speed recovery from a slipped disk or spinal stenosis, but those using noninvasive therapies for at least two years fare just as well.

■ **What results can I expect?** More than 90 percent of people who have a hip replacement are pain-free 10 to 15 years later. Knee replacements improve mobility, but about 20 percent of recipients have ongoing pain, Mandl says. “People who fully commit to rehab tend to have the best outcomes.”

# 5.

## ‘It’s All in Your Head’

Studies show that many doctors dismiss pain symptoms based on patients’ race, gender, and age. Here’s how to make sure you get the care you deserve.

by Maya Dusenbery

**I**T’S ALREADY DIFFICULT to find appropriate treatment for chronic pain. But a growing body of research shows that some groups are more likely than others to face diagnostic delays and undertreatment.

Physicians tend to “dismiss women’s pain a lot more than they do men’s,” says Penney Cowan, founder and CEO of the American Chronic Pain Association. According to a 2014 online survey of more than 2,400 U.S. women with a variety of chronic pain conditions, 91 percent felt that the healthcare system discriminates against female patients. Nearly half were told the pain was all in their head. It’s also common, particularly for women with pelvic and menstrual pain caused by conditions such as endometriosis and fibroids, to be told their pain is just a normal part of being a woman, says Amy M. Miller, president and CEO of the Society for Women’s Health Research.

Evidence shows that women’s pain is also often less thoroughly investigated, especially initially, when the cause of pain is unknown. A 2008 study

of nearly 1,000 patients in an urban emergency room found that women waited an average of 16 minutes longer than men to get medication when reporting abdominal pain and were less likely to receive it. Other research has shown that clinicians are more likely to suggest psychosocial causes, such as stress or family problems, to female patients in pain—when they would order lab tests more frequently for a male patient with similar symptoms.

Studies also have shown that racial bias can affect how doctors assess and treat pain. In 2012, an analysis of 20 years of published research in the U.S. found that African American patients reporting pain were 22 percent less likely than white patients to get pain medication from their doctors. The gap was largest when the cause of the pain, such as back pain, was not immediately apparent.

Another study found that African American patients reported less-effective pain management than white patients. One factor in this, experts say, is that some healthcare providers believe, falsely, that patients of color

often report that they are told, "What do you expect? You're getting older."

Pain is also frequently ignored in children, particularly among those too young to communicate effectively. A 2003 study in a pediatric emergency department found that more than half of the children younger than 2 with obviously painful injuries, such as broken bones and burns, were not given any pain medication at all.

### A Cautionary Tale

Diane Talbert, an African American woman from a small town in Virginia, spent decades in pain despite repeatedly explaining her symptoms to roughly 10 doctors.

She has suffered from a severe case of psoriasis, a persistent skin condition, since she was a child. But when she experienced recurring shoulder pain and then hand swelling in her mid-20s, doctors didn't take her seriously, she says. "They said it was all in my head."

Over time, her pain worsened, and eventually she was unable to lift her arms over her head to get dressed in the morning. One doctor said she must be overreacting. As she got older, her symptoms were dismissed as signs of early menopause.

Finally, a rheumatologist took Talbert at her word and quickly diagnosed psoriatic arthritis, a painful autoimmune disease that affects about 15 percent of people with psoriasis.

Today Talbert, now 61, treats her psoriatic arthritis with the immunosuppressive drug Stelara, and she manages the residual pain with other medications.

Some disparities in pain treatment are due to implicit or unconscious biases, which may be amplified in the medical system, Meghani says. Overloaded healthcare providers with little time to spend with patients may resort to taking shortcuts by falling back on stereotypes when making

are more likely to abuse prescription painkillers.

Other research suggests that doctors—nationwide, about 72 percent are white—often underestimate the pain level of minority patients. "A lot of work in the social sciences has shown that you're more empathetic to people in your in-group than your out-group," says Salimah H. Meghani, Ph.D., R.N., who was a lead author of the 2012 analysis and is an associate professor at the University of Pennsylvania School of Nursing. "That's a very well-studied phenomenon."

Half of the hundreds of white medical students and residents surveyed for a 2016 study subscribed to at least one myth about supposed racial differences related to pain—such as believing that the nerve endings of black people were less sensitive than those of white people. The research found that those who believed in more myths were more likely to rate a black patient as having less pain and to undertreat accordingly.

Experts say the age of the patient also plays a role. Some physicians see pain as an inevitable part of the aging process; older patients

clinical decisions, she says.

Mark Rosenberg, D.O., a spokesperson for the American College of Emergency Physicians, says ad hoc pain care is partially to blame. "Until recently, it was very subjective," he says. "Standardizing pain management will go a long way in decreasing variability in treatment."

Much of the research on these disparities comes from studies of acute pain. But the risk that stereotypes and biases will affect treatment decisions may be even greater when it comes to chronic pain. Research has shown that healthcare providers are more likely to believe patients' self-reported pain levels when there is objective evidence of the pain's cause. But in many chronic pain conditions, lab tests or imaging might not identify the cause of pain, or there's no objective evidence of the pain at all. "Since pain is subjective and relies on patients' own testimony," Meghani says, "disproportionately trusting the self-reports of some groups over others can result in discriminatory care."

While there is greater awareness today that these disparities in pain treatment exist, there is little indication that they have begun to improve, Meghani says. Awareness alone will not solve the problem, she says, and neither will one-off empathy training sessions. "A lot of things need to change simultaneously for this deeply ingrained culture to change."

Cowan says people with pain should not be deterred and should keep pushing to find providers who listen and offer treatment plans that work. "Pain tends to take away our sense of self-esteem," she says. "So many people blame themselves and take responsibility for the fact that they're not getting better. When it comes to living with pain, we can't be passive patients—we need to be active participants."

91%

Percentage of U.S. women with a range of chronic pain conditions who believe the healthcare system discriminates against female patients.

Source: National Pain Report survey.

47%

Percentage of black patients who said doctors underestimated their pain, compared with 33 percent of nonblack patients.

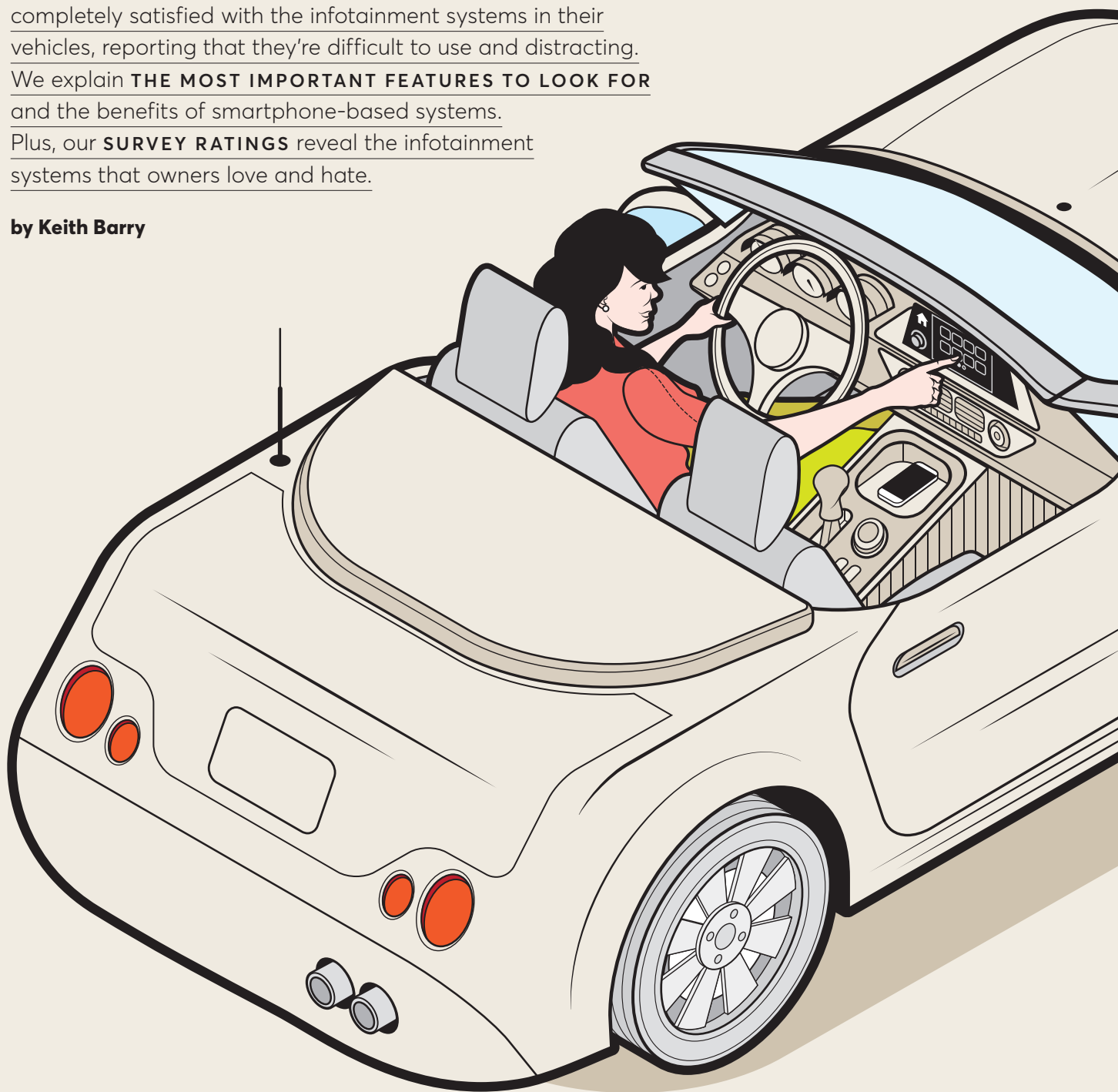
Source: Journal of the National Medical Association.



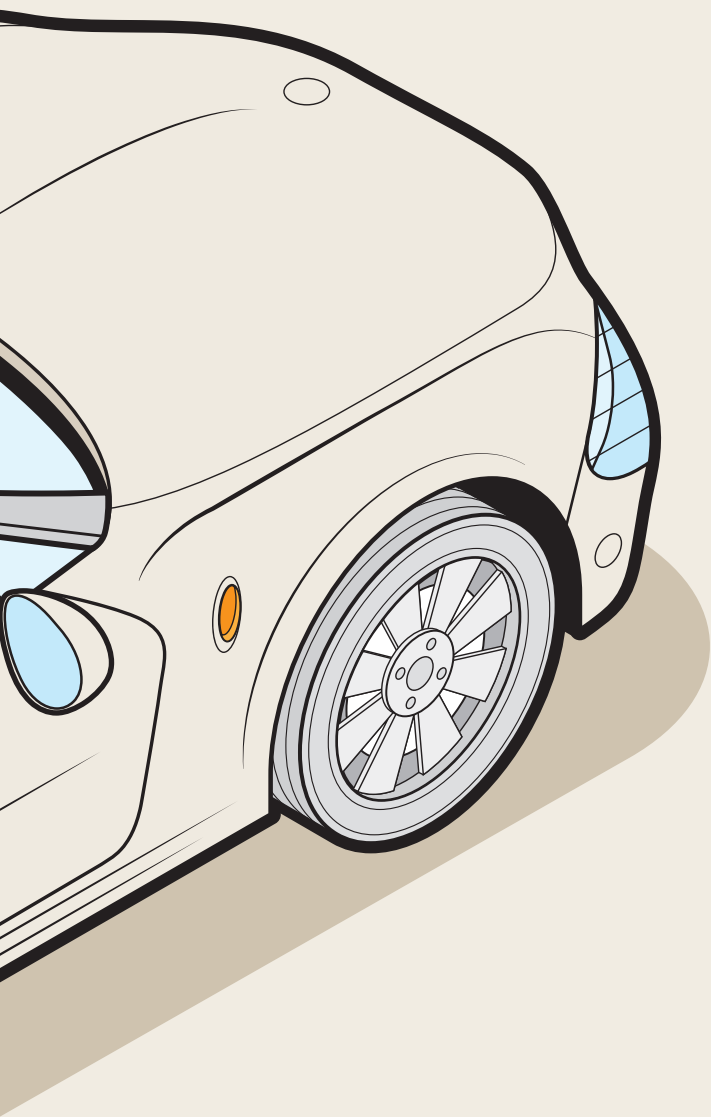
# Choose an Infotainment

Close to half of all CR members we surveyed say they're not completely satisfied with the infotainment systems in their vehicles, reporting that they're difficult to use and distracting.  
We explain **THE MOST IMPORTANT FEATURES TO LOOK FOR** and the benefits of smartphone-based systems.  
Plus, our **SURVEY RATINGS** reveal the infotainment systems that owners love and hate.

by Keith Barry



# ent System You'll Love



NAVIGATION

'Find the nearest gas station.'



ENTERTAINMENT

'Play Consumer Reports' Talking Cars podcast.'



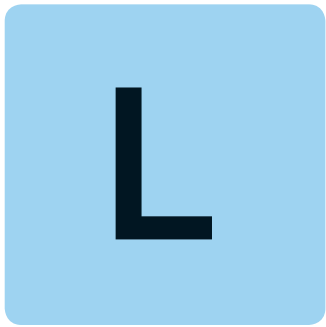
TEXTING

'Text Phil. I'm running late for dinner. Be there in 20 minutes.'



TELEPHONE

'Call Katie's cell phone.'



**Like it or not,** display screens are becoming as common in cars and trucks as steering wheels and speedometers. In an effort to satisfy

a growing demand from drivers for high-tech gadgetry, automakers are placing audio, navigation, telephone, and texting capabilities—a bundle of features known as infotainment—front and center, adding a screen on the dashboard where only knobs and buttons used to be. In 2014, just 53 percent of vehicles sold in the U.S. had a dashboard touch screen, according to data from research and consulting firm IHS Markit. This year, that number is up to 82 percent.

But for all of the convenience these systems are supposed to provide, CR's most recent owner satisfaction survey of members suggests that there's plenty of room for improvement. From data collected on more than 60,000 vehicles, only 56 percent of owners reported that they were very satisfied with their car's infotainment system.

There's a large gap between best and worst: The top-rated system, Tesla's IVI, had an 86 percent owner satisfaction rate, compared with a 46 percent satisfaction rate from users of the lowest-rated system, Lexus' Remote Touchpad. (For full ratings of

all infotainment systems, see page 41.)

"A good system is one that's easy to learn and easy to use every day," says Kelly Funkhouser, program manager for vehicle usability and automation at Consumer Reports. "It should be responsive, not sluggish, and have straightforward controls that are easy to identify and operate."

CR member Yoshie Suo of El Dorado Hills, Calif., gives high marks to the Sync 3 infotainment system in his 2017 Ford Explorer, describing it as "very reliable and intuitive." Edward Philmon of Harker Heights, Texas, praises the system in his Genesis G90,

saying, "It gives me the information I need without giving too much or being intrusive or distracting."

Other systems that won high marks from CR members include those from BMW, Fiat Chrysler Automobiles (FCA), Porsche, Volkswagen, and Audi.

Mike Novak, marketing manager for FCA's Uconnect, the fifth-highest-scoring system overall, credits its high user satisfaction largely to software that runs smoothly, without the bugginess sometimes found in other systems. He says that drivers also appreciate Uconnect's large screens (they range from 7 to 12 inches) and the fact that FCA decided to keep buttons and knobs for frequently used utilities (such as volume and tuning), rather than replacing them with touch controls, as some automakers have done. Novak explains that FCA's research shows that drivers prefer buttons and knobs over touch controls because they can be found by feel and can be used in cold weather when the driver is wearing gloves.

### **Dashboard Dissatisfaction**

CR members complained most about systems that require them to take their eyes—and minds—off the road. Many of the low-rated systems in CR's survey use multiple screens, such as certain versions of Honda's HondaLink or some Jaguar and Land Rover systems, which divide functions across two displays.

Honda says it has largely moved away from multiscreen systems on newer cars, based on research and customer feedback. "Generally speaking, our newest generation systems have a single display with large fonts and a simplified menu structure," a spokesman told CR.

CR members also expressed annoyance with systems that incorporate track pads (similar to those found on laptop computers), such as the Remote Touchpad in Lexus models, which can be hard to control when driving on a bumpy road. Karen



Menning of Debary, Fla., says her Lexus' system is "impossible to use accurately while driving," and Bernard Schiff of Austin, Texas, says his is "hard to use without taking eyes off the road."

CR's Funkhouser says the added complexity of those designs can distract drivers, as can a subpar voice recognition system, which was another common complaint. "When you need to repeat a command over and over because the system doesn't recognize your voice, the risk of cognitive distraction increases rapidly," she says. CR member Yoshie Suo says the system in his Acura TLX, the other vehicle he owns, is "too complicated," noting that it has poor voice recognition.

## Are Smartphones Smart?

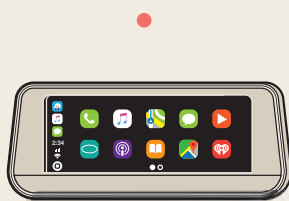
Perhaps the biggest development in infotainment over the past five years has been the increasing popularity of the smartphone-enabled systems Android Auto and Apple CarPlay.

Like built-in systems, Android Auto and Apple CarPlay let drivers control audio, phone, text, and navigation apps on a vehicle's built-in screen, but with popular apps such as Google Maps and Waze for navigation and Spotify and Audible for entertainment. They're designed to reduce driver distraction by using simple, intuitive interfaces and the same familiar icons that drivers find on their phones. Fortunately, they also limit the functions that drivers can access (you can't, for instance, scroll through Facebook on Android Auto or Apple CarPlay). As of 2019, nearly all automakers now offer Android Auto and Apple CarPlay on at least some of their vehicles.

The smartphone-based systems can also take the place of a car's built-in (and often buggy) voice recognition feature, meaning a driver can simply ask Siri or Google Voice to provide directions, read or send texts, or make a phone call instead of having to type in an address or phone number on a touch screen.

### SMARTPHONE VS. BUILT-IN SYSTEMS

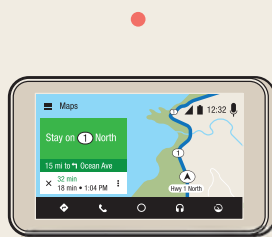
Members rated their satisfaction with the three types of infotainment systems in a recent CR survey.



#### APPLE CARPLAY

**64% VERY SATISFIED**

A simple, easy-to-use design is among CarPlay's strong points.



#### ANDROID AUTO

**59% VERY SATISFIED**

Google Assistant's voice control beats that of many built-in models.

#### BUILT-IN SYSTEMS

**58% VERY SATISFIED**

Members noted the ease of switching between functions, such as audio, navigation, and phone.

"I just say where I want to go and let Siri bring up the destination in Apple Maps," says CR member John Greenstreet, explaining why he prefers to use CarPlay on his BMW.

Android Auto and Apple CarPlay use your phone's data plan to connect to cloud-based services, which means they offer better access to real-time traffic, better navigation search results, and better speech processing than many built-in systems.

To use Android Auto or Apple CarPlay in cars that have them, drivers can simply connect their phones to the system with a cable. Some Audi and BMW models even allow wireless connectivity for CarPlay users.

Overall, surveyed members with Apple CarPlay-compatible infotainment systems reported higher satisfaction making calls and using navigation functions than did those with an Android Auto-capable system or the vehicle's built-in system: 64 percent are very satisfied with Apple CarPlay, 59 percent are very satisfied with Android Auto, and 58 percent are very satisfied with their vehicle's built-in system.

Though smartphone-based systems may offer improvements over a vehicle's built-in infotainment system, they aren't perfect: Some CR members complained about intermittent freezing and bugginess, and difficulty switching between Android Auto or Apple CarPlay functions and those on the built-in system that also use the touch screen (such as an AM/FM radio).

Remember that the same cost, privacy, and signal issues that come with your phone come with these systems, too. Phone-based navigation may not work in remote areas where a cell signal is weak; any audio you stream or maps you download may count against your phone's data plan; your phone may share location data with third parties; and apps could pull information from your calendar or email, depending on your privacy settings.

# Infotainment System Features Our Experts Recommend

AT OUR AUTO TEST CENTER, **WE EVALUATE DOZENS OF INFOTAINMENT SYSTEMS** EACH YEAR. HERE'S WHAT WE BELIEVE THE BEST OF THEM HAVE IN COMMON.

1

## GOOD-SIZED SCREEN

**A single, generously sized screen** (7 inches or more).

Large screens are easy to read at a glance, and their larger size means that they can display big, easy-to-touch icons for functions. Multiscreen systems, such as those found in some Acura, Honda, Infiniti, Jaguar, and Land Rover models, can divide a driver's attention.

2

## SIMPLE CONTROLS

**Look for systems with a touch screen, a central control knob, or a combination of both.** Avoid systems that use a joystick or track pad (like those on laptop computers), which can be difficult to use while driving.

**A dedicated "home" button.** This gives drivers a quick way to navigate back to a main screen if they find themselves on an unfamiliar page or menu.

**Dedicated hard buttons for common tasks,** such as the sound system volume control. Similarly, frequently used features controlled through the touch screen should be easy to find: You should not have to navigate into submenus to perform common tasks, such as operating the climate system or seat heaters.

**Large, recognizable icons.** Drivers should not have to search, squint, or aim carefully to perform a task.

3

## VOICE RECOGNITION

**Look for systems that are responsive to natural voice commands.** You should be able to speak an address for the navigation system (usually after pressing a button on the steering wheel) without spelling out city names or remembering a set of commands. Having to repeat commands can be distracting.

4

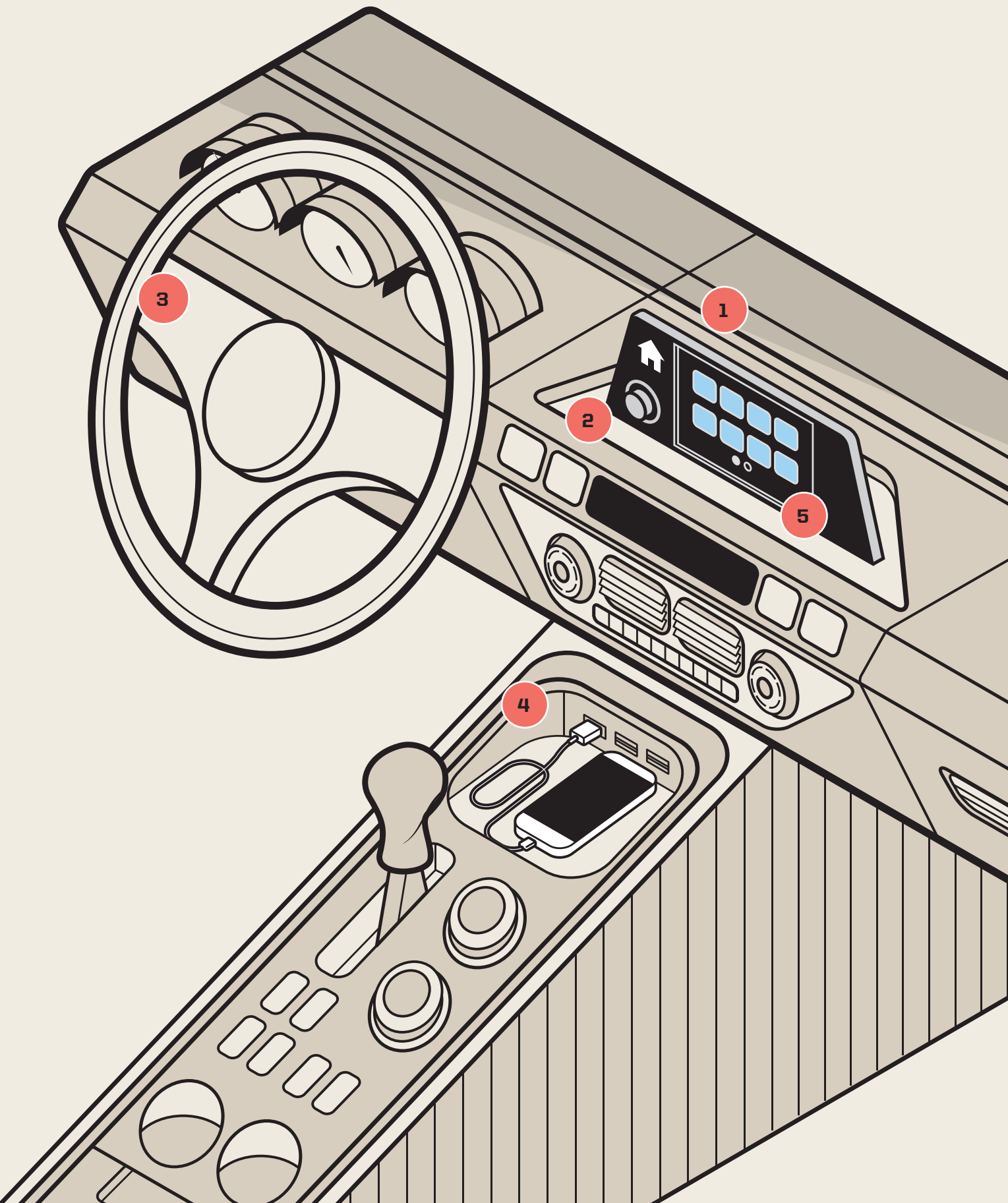
## ANDROID AUTO AND APPLE CARPLAY COMPATIBILITY

**These smartphone-enabled systems** bring familiar interfaces to your dashboard, have admirable voice recognition capabilities, offer up-to-date maps with real-time traffic info, and are preferred by many drivers over built-in systems.

5

## RESPONSIVENESS

**Quick-booting, swiftly responsive systems.** CR members complained about systems that took too long to program for navigation and also about noticeable delays after pressing a button. Ask the salesperson to demonstrate the system, and try it out yourself so that you can evaluate how well it works for you. See how easy it is to pair your phone and enter an address into the navigation system. You can also decide whether it responds as quickly as you'd like it to.





# Systems That Free You From Your Phone

OUR SPECIALLY CREATED **"HANDS OFF THE INFOTAINMENT SYSTEMS THAT LET USE GPS, AND PERFORM OTHER TASKS TOUCHING THEIR PHONES.**

## 'HANDS OFF PHONE' SCORE

MANUFACTURER	INFOTAINMENT SYSTEM	SCORE
FORD/LINCOLN	Sync 3	68
BMW	iDrive (with Gesture Control)	67
FIAT CHRYSLER (FCA)	Uconnect 4	65
GENESIS	Genesis Display	64
TESLA	IVI	64
NISSAN	NissanConnect	62
BMW	iDrive (touch)	61
ACURA	AcuraLink Touchpad	61
LEXUS	Remote Touch	61
LEXUS	Remote Touchpad	61
AUDI	MMI (Virtual Cockpit)	61
CADILLAC	Cue	61
ACURA	AcuraLink II	57
MAZDA	Mazda Connect	57
VOLVO	Sensus Touch	56
TOYOTA	Entune	56
MERCEDES-BENZ	Comand	56
INFINITI	Infiniti Intouch	56
HYUNDAI/KIA	Hyundai Display Audio, UV03	55
PORSCHE	PCM	55
SUBARU	Starlink	55
AUDI	MMI	54
VOLKSWAGEN	MIB 2	53
HONDA	HondaLink with 2 screens	53
GM (Buick, Cadillac, Chevrolet, GMC)	GM Infotainment	53
JAGUAR/LAND ROVER	InControl	53
ALFA ROMEO	Alfa Romeo Display	51
HONDA	HondaLink with 1 screen	50

### Infotainment systems are

**designed to let drivers** make a phone call, respond to a text, or enter a destination into the car's navigation system without having to fumble with their phone.

But the reality isn't quite so straightforward. In fact, depending on the vehicle's infotainment system, as many as half of those CR members surveyed report that they still use their phone for at least one of those tasks, which can cause additional driver distraction.

"Drivers want an infotainment system that is quick, responsive, and easy to understand," says Jake Fisher, senior director of auto testing for Consumer Reports. "But if the system doesn't work well, drivers will often turn to the device they know best: their phone. That choice can be more distracting—and dangerous." Though performing tasks on an infotainment system can also be distracting, Fisher says it's usually a far better choice than fiddling with the small controls on a phone.

To show which built-in infotainment systems are best at keeping drivers from picking up their phones, we created our "hands off phone" score. Based on CR member responses for more than 60,000 vehicles, the score indicates the percentage of respondents who are more likely to use their vehicle's built-in system to make and receive calls, get directions, or use voice recognition to respond to text messages while driving, rather than picking up their phone.

For example, 68 percent of those who own a vehicle with the top-rated Sync 3 system—found in Ford and Lincoln vehicles—primarily use it instead of their phones.

**HOW WE TEST:** The **hands off phone** score is a composite based on the percentage of vehicles where owners opt to use the built-in system vs. picking up their smartphone for three tasks: calls, navigation, and texting.

# PHONE" SCORE SHOWS DRIVERS MAKE CALLS, WITHOUT EVER

At the other end of the scale, half of those who own a vehicle with a one-screen HondaLink system reported primarily using their phone instead of the system.

Michael Barrett of Austin, Texas, says he just ignores his Honda's built-in infotainment system and uses his phone when he needs to make a call. "The voice activation is cumbersome and unreliable," he reported in CR's survey.

Regardless of what kind of car they drive, survey respondents were less likely to pick up their phones when they used Android Auto or Apple CarPlay than when they used their vehicle's built-in system. These smartphone-based systems replicate the smartphone experience people are familiar with on a car's built-in screen. They also provide access to up-to-date maps and real-time traffic with familiar apps, including Waze.

This disconnect is not lost on the industry. "Automakers are working to better match what you see in consumer electronics with what you see in the car," says Brian Rhodes, associate manager for connected car research and analysis at market research firm IHS Markit. "Not only in terms of the features, but how you use the features," he says.

Our members also complained about infotainment systems that fell short when it came to map data, which tends to be more current on phones than in a car. For example, a CR member from Sarasota, Fla., reported that he lives in a housing development that was completed two years ago, but the streets still do not show up on the infotainment system in his Lexus. "The dealer says the maps won't likely be updated until next year. Smartphone maps are much more current," he says.

**Ratings** ➤ **Built-In Systems** CR members rate infotainment systems based on satisfaction with audio, calling, and navigation functions.

Manufacturer	Infotainment System	Overall Score	Audio	Calls	Nav.
Tesla	IVI	86	⬆	⬆	⬆
BMW	iDrive (with Gesture Control)	80	⬆	⬆	⬆
Genesis	Genesis Display	75	⬆	⬆	⬆
Ford/Lincoln	Sync 3	73	⬆	⬆	⬆
FCA (Chrysler, Dodge, Fiat, Jeep, Ram)	Uconnect 4	72	⬆	⬆	⬆
Porsche	PCM	69	⬆	⬆	⬆
Volkswagen	MIB 2	68	⬆	⬆	⬆
BMW	iDrive (touch)	68	⬆	⬆	⬆
Audi	MMI (Virtual Cockpit)	68	⬆	⬆	⬇
Cadillac	Cue	67	⬆	⬆	⬇
Hyundai/Kia	Hyundai Display Audio & UVO3	67	⬆	⬆	⬇
GM (Buick, Cadillac, Chevrolet, GMC)	GM Infotainment	66	⬆	⬆	⬆
Volvo	Sensus Touch	63	⬆	⬆	⬇
Nissan	NissanConnect	61	⬆	⬇	⬇
Infiniti	Infiniti Intouch	60	⬆	⬆	⬇
Audi	MMI	59	⬆	⬇	⬇
Mercedes-Benz	Comand	58	⬆	⬆	⬇
Toyota	Entune	58	⬆	⬇	⬇
Honda	HondaLink with 1 screen	56	⬆	⬇	⬇
Lexus	Remote Touch	56	⬆	⬇	⬇
Acura	AcuraLink Touchpad	55	⬆	⬇	⬇
Subaru	Starlink	55	⬆	⬇	⬇
Jaguar/Land Rover	InControl	54	⬆	⬇	⬇
Alfa Romeo	Alfa Romeo Display	54	⬆	⬇	⬇
Mazda	Mazda Connect	53	⬇	⬇	⬇
Acura	AcuraLink II	52	⬆	⬇	⬇
Honda	HondaLink with 2 screens	50	⬇	⬇	⬇
Lexus	Remote Touchpad	46	⬇	⬇	⬇

**HOW WE SURVEY:** The Overall Score by system is the composite based on the percentage of vehicles for which owners responded that they are very satisfied with the operation of audio, calls, and navigation. Results are based on responses to CR's 2018 Auto Satisfaction

Survey. All systems are available on new models that are currently on sale.

# SOUND ADVICE ABOUT

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Are you one of the millions of Americans living with the frustration and loneliness of **UNTREATED HEARING LOSS**? We've got advice from audiologists and other experts about why it's critical not to delay **PROPER DIAGNOSIS** and **TREATMENT**. Plus, use our ratings of hearing aid brands and retailers to find the best ones for you.

**by Hallie Levine**





HEARING

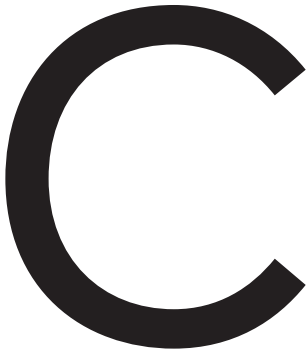
LOSS



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**Can you see me now?**

CR members gave most of the 16 brands in our survey high ratings for being almost unnoticeable.



**CONNIE VAUGHAN**, a 78-year-old retired office manager from Camden, Ark., didn't think there was anything wrong with her hearing. Sure, she didn't always understand what people were saying unless they were right in front of her. And yes, sometimes she did strain to hear her minister's sermon on Sundays. But Vaughan told herself those people were mumbling.

Vaughan's daughter, Lisa Christensen, an audiologist at Cook Children's Medical Center in Fort Worth, Texas, and president of the American Academy of Audiology, suspected that her mother might have hearing loss. "Every time I visited, the TV would be blaring," she says. "It was really difficult to speak to her on the phone. And she'd keep asking me to repeat things over and over again."

Finally, last summer Christensen coaxed her mother into her office for hearing tests. They revealed that she had moderate sensorineural hearing loss, which is caused by damage to the auditory nerve or inner ear and is usually permanent, according to the National Institute on Aging. (Conductive hearing loss, typically from excessive earwax, fluid in the ear, or a punctured eardrum, can often be restored by medical treatment.)

Sensorineural hearing loss generally worsens over time. That's because as we get older, the inner ear's tiny hair cells, which convert sound waves into electrical signals that travel to the brain, may simply wear out. This can also occur after one-time exposure to loud

sounds (such as an explosion), as a side effect of some medications (including certain chemotherapy drugs), or as a complication of conditions such as high blood pressure or type 2 diabetes.

### Why People Delay Treatment

Vaughan is just one of about 48 million people in the U.S. who have difficulty hearing. The number is expected to almost double by 2060, according to a study published in 2017 in the journal *JAMA Otolaryngology-Head & Neck Surgery*.

The biggest reason for this huge rise in hearing problems? Quite simply, the growing number of older adults. Another reason is the use of earbuds and headphones for listening to music, which may be leading to more hearing problems, especially among younger people, says James Denny III, M.D., CEO and executive vice president of the American Academy of Otolaryngology-Head and Neck Surgery. They're more likely to listen for long periods of time and may also be turning up the volume

to overcome street noise.

Like Vaughan, many with hearing loss forgo treatment for years. Of the more than 122,000 CR members who responded to our spring 2018 survey on hearing loss, nearly one-third who acknowledged difficulty hearing had never had the problem diagnosed as such. And less than half of those with diagnosed hearing loss (or who thought they had the condition) had hearing aids.

One factor is that hearing loss, particularly the age-related type, often develops so slowly that it may go unnoticed. As Vaughan says, "the hearing loss came on so gradually I just became used to it."

Other people avoid getting help due to the stigma of hearing loss. A study in 2018 of 11 older adults with hearing loss, published in the *American Journal of Audiology*, found that participants felt ashamed and believed others saw them as "stupid." And 18 percent of CR's survey respondents who said they delayed getting hearing aids did so because of embarrassment.

"Looking back, I can see there were clear signs," Vaughan says. "I guess I just didn't want to admit that I really needed a hearing aid."

Even after people are ready to seek help, the cost of aids—often thousands of dollars out of pocket—can put them off. There's often little insurance coverage, if any, even from basic Medicare (see "4 Ways to Spend Less," on the facing page). In our survey, 63 percent of members said they waited at least two years after first noticing the problem to buy hearing aids, 42 percent of them because of the price.

### Health Risks of Hearing Loss

Those who acknowledge their hearing loss would do well to address it. A study published in 2018 in the journal *JAMA Otolaryngology-Head & Neck Surgery* found that among adults 50 and older, those with hearing loss were about 30 percent more likely to experience a fall. About 40 percent

### REASONS WHY PEOPLE DELAY GETTING HEARING AIDS

42%

Cost

26%

Haven't had their hearing tested

18%

Embarrassed to wear one

12%

Wearing aids causes physical discomfort

10%

A friend or family member did poorly with one

were more likely to be depressed, and about 50 percent were more likely to develop dementia over the 10-year study period.

One theory is that with hearing loss, the brain has to work harder to process sound, which may drain cognitive reserves faster, according to Maura Cosetti, M.D., director of the Cochlear Implant Center at the Ear Institute of the New York Eye and Ear Infirmary of Mount Sinai.

A life with untreated hearing loss can be one of loneliness and frustration. In fact, a 2017 review published in *Trends in Hearing* concluded that hearing problems take a significant toll on relationships.

Shari Eberts, 50, of New York City, knows this well. “There were so many social situations that I avoided, like going out to dinner or to a cocktail party, because I knew I would struggle the whole night to understand what people were saying,” recalls Eberts, a writer and hearing-loss advocate. “I would come home feeling absolutely exhausted. After awhile, you figure, why bother? But then you end up isolating yourself even more.”

Both Eberts and Vaughan say their lives improved significantly when they began wearing hearing aids. Vaughan, for instance, is now able to fully participate in discussions in her Sunday school class and attend lectures without missing details. “Everything is so crisp, so clear,” she says. “I can have a conversation without constantly having to say, ‘What? What?’”

Experts concede that these pricey prescription devices can be challenging for people to use. “Unlike glasses, you can’t just turn them on and expect perfect, crystal clear hearing,” says Sarah Sydlowski, Au.D., Ph.D., audiology director of the hearing implant program at the Cleveland Clinic.

Nonetheless, the latest generation of aids can provide a significantly better experience than devices of the past—and they’re more discreet.



## 4 WAYS TO SPEND LESS

With few insurance plans fully covering hearing aids, CR survey respondents typically spent \$2,691 out of pocket for a pair. So it’s no surprise that cost was the most frequently stated reason respondents gave for putting off a purchase. “It’s a huge barrier for many people,” says Barbara Kelley, executive director of the Hearing Loss Association of America.

Before you buy, check your insurance policy (some plans offer more than others) and try these steps:

1

### BE SAVVY ABOUT FEATURES

Many hearing aid features that CR survey respondents consider important—such as the ability to connect wirelessly to a smartphone—may now be found in less expensive models. When it comes to higher-end features, consider your lifestyle. For instance, it may make sense to invest in wind noise reduction if you’re an avid boater or golfer, says Deborah Culbertson, Ph.D., CCC-A, an audiologist and a clinical professor at East Carolina University’s Department of Communication Sciences and Disorders. But others may not need it.

2

### CONSIDER WAREHOUSE CLUBS

CR members typically spent \$1,926 for a pair of hearing aids

at wholesale clubs. (Ninety-five percent of respondents who shopped at wholesale clubs did so at Costco.) But respondents reported that they typically spent \$4,107 for a pair of hearing aids at name-brand hearing aid stores, \$3,909 for a pair at freestanding audiology offices, and \$3,517 at hospitals and clinics with an audiologist or hearing instrument specialist on-site.

3

### KNOW YOUR REAL COST

The price of a hearing aid is sometimes “bundled” to include the device plus the audiologist’s services, such as fittings, instructions on how to use them, adjustments, and follow-up and repairs during a specified warranty period. You can request an itemized list of charges, says Elizabeth Levine-Davis, Au.D., a clinical audiologist

4

### ASK FOR A PRICE BREAK

Nearly half of the 14 percent of survey respondents who requested a discount got one. And you might be eligible for other breaks. CR survey respondents who bought their aids through the Department of Veterans Affairs typically paid \$127 out of pocket. (The VA offers some vets free aids, depending on eligibility.) You can also find a list of organizations that may give you financial assistance at [asha.org/public/coverage/audfundingresources/](http://asha.org/public/coverage/audfundingresources/).



What's more, experts have extensive knowledge about how to protect and preserve hearing in the first place.

## Use It or Lose It

Too many people, it seems, take their hearing for granted. In CR's member survey, 30 percent of respondents said they had gone for more than 10 years without having their hearing checked or had never had a hearing test.

Although there are no national hearing screening guidelines for adults, you should have your hearing checked by an audiologist if you have concerns, and no later than age 50, says Sydlowski. Hearing evaluations are done by audiologists, who have a Ph.D. or a doctor of audiology (Au.D.) degree. (Some warehouse clubs have audiologists and hearing instrument

specialists. The latter can check your hearing and help with aid selection and fittings, but they have less education and training.)

In the pure-tone test, which measures the ability to hear sounds at different frequencies, you wear earphones and raise your hand each time you hear a beep. In speech recognition testing, recorded words are played and you try to repeat them. This checks your ability to understand spoken words.

Depending on your test results and your risk factors for hearing loss—tinnitus, for instance, signals an increased likelihood of difficulty—the audiologist may recommend annual tests. If you're found to have hearing loss, it's important to take action as quickly as possible. "The longer you wait, the harder it will

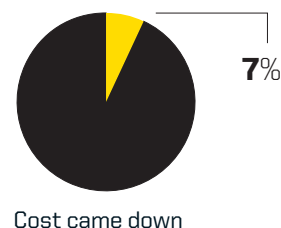
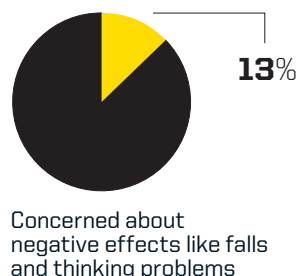
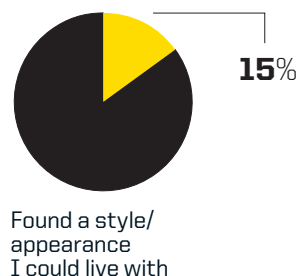
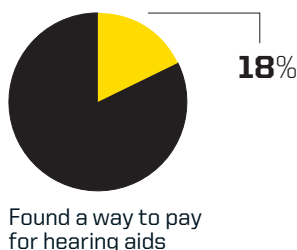
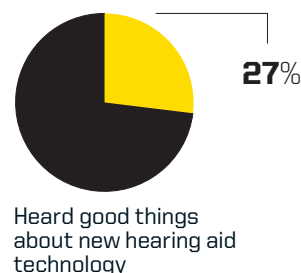
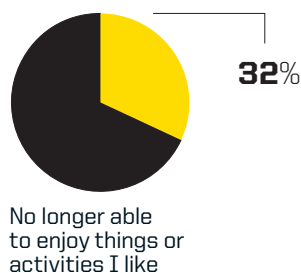
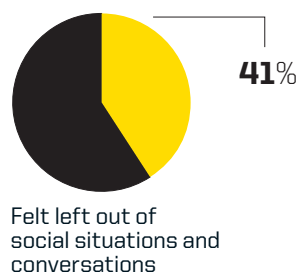
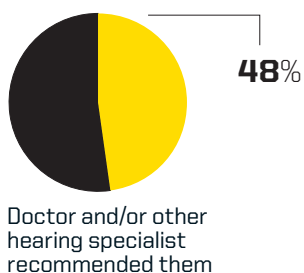
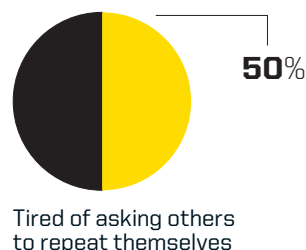
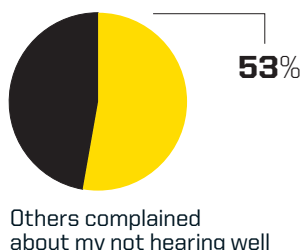
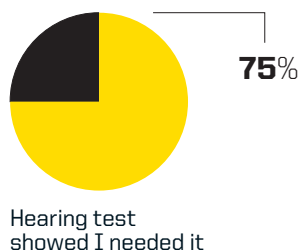
be to adapt to hearing devices when you do get them," Sydlowski says. The reason: When the hearing nerve is understimulated by sound, it can begin to atrophy.

## Protecting Your Ears

Whether or not you have diagnosed hearing loss, it's crucial to safeguard the hearing you have. Noise at or above 85 decibels (dB), which is considered moderately loud, like the noise of busy city traffic, may be harmful, depending on how long you're around it. Anything between 85 and 100 dB, such as a lawn mower or motorcycle engine, can cause damage within an hour or two, and loud sporting events or rock concerts—which can clock in around 110 dB—can damage ears within 15 minutes.

## MOTIVATING FACTORS FOR GETTING A HEARING AID

According to nearly 18,000 CR members



# 6 MUST-HAVE FEATURES

CR members speak out about important attributes of their aids.



Kirkland Signature  
8.0 Premium Digital  
Hearing Instruments  
\$1,600 a pair

**53%**

## **RECHARGEABLE BATTERIES**

This allows you to charge aids every night and then wear them for a full 16 hours the next day, says Lisa Christensen, Au.D., president of the American Academy of Audiology.

**43%**

## **SMARTPHONE COMPATIBILITY**

You can stream music and calls from computers, smartphones—even TVs (with an additional accessory) through your aids.

**43%**

## **TINNITUS MASKING**

If you have chronic ringing in your ears, this offers soothing sounds to distract you.

**42%**

## **AUTOMATIC NOISE ADJUSTMENT**

Aids will automatically adjust to the noise level in the room, whether it's soft, loud, or in between.

**41%**

## **MULTIPLE PROGRAMS**

They optimize your aid for different environments, such as a windy day or a party.

**40%**

## **ADVANCED MICROPHONE FEATURES**

They can help amplify the sounds you want to hear and minimize background noise.

If you know you'll be around noise that's at or above 85 decibels, especially on a recurring basis, use comfortable, well-fitting earplugs or earmuffs designed to bring your exposure down to safe levels, suggests Vickie Tuten, Au.D., an audiologist and a coordinator for the American Speech-Language-Hearing Association's Special Interest Group 8: Audiology and Public Health. You can check product labels for noise reduction ratings. (For more, see CR's series on noise in consumer products at [CR.org/noise](https://www.consumerreports.org/noise/).)

Only 8 percent of adults in the U.S. say they regularly wear earplugs or protective headphones at loud athletic and entertainment events, according to the Centers for Disease Control and Prevention. But this simple step can make a big difference. A 2016 Danish study in *JAMA Otolaryngology-Head & Neck Surgery* found that people who wore earplugs for a 4½-hour outdoor concert were much less likely to experience temporary hearing loss—a sign of possible permanent

damage—than those who went without.

When listening to music on devices such as a smartphone, consider noise-canceling headphones (see “Hearing Helpers for Music, Phone Calls & TV,” on the facing page). Keep music at no more than 60 percent of maximum volume for no more than an hour a day.

And last, follow a healthy lifestyle. Research suggests that smoking may increase the risk of hearing loss. But a healthy diet may reduce it. A 2018 study in the *Journal of Nutrition* found that women who followed eating plans like a Mediterranean-style diet or the DASH diet (both rich in produce and whole grains) had about a 30 percent lower risk of moderate to severe hearing loss.

### Advances in Technology

Only 20 percent of people who could benefit from hearing aids wear them, according to the National Institutes of Health. That's due to a variety of reasons—including, for some, the assumption that they won't help enough.

Lisa Fried, 45, of New York City, gave up on her first set of hearing aids after several months. “They were useless for filtering out background noise,” she says, “so I felt like in many social situations, like a crowded restaurant, they made it harder to hear, not easier.”

When Fried tried again two years ago, she was pleasantly surprised. Aids have now become sleeker, smaller, and more able to minimize feedback and distracting background sounds, once common annoyances. Fried's new Oticon Opn 1 aids screen out almost all of “that awful feedback and background noise,” she says.

Her aids are also Bluetooth-enabled, allowing her to take phone calls and listen to podcasts right through them. Some aids come with even higher-tech tools, such as sensors to detect your heart rate or the ability to send alerts to emergency contacts if you fall.

Those features may be useful for select users, but even modest devices may now offer enough benefits for most people. “There's often a belief that



## HEARING AIDS WITHOUT AN Rx?

Hearing aids are considered prescription products, usually dispensed by an audiologist, physician, or hearing instrument specialist, depending on state law.

But a 2017 law calls for the creation of a new entry-level category of hearing aid, which will be available over the counter. Exactly what this category of aids will look like and cost, and how they'll be evaluated and regulated, isn't clear yet. Proposed rules and regulations aren't expected from the Food and Drug Administration

until at least August 2020.

(But last fall the FDA approved the marketing of the Bose Hearing Aid, the first self-fitting hearing device. This is intended to be a direct-to-consumer product, the agency says, but some states may require it to be purchased from a licensed hearing dispenser. Bose doesn't have a release date yet.)

Presumably, aids in the new category will be less expensive than current prescription aids. “This represents a great opportunity to facilitate entry into the

hearing healthcare system for those with hearing loss,” says James Denny III, M.D., CEO and executive vice president of the American Academy of Otolaryngology-Head and Neck Surgery. “I believe the increased access and affordability will benefit the public significantly.”

Experts also say it will be important to have a comprehensive hearing test from an audiologist before buying an OTC hearing aid.

And don't confuse the new category with the OTC products available now, called

personal sound amplifiers (PSAPs). Although these devices, sold online and in stores for \$10 to \$500, may look like hearing aids, they aren't—and aren't allowed to be marketed to improve impaired hearing. (You might see them described as sound or hearing amplifiers.)

CR's past testing of four PSAPs found that two very inexpensive models could potentially harm hearing by overamplifying sharp noises. The two high-end PSAPs were helpful for some people with mild to moderate hearing loss.



if you have a hearing aid with fancy features and all the bells and whistles, it will result in a better outcome, even though there's evidence to suggest that's not the case," Sydlowski says. In fact, a study published in 2016 in the journal *Ear and Hearing* found that people with premium models reported no more satisfaction or quality of life improvement than those whose aids had fewer special features.

## Making the Most of Your Aids

When you first get your hearing aids, the audiologist should adjust them to match your needs; make sure they fit you comfortably; explain how to use, clean, and store them; show you how to change the batteries; and counsel you on the sounds you can expect to hear.

At home, wear your aids as much as comfort allows to help you get used to the feel of the devices and sounds that have gone unheard for years. "Put them on (early in the day) and try to leave them on until you go to bed at night," says Deborah Culbertson, Ph.D., CCC-A, an audiologist and clinical professor at East Carolina University's department of communication sciences and disorders.

To make sure your aids are properly programmed, return to your audiologist after the first two weeks for tweaks. You may need additional adjustments from time to time.

And last, be realistic about what hearing aids can do. They can help you hear better in certain situations, but they won't return your hearing to normal. "People always ask, 'What can restore my hearing?' and the answer is, there's nothing that can reverse nerve damage," says Elizabeth Levine-Davis, Au.D., an audiologist at the New York Eye and Ear Infirmary at Mount Sinai. "It's not like putting on a pair of glasses and suddenly experiencing 20/20 vision. Even so, today's hearing aids are much more sophisticated than they ever were, and do a pretty good job at satisfying patients even in the most difficult situations."

# HEARING HELPERS FOR MUSIC, PHONE CALLS & TV

Headphones, smartphones, and TVs have functions that may help you hear better whether or not you use hearing aids.



## HEADPHONES

**Choose a noise-canceling model.**

Headphones with electronics that cancel out background noise can help you hear better and protect your hearing, too. That's because you can listen comfortably with the volume set low. One inexpensive option is the Monoprice BT-300ANC, which gets an Excellent rating from CR for noise-canceling ability.

**Combine hearing aids with headphones, if you want.** Larger over-the-ear models are the most likely to fit with a wide range of hearing aids.



## SMARTPHONES

**Sync your phone to your hearing aids.** Many hearing aids equipped with Bluetooth can receive audio straight from your smartphone, whether you're making a phone call or listening to music. Check to make sure the devices are compatible.

**Hear better in a noisy restaurant.** If you've synced your hearing aids with your iPhone, you can turn on Apple's

Live Listen feature and then place the phone near your dining companion. His or her voice will be piped to your hearing aids. You can also leave your iPhone near a TV across a room, then listen through your hearing aids. Audiologists say the feature may help, though the audio quality is often just so-so. The feature also works with AirPods, Apple's true wireless earphones. Once your phone and hearing devices are paired, you turn the feature on from the Control Panel. To set this up, go to Settings > Control Center > Customize Controls > Hearing.

**Get flash notifications.** Smartphones can sound a tone to signal a new text message or Facebook post. You can also set many phones to flash so you don't miss an alert, especially in a noisy environment, says Brian Fligor, Ph.D., an audiologist in Boston. Look under Accessibility in Settings.

**Use real-time text.** Most new smartphones support RTT, which works like a combination of a phone call and texting. If you and a friend both have RTT turned on, you can call each other and then use either text or voice to converse. There's no delay as in regular messaging; the text appears on your partner's phone as

you type. Turn RTT on under the Accessibility settings.




## TVs

**Adjust the sound settings.** TV viewers may find it hard to distinguish dialog, especially in action scenes. Try TV audio settings with names such as "Dialog" or "Clear Voice." Whether it helps will depend on your hearing, your TV model, and even the show you're watching. If your TV has an on-screen graphic equalizer, try adjusting frequencies to suit your hearing needs.

**Experiment with volume leveling.** This setting adjusts the highs and lows in volume so that you won't strain to hear a movie's intimate conversations or jump out of your skin when a commercial starts. Turning it on—or off—may help.

**Spring for a sound bar.** Good sound bars can produce clearer audio than many TVs. ZVOX claims that its AccuVoice feature makes it easier to hear dialogue; CR hasn't tested that claim.

**Ratings** ➤ **Hear, Here** Use our ratings to see which hearing aid brands scored highest with CR members.

Brands	Reader Score	Product Features									Performance in Situations							
		Battery life	Ease of changing or charging battery	Cleaning ease	Durability	Reliability	Fit/comfort	Visibility to others	Richness of sound quality	Value	Conversations in quiet places	Conversations in noisy places	Talking in small groups	Listening to a TV or radio	Talking on a cell phone	Talking on a landline phone	At a movie theater, play, or concert	Windy environments
Costco/Kirkland	76	🟡	🟢	🟡	🟢	🟢	🟡	🟢	🟡	🟢	🟢	🔴	🟡	🟢	🟢	🟡	🟡	🔴
Signia	75	🟡	🟢	🟡	🟢	🟢	🟡	🟢	🟡	🟡	🟢	🔴	🟡	🟢	🟢	🟢	🟡	🔴
Oticon	74	🟡	🟢	🟡	🟢	🟢	🟢	🟢	🟡	🟡	🟢	🔴	🟡	🟢	🟡	🟡	🟡	🔴
Phonak	74	🟡	🟢	🟡	🟢	🟢	🟢	🟢	🟡	🟡	🟢	🔴	🟡	🟡	🟡	🟡	🟡	🔴
Widex	74	🟡	🟢	🟡	🟢	🟢	🟢	🟢	🟡	🟡	🟢	🔴	🟡	🟢	🟡	🟡	🟡	🔴
ReSound	74	🟡	🟢	🟡	🟢	🟢	🟡	🟢	🟡	🟡	🟢	🔴	🟡	🟢	🟢	🟡	🟡	🔴
Rexton	73	🟡	🟢	🟡	🟢	🟢	🟡	🟢	🟡	🟢	🟢	🔴	🟡	🟡	🟡	🟡	🟡	🔴
Liberty	72	🟡	🟢	🟡	🟡	🟢	🟡	🟡	🟡	🟡	🟢	🔴	🟡	🟡	🟡	🟡	🟡	🔴
Audibel	70	🔴	🟢	🟡	🟡	🟡	🟡	🟢	🟡	🔴	🟢	🔴	🟡	🟡	🟡	🟡	🟡	🔴
Unitron	70	🟡	🟢	🟡	🟢	🟢	🟡	🟢	🟡	🟡	🟢	🔴	🟡	🟡	🟡	🟡	🟡	🔴
Bernafon	70	🟡	🟢	🟡	🟢	🟢	🟡	🟢	🟡	🟡	🟢	🔴	🔴	🟡	🟡	🟡	🟡	🔴
Starkey	70	🟡	🟢	🟡	🟡	🟢	🟡	🟢	🟡	🔴	🟢	🔴	🔴	🟡	🟡	🟡	🟡	🔴
AGX Hearing	70	🔴	🟢	🟡	🟢	🟢	🟡	🟢	🟡	🔴	🟢	🔴	🟡	🟡	🟡	🟡	🟡	🔴
Miracle Ear	69	🟡	🟢	🟡	🟡	🟡	🟡	🟡	🟡	🔴	🟡	🔴	🟡	🟡	🟡	🟡	🟡	🔴
Beltone	67	🔴	🟢	🟡	🟡	🟡	🟡	🟡	🔴	🔴	🟡	🔴	🔴	🟡	🟡	🟡	🟡	🔴
NuEar	67	🔴	🟢	🟡	🟢	🟢	🟡	🟢	🟡	🔴	🟢	🔴	🔴	🟡	🟡	🟡	—	🔴

**HOW WE SURVEY:** We surveyed 17,626 members on their prescription hearing aids in spring 2018. The **Reader Score** represents overall satisfaction with the

aids, and 100 is the highest possible—meaning that all respondents were completely satisfied. An 80 means very satisfied, and 60, somewhat

satisfied, on average. (Differences of fewer than 4 points aren't meaningful.) We also surveyed the members about various features and how aids

performed in different situations. Ratings are based on CR members, who may not be representative of the general U.S. population.

## RETAILER SURVEY RATINGS

	Costco Wholesale	Connect Hearing	HearUSA	Sam's Club	Audibel	Starkey store	Beltone	Miracle-Ear
<b>Reader Score</b>	89	85	82	81	79	79	76	76
<b>Hearing Aid Options</b>	⬆️	⬆️	⬆️	⬆️	⬆️	⬆️	⬆️	⬆️
<b>Selection</b>	⬆️	⬇️	⬇️	⬇️	⬇️	⬇️	⬇️	⬇️
<b>Price Transparency</b>	⬆️	⬆️	⬆️	⬆️	⬇️	⬇️	⬇️	⬇️
<b>Price Plan Options</b>	⬆️	⬇️	⬇️	⬇️	⬇️	—	⬇️	⬇️

**HOW WE SURVEY:** Ratings are based on responses of 4,391 members in a spring 2018 survey who bought hearing aids

since 2014 and answered questions about retailers. The **Reader Score** represents overall satisfaction; 100

means all were completely satisfied. An 80 means very satisfied; 60, somewhat satisfied, on average. (Differences of

fewer than 5 points aren't meaningful.) CR members may not be representative of the general U.S. population.



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

# ROAD REPORT

## TIPS FROM OUR TEST TRACK

### Solution to a Sticky Situation

Tree sap can leave a sticky mess on vehicles any time of year, but it can be particularly problematic in warm weather.

"Heat accelerates how sap sticks to the paint," says John Ibbotson, chief mechanic at CR's Auto Test Center. "The longer you wait, the harder it is to remove." Clean sap off as soon as possible. "Otherwise, it will eventually eat through the paint."

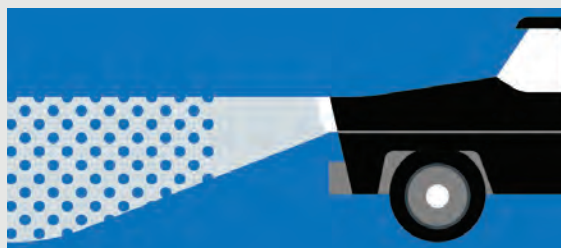
Ibbotson recommends using rubbing alcohol on a soft cloth to remove sap. If that doesn't work, try a specialized tree sap or bug-and-tar removal product. Be sure to use it sparingly and test it on a small area of paint first—some can damage the clear coat and possibly the paint itself. Wash off any residue and follow with a full coat of wax.

To remove sap from a windshield, try a plastic scraper. If sap remains, try a razor blade, taking care not to scratch the glass.



## ASK OUR EXPERTS

### Why Aren't My Headlights Illuminating the Road Well?



Sometimes, just cleaning headlights with a household glass cleaner is enough to increase their brightness. If that doesn't work (and there's no issue with your vision), the problem could be the coating on your headlight lenses. A recent AAA study reported that the plastic coating on headlight lenses can start to deteriorate in three to five years and can become so clouded or yellowed over time that the headlights **provide just 22 percent of the light they did when new.**

"Drivers need a minimum of 300 to 350 feet to see and react and brake when traveling at 60 mph," says Jennifer Stockburger, director of operations at CR's Auto Test Center. If headlight illumination drops to 20 percent of the original brightness, **visibility could drop enough to make night driving riskier than it already is.**

A mechanic can replace the entire headlight assembly, or you can restore the lens coating using a kit sold online or in auto-parts stores. If the lenses are clear but the lights are dimmer than they used to be, you may need new bulbs.

## THE VITAL STATISTIC

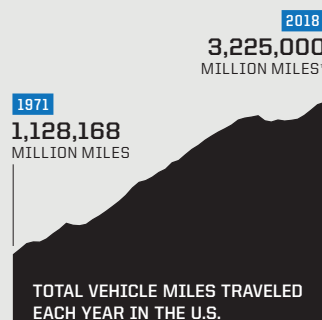
# 36

Percent reduction in fuel economy at highway speed when a bike rack with two bicycles is placed atop a midsize sedan. CR's testing showed that the bike rack reduced fuel economy by 5 mpg even when it was empty. For maximum mileage, remove the rack when it's not in use or stash bikes inside the vehicle.

## TRENDS

### On the Road Again

Total miles traveled by all vehicles have risen more than 180 percent since 1971, thanks partly to periods of economic growth and low gas prices.



Sources: U.S. Departments of Energy and Transportation. \*Estimated.



# The Hidden Risks of Used Cars

A Consumer Reports investigation found that dealers are selling used cars with open recalls, some of which can be deadly, to unsuspecting consumers. Here's how to protect yourself.

by Jeff Plungis

ARMANDO VARGAS-ORTEGA had bought his 2002 Honda Civic just three months earlier. While driving on the outskirts of Phoenix one evening last June, Vargas-Ortega, 54, collided with a Jeep that had run a stop sign.

His wife, in the passenger seat, survived with only minor injuries after her airbag activated, as it's meant to. But Vargas-Ortega's airbag malfunctioned. Instead of cushioning the blow, it ejected a piece of metal, lacerating the carotid artery in his neck and covering the driver's seat with "copious amounts of blood," according to the police report. Vargas-Ortega died in the hospital three days later.

The death is the most recent fatality—the 16th in the U.S. and 24th worldwide—known to be linked to airbags made by the now bankrupt Japanese car-parts manufacturer Takata. A faulty part—the

airbag inflator—led to the largest, most complex auto recall in history. The recall now affects 19 automakers and 183 models, covering a total of 56 million airbags in nearly 42 million vehicles.

This most recent death highlights not just the ongoing tragedy of a flawed design that can propel deadly shrapnel toward drivers and passengers but also two common but underappreciated risks faced by the nation's drivers and car buyers.

The first is that the systems in place to identify and fix dangerous vehicles are flawed. Vargas-Ortega's death occurred because of a safety defect that Honda had issued a recall for years earlier. Today, the National Highway Traffic Safety Administration estimates that the unsafe inflator remains unrepaired in nearly 23 million vehicles.

Overall, hundreds of recalls are issued every year—813 alone in 2017 (the most recent year with complete data), affecting 30.7 million cars, according to NHTSA. And only about two-thirds of recalls get fixed, according to the agency's 2017 analysis of five model years.

Vargas-Ortega's death also illustrates how vulnerable used-car buyers can be. Honda says that it had mailed 12 recall notices on the vehicle and made 20 phone calls to try to get the car fixed—but that it didn't know Vargas-Ortega had just recently purchased the Civic.

And even though used-car dealers routinely repair more minor mechanical problems and cosmetic flaws, no federal law requires them to check for open recalls or fix safety defects before they sell a vehicle, says





RECALL: BRAKE LIGHT

RECALL: BRAKE LIGHT

RECALL: AIRBAG

RECALL: AIRBAG

RECALL: CATALYTIC CONVERTER

RECALL: AIRBAG

RECALL: BRAKE LIGHT

RECALL: FUEL PUMP

RECALL: AUTOMATIC TRANSMISSION

RECALL: BRAKE LIGHT

RECALL: AIRBAG



William Wallace, senior policy analyst at Consumer Reports.

Federal law requires that new car dealerships and car rental companies repair known safety defects, but consumers don't have the same protections when purchasing used cars, whether they're sold by individuals or dealers.

"There's a clear safety gap," Wallace says. "And that puts consumers at risk in a potentially unexpected way."

Jared Allen, a spokesperson for the National Automobile Dealers Association, says his group encourages franchised used-car dealerships to tell consumers when a car they're interested in has an open recall, echoing comments from the trade group that represents independent dealers. Allen also says dealers should try to fix used cars with serious recalls. But he says they shouldn't be required by law to fix all recalls because replacement parts are not always available and because "not all recalls are equal" and need to be repaired before a buyer leaves the lot.

Car safety advocates disagree. "There's only one reason it's under a safety recall, and that's because

#### THE SECRET SHOPPER ASKED

'Would you be willing to fix the recall before selling it to me?'

#### THE DEALER SAID

'I can't even take it to [a Ford dealer] because ... they will charge me for it. But you being the owner, they will do it for free.'

#### THE TRUTH

Authorized dealers must fix all recalls free of charge, regardless of who takes the car in, even other dealers.

it's unsafe," says Rosemary Shahan, president of Consumers for Auto Reliability and Safety, a national watchdog group based in California. There's now additional protection for rental cars under federal law, Shahan says, arguing that the same protections should apply to used cars.

#### CR's Special Investigation

To better understand how these problems play out in the real world, Consumer Reports had a team of secret shoppers look into purchasing used cars with known safety defects.

CR's car safety experts picked the most serious defects they knew of: Takata airbags in 2001 and 2002 Honda Accords and Civics, such as the one Vargas-Ortega drove, as well as those in 2006 Ford Ranger pickup trucks.

Thirteen of the 16 known deaths in the U.S. linked to Takata airbags involved one of those vehicles.

NHTSA considers all those vehicles so dangerous that it warns drivers, "Do not drive these vehicles ... unless you are going straight to a dealer to have them repaired." Ford, in fact, says it will take affected 2006 Rangers to an authorized repair shop to be

## How to Be a Smart Used-Car Shopper



In most states, used-car dealers don't necessarily have to tell you when a vehicle has an open recall. And that's not the only thing you need to worry about when shopping.

Here are some tips from our secret shoppers and car-buying experts.

#### Check for Recalls

Ads often include the vehicle identification number, or VIN. Type that into NHTSA's recall tool at [nhtsa.gov/recalls](http://nhtsa.gov/recalls). Some used-car websites offer a version of that tool, such the one at [cars.com/recalls](http://cars.com/recalls).

#### Quiz the Dealer

Even if you checked online before going to the lot, ask about recalls once you get there. A reputable dealer should share that info—though our secret shoppers found that many dealers don't unless you ask.

#### Negotiate

A dealer might agree to fix the vehicle to

make the sale. Or you can use the info to ask for a better price.

#### Watch the Paperwork

If you're nearing a deal and recalls haven't come up, check the closing papers. As part of a settlement with the Federal Trade Commission, CarMax and some other used-car chains

must "conspicuously disclose" vehicles subject to recall if they market them as safe; that could mean simply including the information in one of the documents you sign at closing. Go to [CR.org/usedcars](http://CR.org/usedcars) to see the most reliable used cars and what models to avoid.

repaired free of charge.

Yet CR's secret shoppers found these risky cars for sale at used-car dealers across the country—and few dealers warned them about the danger or offered to fix the car.

CR first identified every 2001 and 2002 Honda Civic and Accord, and 2006 Ford Ranger, listed on Autotrader and Cars.com, the nation's two largest websites for listing used cars, in early 2019. (Cars.com is a business partner of CR.) Overall, we identified 826 such vehicles, most of which were for sale by independent dealers, not individuals or automaker-owned dealerships.

We then ran the vehicle identification number (VIN) for each car through a tool that checks to see whether a car still has an open recall. (The tool was developed by Carfax, a website that allows users to check repair records of vehicles.)

We found 102 vehicles, or 12.3 percent, with open Takata airbag recalls. Some had more than one recall, for both driver's-side and passenger-side airbags. Certain cars and trucks had other safety defects, too. Overall, 119 vehicles, or 14.4 percent, had a total of 186 open recalls.

Autotrader and Cars.com, which list used cars but don't sell them, include language on their sites encouraging users to check on a car's recall status before purchasing it. Cars.com also offers a tool allowing prospective buyers to look for recalls by VIN.

When CR's secret shoppers called dealers expressing interest in purchasing the listed vehicles, only four of those selling the Fords, and none of those selling the Hondas, volunteered information that the car was subject to recall or about the danger of the faulty airbag.

## What Used-Car Dealers Said

When our secret shoppers asked directly about the Takata recall, saying that they had heard about it on the



## Could Your Car Be Under Recall? And If So, What to Do.

Every recall is serious: Recalls happen only when the National Highway Traffic Safety Administration or an automaker determines that a defect poses an "unreasonable safety risk" or violates a safety standard.

Hundreds of recalls are issued every year, sometimes even for new models. In February, for example, Ford recalled its all-new Ranger pickup because of a faulty automatic transmission.

And don't assume that you're in the clear if your car is several years old. Every month, CR publishes a list of recent recalls. In December 2017, for example, Fiat Chrysler recalled more than a million Ram trucks dating back to 2009 because of defective gear selectors.

Since the start of this year, carmakers have issued recalls for more than 3.9 million vehicles, including at least five involving 250,000 or more vehicles. In addition to Takata airbag recalls, these include:

- **1.3 million Subaru Crosstreks** (2013 to 2017 model years), **Foresters** (2014 to 2016 model years), **Imprezas** (2008 to 2016 model years), and **WRXs** (2008 to 2014 model years) because of brake lights that could fail.

- **1.3 million Ford F-150 pickups** (2011 to 2013 model years) because of automatic transmissions that can unexpectedly downshift.

- **574,000 Ram 2500 pickups** (2014 to 2017 model years) and **3500 pickups** (2013 to 2017 model years) because of steering components that could cause drivers to lose control.

- **437,000 Honda Accords** (2015 to 2017 model years), **Acura TLXs** (2015 to 2019 model years), and **Acura MDXs** (2016 to 2018 model years) because of defective fuel pumps that can lead to stalling.

- **380,000 Kia Soul SUVs** (2012 to 2016 model years) because of catalytic converters that can overheat and damage engines.

To help you keep track of recalls that affect your car, CR has created the Car Recall Tracker ([CR.org/carrecalltracker](http://CR.org/carrecalltracker)). CR members can enter a vehicle's make, model, and year, and get a list of recalls that have been issued for it—and information on how to get the problems fixed.

Or go to [nhtsa.gov/recalls](http://nhtsa.gov/recalls) to check the free recall tool on NHTSA's website. Once there, type in your car's vehicle identification number, the 17-digit combination of numbers and letters unique to every car. You can usually find it on the bottom of the driver's side of the windshield.

If you can't find your VIN, the free Carfax app, myCarfax, lets you track open recalls using just your license plate information.

Finally, remember that authorized new-car dealers are required to repair recalls free of charge. If you get a recall letter from a carmaker, take it seriously and make an appointment to get the work done as soon as you can.



#### THE SECRET SHOPPER ASKED

'I'm seeing that Ford issued a warning about driving 2006 Ford Rangers. They're saying consumers should have them towed to a dealer to be fixed immediately. That sounds pretty scary.'

#### THE DEALER SAID

'Oh, they list just about everything. Just because they list it doesn't necessarily mean anything.'

#### THE TRUTH

All recalls are serious, and the truck had a do-not-drive order from Ford because of concerns about a particularly dangerous Takata airbag.

news, the dealers' responses varied, with some refusing to fix or even acknowledge the problem.

For example, a dealer at the Richmond Truck Authority in Richmond, Va., told our shopper that it couldn't do the repair on the truck because it wasn't a Ford dealer but that once the truck was sold, it would be done for the new owner free of charge. "I can't even take it to them because being another

dealer, they will charge me for it," our shopper was told. "But you being the owner, they will do it for free."

But under federal law, recall repairs are free to the legal owner of a vehicle, which includes used-car dealers. And Ford spokesperson Monique Brentley says that anyone, including independent dealers, can take any Ford, Lincoln, or Mercury vehicle to an authorized dealership for a recall repair at no charge.

When asked for an on-the-record comment, Richmond Truck Authority's used-car sales manager, who didn't give his full name, said it would be impractical to get all recalls repaired. And in any case, he said, "we are pretty short-staffed," adding that he was the only one available to schedule and take a car to a franchised dealership for repair.

A spokesperson at the National Independent Automobile Dealers Association says the difficulty of getting repairs done is one reason the industry opposes laws requiring that used-car dealers repair open recalls.

But CR's secret shoppers found that certain dealers were willing to make these repairs. For example, when one shopper asked about a 2002 Honda Accord at Rich's Car Corner in Seattle, the dealer simply replied, "Yes, we can do the recall repair."

Another secret shopper, calling about a truck at Robberson Ford Lincoln Mazda in Bend, Ore., got no pushback when asking about the airbag repair. "Of course, recalls are free," he was told. "It's standard across the board. We could probably do that for you."

A few dealers even volunteered information about the recall. For example, a salesperson at A1 Auto Source in Jenkinsburg, Ga., told our secret shopper that he couldn't even test-drive the Ranger he was interested in because of the airbag. "You can't drive it today because Ford called, and they're coming to get the truck," he was told. "This is a serious issue."

## The Tragedy of the Takata Airbag Failure

### AFFECTED AIRBAGS THAT HAVE NOT BEEN REPAIRED

22

Toyota  
2.4 Million

Daimler  
Trucks  
3K

Nissan  
1.1 Million

Ferrari  
1K

It's the largest and most complex auto recall in history. But even that description doesn't do justice to the scope and impact of the Takata airbag inflator recall.

The recall involves 19 automakers and 183 car models, and the list keeps growing. Just this past fall and winter, several additional recalls—including from Audi, BMW, Jeep, Ford, Honda, Mercedes-Benz, Mazda, Tesla, Toyota, and Volkswagen—added 5.4 million vehicles, bringing the total to 56 million airbags in 42 million cars. And nearly 23 million of these

airbags still aren't fixed.

The Takata recall is also unprecedented because of the seriousness of the injuries the airbags can cause. The ammonium nitrate initially used as a propellant in the inflator sometimes becomes unstable, especially after exposure to repeated temperature changes and moisture from long periods of high humidity.

As a result, during a crash airbags sometimes not only inflate but also explode, expelling pieces of metal from the inflator itself, causing injuries similar to those sustained in combat.

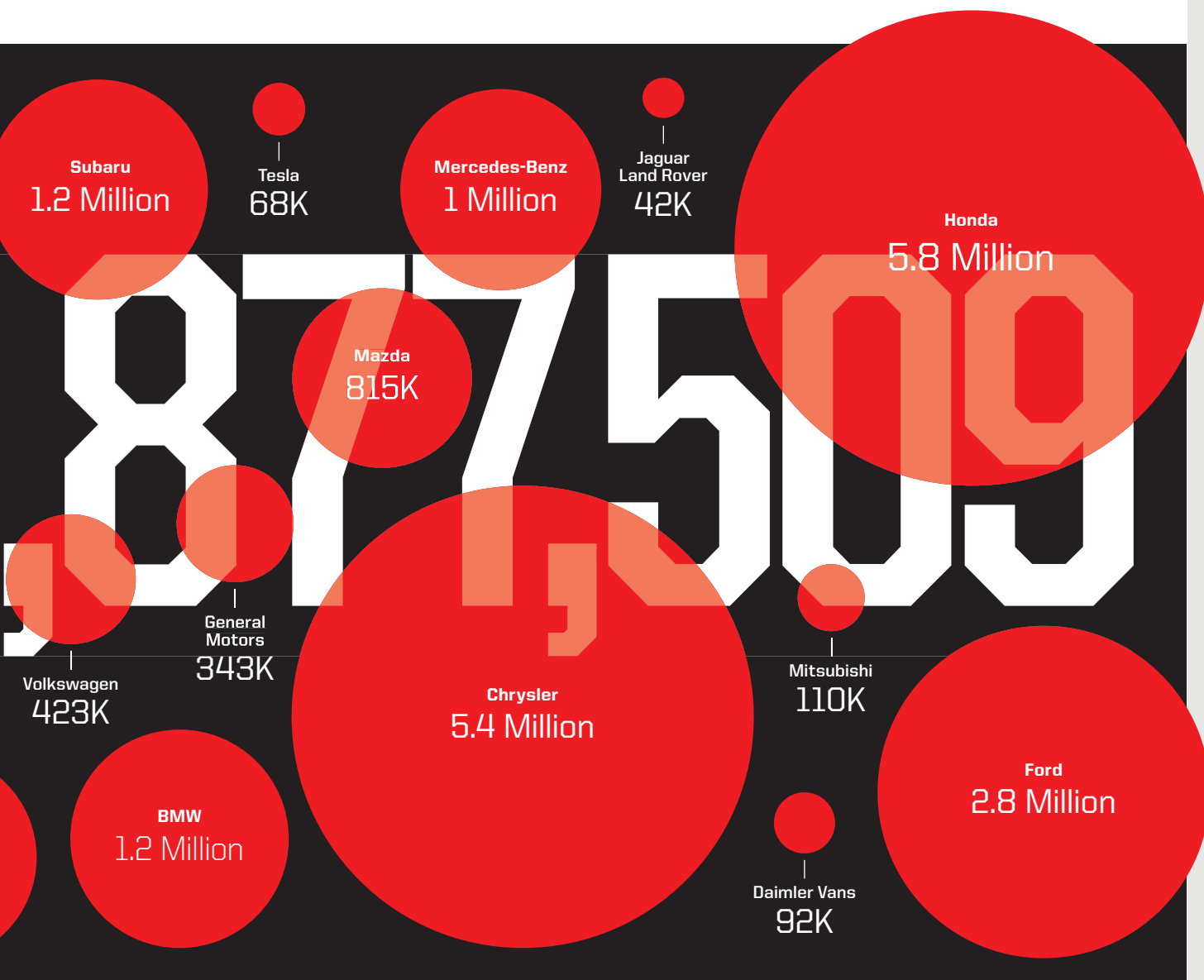
The first Takata airbag recall was in 2008, when the National Highway Traffic Safety Administration and automakers became aware of flaws in the manufacturing process. And the recalls greatly expanded in 2015, with NHTSA organizing the recall by prioritizing the delivery of replacement parts to the most vulnerable cars: the oldest vehicles in the hottest and most humid climates.

NHTSA broke the country into three zones based on climate and spaced out the delivery of replacement inflators. The recalls announced this past winter were part of

the fourth of an expected five waves, with the final push planned for the end of this year.

But even then the problem won't be fully solved. Certain replacement airbags used in early waves were also defective, so some cars will have to have their airbags replaced twice. For example, this March, Honda recalled more than 1.1 million vehicles because of a manufacturing defect in some replacement airbags.

To find out whether your vehicle is subject to a Takata airbag recall, go to [nhtsa.gov/recalls](http://nhtsa.gov/recalls) or see "Could Your Car Be Under Recall?" on page 55.



Asked later for an on-the-record comment about this shopper's experience, David DeBarr of A1 Auto Source said that he always checks for recalls and that he wouldn't advertise a car as safe if it had an open recall.

### Improving Recall Rates

Getting recalled cars repaired has long been recognized as a challenge, even for models as dangerous as the three CR looked at. That's partly because the auto industry and its regulator, NHTSA, struggle to reach consumers, especially after a car has been resold.

Recall completion rates decline sharply as vehicles age. Vehicles that are 1 to 3 years old have average recall completion rates of 80 percent. For vehicles 6 to 10 years old, only 56 percent have the work performed.

Automakers have taken some steps to expand outreach, reportedly even using social media, sponsoring public service announcements at sports stadiums, and, in at least one case, hiring private detectives to track down vehicle owners.

Congress has also taken steps to improve recall rates by forbidding the sale of new or rental cars with open recalls. In 2015, consumer groups, including Consumer Reports, helped push for the passage of the Raechel and Jacqueline Houck Safe Rental Car Act. That law was named after two sisters, ages 20 and 24, who were killed in 2004 when their rented Chrysler PT Cruiser caught fire. That car had an open recall for a defective power-steering hose.

But the same protections don't apply to used cars, despite calls from numerous advocacy and driver-safety groups. That doesn't make sense, says Shahan at Consumers for Auto Reliability and Safety. She says older used cars with open recalls are the most difficult ones to get fixed.

Used-car dealers and their trade groups have opposed efforts to require dealers to fix cars with open recalls before selling them. In effect, they say, doing so "grounds" these cars,

#### THE SECRET SHOPPER ASKED

'Do you know if the car you're selling is subject to the Takata airbag recall?'

#### THE DEALER SAID

'If you contact a Honda dealership and give them the VIN number, they can tell you if the recall was already done.'

#### THE TRUTH

Anyone, including used-car dealers, can check the recall status of any vehicle at any time, free of charge, at [nhtsa.gov/recalls](http://nhtsa.gov/recalls).

costing dealers business. It could hurt consumers, too, by reducing the value of a trade-in car by an average of \$1,210, says Jared Allen at the NADA, citing an analysis his organization commissioned from J.D. Power.

Several states, spurred by industry-led lobbying campaigns, have tried to protect used-car dealers from lawsuits related to recalls. Last year, Tennessee enacted a law saying dealers were, in most cases, protected as long as they

disclosed open recalls. Pennsylvania has a similar law. Massachusetts, Missouri, New Jersey, and New York reportedly also have similar measures under consideration.

### Better Protection Needed

Consumer advocates, however, say simply disclosing the problem isn't good enough. "That puts the burden on the buyer to sort through what needs to be fixed right away and what could wait," says Wallace, CR's policy expert.

He says not only that dealers routinely repair cars before selling them but also that some interact directly with carmakers about other problems.

Moreover, the carmakers will make all those repairs free of charge. "Removing the danger to consumers is worth any additional step they realistically might have to take," Wallace says.

Honda also favors laws requiring that used cars be fixed before they're sold, says company spokesperson Chris Martin. And while dealers are not required by law to make these repairs, many automakers have policies that forbid their own dealers from selling vehicles with open recalls. "We have advised our dealers that they should not sell any vehicle, new or used, from any brand, with an unrepaired safety recall," Martin says.

Similarly, Ford has a used-car checklist for its dealers that allows them to check for open recalls and, if any are found, to fix them, says company spokesperson Brentley.

That, Wallace says, should be the standard for all used cars. Private individuals selling their personal cars shouldn't be required to take that step, but they should check their car's recall status and try to get problems fixed before selling the car.

And for commercial dealers, both franchised and independent, it should be mandatory.

Says Wallace: "If there's an open defect, it has to be fixed, period."





## ROAD TEST

WE CONDUCT 50+ TESTS ON EACH VEHICLE AT OUR 327-ACRE AUTO TEST CENTER. FOR COMPLETE ROAD TESTS, ALL-ACCESS MEMBERS CAN GO TO [CR.ORG/CARS](https://www.cars.com).



LUXURY ENTRY-LEVEL SUVs

### Lexus UX

Fuel Frugal and a Little Fussy

75

OVERALL  
SCORE

ROAD-TEST SCORE 71

**HIGHS** Fuel economy, standard advanced safety features

**LOWS** Controls, tight interior, small cargo area

**POWERTRAIN** 175-hp, 2.0-liter 4-cylinder hybrid engine; continuously variable transmission; all-wheel drive

**FUEL** 37 mpg on regular fuel

**PRICE AS TESTED** \$37,740

**THE NEW UX** blends many of the things we like—and don't—from the Lexus lineup into a package that will suit buyers who rank fuel efficiency and reliability over functionality.

We purchased the UX 250h hybrid, which is the only version with all-wheel drive. Its four-cylinder engine, continuously variable transmission, and electric motors return an impressive 37 mpg overall, and it smoothly delivers power for most around-town driving. And the UX's small size makes it very maneuverable.

But despite its sporty styling, this wee hatchback is boring to drive, and acceleration is slow compared with its peers.

The engine revs loudly when drivers accelerate hard, such as when merging onto a highway. Otherwise, there's

little noise in the UX's well-insulated cabin, especially when operating on electric power. And the suspension does a good job of insulating passengers from road bumps.

Like most luxury entry-level SUVs, the UX's interior is small, but the rear seat and cargo area are especially tight.

It's a challenge to use the annoying touchpad to control the infotainment system while in motion. But the buttons and controls for the most-used audio functions are grouped together just in front of the center armrest. They're close at hand for the driver and easier to use than interacting with the touchpad.

Forward collision warning (FCW) and automatic emergency braking (AEB) with pedestrian detection are standard. Blind spot warning is optional.



LUXURY COMPACT CARS

### Volvo S60

More Style Than Substance

61

OVERALL  
SCORE

ROAD-TEST SCORE 71

**HIGHS** Braking, quietness, front-seat comfort, fit and finish, standard advanced safety features

**LOWS** Ride, controls, Volvo's brand reliability

**POWERTRAIN** 250-hp, 2.0-liter 4-cylinder turbocharged engine; 8-speed automatic transmission; front-wheel drive

**FUEL** 26 mpg on premium fuel

**PRICE AS TESTED** \$47,110

**THE S60 IS** an under-the-radar choice in its class. Its visually appealing exterior and interior design projects sophisticated luxury without being flashy.

This sedan has some standout qualities. Its quiet cabin is a nice place to be on a long drive. The front seats are supportive and comfortable. Volvo's minimalist interior is polished and refined, and both the cabin and trunk provide plenty of storage.

We weren't as impressed once the S60 started moving. Like other Volvos, this one struggles to smooth out road imperfections, leaving passengers feeling all of the thumps.

Factoring in the slow-to-respond steering, the S60 feels neither sporty nor luxurious to drive.

The Volvo feels quick in

everyday driving, but its competitors—including the Audi A4 and Mercedes-Benz C-Class—accelerate faster. Its fuel economy is 26 mpg overall. That means this front-wheel-drive sedan is less efficient than some of its all-wheel-drive rivals, many of which cost less.

The vertical touch-screen infotainment system forces drivers to make too many swipes and taps in order to execute common tasks, and it also requires them to spend too much time with their eyes off the road.

We like that FCW, AEB, and other advanced safety systems are standard, which isn't surprising for Volvo. But blind spot warning remains part of a costly option package. In addition, Volvo's below-average brand reliability is a concern.



MID-SIZED SUVs

## Honda Passport

Roomy and Powerful, but a Bit Bland

73

OVERALL SCORE

ROAD-TEST SCORE 76

**HIGHS** Acceleration, quietness, interior room, standard advanced safety features

**LOWS** Gear selector, ride

**POWERTRAIN** 280-hp, 3.5-liter V6 engine; 9-speed automatic transmission; all-wheel drive

**FUEL** 21 mpg on regular fuel

**PRICE AS TESTED** \$39,937

**THERE ISN'T A GOOD REASON** to choose the all-new Passport over the two better SUVs that Honda already makes—the smaller CR-V and the larger Pilot.

We enjoyed its plentiful power and roomy, two-row interior, but we were put off by its stiff ride, ponderous handling, and bland demeanor.

The Passport is quick, sprinting from 0 to 60 mph in just 6.4 seconds, thanks to the potent-yet-refined V6. Its 21 mpg overall is typical for the class. The nine-speed automatic transmission shifts smoothly but can hesitate annoyingly before downshifting at low speeds.

The cabin is wide and roomy, with generously padded door armrests and height-adjustable front-seat inner armrests. Handy storage nooks abound, including two

front trays and a very large bin between the seats. Thin windshield pillars and tall side glass allow for unobstructed views out.

But the Passport's suspension is overly stiff. And the front seats lack any side support to keep occupants from sliding about.

We found the touch-screen infotainment system slow to start up when we turned on the Passport; the system is also bogged down by clumsy menus. Android Auto and Apple CarPlay—with their streamlined interfaces—are standard and help to overcome that problem. The push-button gear selector is very awkward to operate, especially when parking.

We like that FCW and AEB are standard. Blind spot warning comes on all trims except the base Sport.



MID-SIZED SUVs

## Chevrolet Blazer

Swift and Steady; Short on Extras

67

OVERALL SCORE

ROAD-TEST SCORE 83

**HIGHS** Acceleration, braking, transmission, quietness, controls

**LOWS** Visibility, low dash vents, no standard advanced safety features, Chevrolet's brand reliability

**POWERTRAIN** 305-hp, 3.6-liter V6 engine; 9-speed automatic transmission; all-wheel drive

**FUEL** 19 mpg on regular fuel

**PRICE AS TESTED** \$43,290

**CHEVROLET HAS** resurrected the Blazer name for its new five-passenger SUV, which slots in between its compact Equinox and three-row Traverse SUVs. Chevy markets the midsize SUV as an aggressively styled performance machine. But we found it overpriced and underequipped.

We tested a Blazer with the 305-hp V6 engine, which was coupled to a nine-speed automatic transmission. This powertrain accelerates the Chevy swiftly, with immediate thrust and responsive shifts, but the engine sounds raspy when pushed. Fuel economy is just 19 mpg overall, 1 mpg less than the larger Traverse.

The ride is very civilized; the suspension soaks up bumps well and body motions are limited, helping

the SUV feel steady and planted. We were impressed by how it handled on twisty roads and our test track.

Getting in is easy, both front and rear. But the short windows give the cabin a closed-in feeling and make it challenging to see out the back.

The interior looks modern and functional, but there are many hard plastic surfaces and flimsy-feeling trim. Plus, the low-mounted vents of the climate-control system blow more air on the driver's elbows and legs than they do on the torso.

We do like Chevrolet's easy-to-use infotainment system, and Android Auto and Apple CarPlay are standard.

But FCW and AEB are available only as costly options on the higher Premier and RS trims.

**Ratings** ➤ **A Surge of SUVs** We've got test results on the newest two-row midsize options on the market, plus a small luxury SUV. We also review Volvo's latest sedan.

	Make & Model	Overall Score	Price	Survey Results		Safety	Road-Test Results										
Rec.			As tested	Predicted reliability	Owner satisfaction	Front-crash prevention	Road-test score	Overall mpg	Acceleration 0-60 mph, sec.	Dry braking 60-0 mph, ft.	Avoidance maneuver speed, mph	Routine handling	Ride	Noise	Seat comfort front/rear	Controls	Cargo volume, cu. ft./ Luggage, suitcases+duffels
MIDSIZE SUVs (2-ROW)																	
✓	Hyundai Santa Fe Limited (2.0T)	80	\$37,200	⬆	⬆	Std./⬆	80	21	8.7	136	52.0	⬆	⬇	⬆	⬆/⬆	⬆	35.5
✓	Ford Edge SEL (2.0 EcoBoost)	78	\$42,610	⬇	⬇	Std./⬆	84	22	7.7	129	52.0	⬆	⬆	⬆	⬆/⬆	⬆	39.0
✓	Nissan Murano SL	77	\$42,065	⬆	⬇	Std./⬆	77	21	7.7	131	50.5	⬇	⬆	⬆	⬆/⬆	⬆	33.5
✓	Honda Passport EX-L	73	\$39,937	⬇	⬆	Std./⬆	76	21	6.4	135	53.5	⬇	⬇	⬆	⬆/⬆	⬇	39.0
	Chevrolet Blazer Leather (V6)	67	\$43,290	⬇	⬆	Opt.	83	19	6.4	130	54.5	⬆	⬆	⬆	⬆/⬆	⬆	34.5
	Jeep Grand Cherokee Limited (V6)	62	\$41,375	⬇	⬆	Opt.	80	18	8.0	134	50.0	⬇	⬆	⬆	⬆/⬆	⬆	36.5
LUXURY ENTRY-LEVEL SUVs																	
✓	Mini Cooper Countryman S	77	\$39,535	⬆	⬆	Opt.	82	25	8.3	120	53.0	⬆	⬇	⬇	⬆/⬆	⬇	23.5
✓	Lexus UX 250h	75	\$37,740	⬆	⬆	Std./⬆	71	37	8.8	137	54.0	⬆	⬆	⬆	⬆/⬇	⬇	18.0
	Mercedes-Benz GLA250	64	\$42,210	⬆	⬇	Std./⬇	70	26	6.9	128	54.5	⬆	⬇	⬇	⬆/⬇	⬇	23.0
	BMW X2 xDrive28i	64	\$45,895	⬇	⬇	Std./⬆	77	25	8.0	134	52.5	⬆	⬇	⬆	⬆/⬇	⬆	23.5
	Infiniti QX30 Essential	62	\$43,745	⬇	⬇	Std./⬆	71	25	7.1	122	57.0	⬆	⬇	⬇	⬆/⬇	⬇	21.5
	BMW X1 xDrive28i	61	\$44,745	⬇	⬇	Std./⬆	74	26	7.9	134	53.0	⬆	⬇	⬇	⬇/⬇	⬆	27.0
	Volvo XC40 T5 Momentum	59	\$41,510	⬇	⬆	Std./⬆	71	24	7.3	132	54.0	⬆	⬇	⬆	⬆/⬆	⬇	25.5
LUXURY COMPACT CARS																	
✓	Audi A4 Premium Plus	80	\$48,890	⬆	⬆	Std./⬆	88	27	6.3	135	53.5	⬆	⬆	⬆	⬆/⬇	⬇	2+2
✓	Buick Regal Essence (2.0T, AWD)	77	\$39,715	⬇	⬇	Opt.	87	23	7.0	125	55.5	⬆	⬆	⬆	⬆/⬇	⬆	3+2
	Acura TLX 2.4L	74	\$35,920	⬇	⬇	Std./⬆	79	27	7.4	129	54.5	⬆	⬆	⬆	⬆/⬇	⬇	2+2
	Mercedes-Benz C300 (4MATIC)	74	\$47,560	⬇	⬇	Std./⬆	85	26	6.8	136	55.5	⬆	⬆	⬆	⬆/⬇	⬇	2+1
	Genesis G70 Elite (2.0T, AWD)	73	\$43,115	⬇	⬆	Std./⬆	74	23	7.8	137	56.5	⬆	⬆	⬆	⬆/⬇	⬆	2+0
	Acura TLX SH-AWD	71	\$42,345	⬇	⬇	Std./⬆	75	25	6.5	129	55.0	⬆	⬆	⬆	⬆/⬇	⬇	2+2
	Infiniti Q50 3.0t Luxe (AWD)	69	\$48,775	⬇	⬇	Std./⬆	85	22	5.7	126	56.0	⬆	⬆	⬆	⬆/⬇	⬇	2+1
	Kia Stinger Premium (2.0T, AWD)	67	\$40,400	⬇	⬆	Opt.	75	23	7.5	132	53.5	⬆	⬇	⬆	⬆/⬇	⬆	3+0
	Volvo S60 T5 Momentum	61	\$47,110	⬇	⬆	Std./⬆	71	26	7.3	125	53.5	⬆	⬇	⬆	⬆/⬇	⬇	2+1
	Lexus IS 300 (AWD)	60	\$48,149	⬆	⬇	Std./⬆	56	20	6.5	139	53.0	⬆	⬇	⬆	⬆/⬇	⬇	2+1
	Alfa Romeo Giulia Ti (AWD)	48	\$48,890	⬇	⬆	Opt.	70	27	6.7	136	53.0	⬆	⬆	⬆	⬆/⬇	⬇	1+2
	Jaguar XE Premium (25t AWD)	39	\$47,378	⬇	⬇	Opt.	69	25	7.7	133	53.0	⬆	⬆	⬆	⬇/⬇	⬇	1+2

**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, pedestrian detection, and

blind spot warning. NA means no such safety system is offered; Opt. means it's available but not as standard equipment. We also rate models from ⬇️ to ⬆️ based on how

many advanced safety features come standard. We deduct points if a model's gear selector lacks fail-safes. Digital or All-Access members can go to [CR.org/cars](https://www.cars.com) for complete ratings.



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# Silly Summer Sales

These goofs may cast some shade on your summer fun

## Throw Dad a Bone

Maybe these are best for those who want to teach an old dad new tricks?

Submitted by Megan Shawker, Catonsville, MD



## Lifetime Adirondack Chair

Constructed of UV-protected polystyrene simulated wood, the Adirondack Chair is comfortable and weather resistant. This model is a 2 pack of model 60064. It is available in brown and comes in (2) boxes. 2-year limited warranty.



2-year limited warranty.

## Off Their Rockers

Life is short, but this warranty is even shorter.

Submitted by Robert Gochberg, Canton, MA

## This Deal Is the Pits ...

... if you're the one who got only 20 percent off.

Submitted by Martin Friedman, Staten Island, NY



JUST SOLD

710 Calle Dulce, San Clemente



this home is the epitome of subtle elegance & careless beach living.

Located on a quiet cul de sac in the Coast District, this beautiful single story home is simply a pleasure to experience. Meticulously remodeled, this home is the epitome of subtle elegance & careless beach living.

## Troubled Waters

These ad writers may want to hide their heads in the sand.

Submitted by Larry Leisenring, via email



SHARE

Be on the lookout for goofs and glitches like these. Share them with us—by email at [SellingIt@cro.consumer.org](mailto:SellingIt@cro.consumer.org) or by mail to Selling It, Consumer Reports, 101 Truman Ave., Yonkers, NY 10703—and we might publish yours. Please include key information, such as the publication's name and date.





# Consumer 101

**SATURDAY MORNINGS ON NBC**  
**IN SPANISH ON TELEMUNDO**

CHECK YOUR LOCAL LISTINGS FOR TIMES, OR WATCH IT ON DEMAND  
[CR.ORG/CONSUMER101](http://CR.ORG/CONSUMER101)



the more  
you know





# Canada Extra

Portable A/Cs **32a**

Recalls **32b**

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## How to Use the Canada Extra Section

EVERY MONTH, Canada Extra provides Canadian pricing and availability information about products tested for that issue. The ratings in this section are based on this month's reports, but they narrow your choices to the products that are sold in Canada.

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 32d, 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.)

We appreciate your support, but we don't take it

for granted. Please write to [CanadaExtra@cu.consumer.org](mailto:CanadaExtra@cu.consumer.org) and tell us what you think. We can't reply to every email or implement every suggestion, but with your help we'll try to keep growing to serve your needs.

### **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.

## Portable Air Conditioners 9,000 to 15,500 Btu/hr.

Five of the tested air conditioners are available. **Report and ratings, pages 19-23**

**WHYTER  
ARC-14SH**  
\$678

**67** OVERALL  
SCORE



**WHYTER  
ARC-12SDH**  
\$600

**67** OVERALL  
SCORE



**HONEYWELL  
HL12CESWB**  
\$839

**64** OVERALL  
SCORE



**HONEYWELL  
MM14CCS**  
\$899

**62** OVERALL  
SCORE



**HONEYWELL  
MN10CES**  
\$649

**60** OVERALL  
SCORE







## RECALLS



SUBARU CROSSTREK

#### 2008-2017 SUBARU MODELS

On certain vehicles, the brake lamp switch could fail, causing the brake lamps not to turn on when the brakes are applied. Depending on the model, this could cause an inability to shift from Park or an inability to start the vehicle using the push-button ignition. This may also cause problems with the following: anti-lock brake system (ABS), vehicle dynamics control (VDC), and/or EyeSight system.

**Affected:** 135,814 2008-2014 Impreza WRX, 2008-2016 Impreza, 2013-2017 XV Crosstrek, and 2014-2016 Forester vehicles.

**What to do:** The company will notify owners by mail. Owners will be instructed to take their vehicle to a dealer to have the brake lamp switch replaced.

#### 2011-2014 KIA MODELS

Kia Canada is conducting a product improvement campaign that provides an update to the engine control module to detect potential problems before an engine fails and causes a sudden loss of power with an inability to restart.

**Affected:** 29,501 2011-2013 Optima and Sportage, and 2012-2014 Sorento vehicles.

**What to do:** The company will notify owners by mail. Owners will be instructed to take their vehicle to a dealer to update the software for the engine control module.

**Note:** Vehicles repaired under Service Campaign SC025 already have this software update.

#### 2011-2018 HYUNDAI MODELS

Hyundai Auto Canada is conducting a product improvement campaign that provides an update to the engine control module to detect potential problems before an engine fails and causes a sudden loss of power with an inability to restart.

**Affected:** 255,370 2011-2018 Sonata, 2013-2018 Santa Fe Sport, and 2014-2015 Tucson vehicles.

**What to do:** The company will notify owners by mail. Owners will be instructed to take their vehicle to a dealer to update the software for the engine control module.

**Note:** Vehicles repaired under Service Campaigns C0336, C0344, or C0347 already have this software update.

#### 2012-2016 KIA SOUL

On certain vehicles, the catalytic converter may be damaged by overheating. This could cause engine damage or an engine failure and sudden loss of power with an inability to restart. Engine failure may also result in fire.

**Affected:** 8,908 vehicles.

**What to do:** The company will notify owners by mail. Owners will be instructed to take their vehicle to a dealer to have the engine software updated. This update will prevent overheating of the catalytic converter. Vehicles will also be inspected for other damage. Depending on the results of the inspection, the catalytic converter and/or

the engine may be replaced.

**Note:** A driver may notice any of the following symptoms of this problem: a knocking sound from the engine, reduced power or hesitation, and/or the illumination of the malfunction indicator lamp (MIL) or check engine light.

#### 2013-2018 RAM MODELS

On certain trucks, a nut in the steering system could loosen and cause a loss of steering control. This problem affects trucks equipped with a 4x4-style steering system.

**Affected:** 77,994 2013-2018 3500 and 2014-2018 2500 vehicles.

**What to do:** The company will notify owners by mail. Owners will be instructed to take their vehicle to a dealer to inspect the outboard steering linkage jam nut. If the nut is properly tightened, it will be welded to the adjuster sleeve. If the nut is not properly tightened, the drag link assembly will be replaced.

#### 2014-2018 KIA MODELS

Kia Canada is conducting a product improvement campaign that provides an update to the engine control module to detect potential problems before an engine fails and causes a sudden loss of power with an inability to restart.

**Affected:** 79,301 2014-2018 Optima and Sportage, and 2015-2018 Sorento vehicles.

**What to do:** The company will notify owners by mail. Owners will be instructed to take their vehicle to a dealer to update the software for the engine control module.

**Note:** Vehicles repaired under Service Campaign SC023 already have this software update.

**2015-2019  
VOLKSWAGEN MODELS**

On certain vehicles, the rear suspension coil springs may not have been properly manufactured and could break over time, damaging a rear tire and resulting in rapid air loss and/or tire failure.

**Affected:** 15,579 2015-2019 Golf, 2017-2018 Golf Wagon, 2018-2019 Tiguan, and 2019 Jetta vehicles.

**What to do:** The company will notify owners by mail. Owners will be instructed to take their vehicle to a dealer to have both of the rear axle coil springs replaced. If a broken coil spring is found, the rear tires should be inspected for damage and be replaced as required.

**2017-2018  
MERCEDES-BENZ MODELS**

On certain coupe and cabriolet models, the front seatbacks may not fully lock on the right side. In a crash, a seatback that is not properly locked could allow unsecured objects from the rear seats to move forward.

**Affected:** 3,713 C-Class and E-Class vehicles.

**What to do:** The company will notify owners by mail. Owners will be instructed to take their vehicle to a dealer to inspect the front seatbacks and replace them as necessary.

**Note:** This is an expansion of Recall 2018-161.

**2017-2018  
NISSAN MODELS**

In certain driving situations, a metal structure such as a railroad crossing or overhead sign could cause the automatic emergency braking (AEB) system to activate when it is not needed, providing a collision warning. The vehicle could

slow suddenly or come to a complete stop.

**Affected:** 90,792 Qashqai and Rogue vehicles.

**What to do:** The company will send a letter to owners to explain this issue. Owners will be informed that a software update is available for the AEB system. This update can be installed at a dealership at no charge to the owner.

**2017-2019 HONDA RIDGELINE**

During a car wash, water can drain from the truck bed onto the top of the fuel pump. Certain car wash detergents could damage the fuel pump, causing it to crack and leak fuel.

**Affected:** 13,289 vehicles.

**What to do:** The company will notify owners by mail. Owners will be instructed to take their vehicle to a dealer for an inspection of the fuel pump. If the fuel pump is cracked, it will be replaced. Dealers will also install a fuel pump cover.

**Note:** Owners who smell a

fuel odor or believe there is a fuel leak should contact a dealer immediately.

**2017-2019  
LINCOLN CONTINENTAL**

On certain vehicles, the door latches may not fully engage, allowing the door to open while the vehicle is moving.

**Affected:** 1,276 vehicles.

**What to do:** The company will notify owners by mail. Owners will be instructed to take their vehicle to a dealer to have the latch assemblies replaced on all four doors.

**2017-2019 PORSCHE MODELS**

On certain vehicles, the fuel tank could be punctured in a crash.

**Affected:** 1,714 718 Boxster and 718 Cayman vehicles.

**What to do:** The company will notify owners by mail. Owners will be instructed to take their vehicle to a dealer to have additional rivets installed on the lower crash beam.

**2018 CHRYSLER PACIFICA**

On certain vehicles, the right-front lower control arm ball joint could separate from the steering knuckle and cause a loss of steering control.

**Affected:** 2,239 vehicles.

**What to do:** The company will notify owners by mail. Owners will be instructed to take their vehicle to a dealer to have the right-front steering knuckle and lower control arm inspected for damage. The parts will be replaced as needed. Dealers will also replace the right-front steering knuckle pinch bolt with a larger-diameter bolt.

**2019 RAM 1500**

The power steering system may have a loose electrical connection, resulting in intermittent loss of power steering assist. This may make the truck difficult to steer and could cause both oversteer and understeer conditions.

**Affected:** 18,682 vehicles.

**What to do:** The company will notify owners by mail. Owners will be instructed to take their vehicle to a dealer to inspect and repair the electrical connection as needed.

**2019 RAM 1500**

On some vehicles equipped with adjustable pedals, the brake pedal could detach when it is adjusted and result in a loss of brakes.

**Affected:** 22,095 vehicles.

**What to do:** The company will notify owners by mail. Owners will be instructed to take their vehicle to a dealer to repair the adjustable pedal assembly. Drivers should not adjust the pedals until the vehicle is fixed. The pedals should never be adjusted while driving.



**NISSAN ROGUE**

## Autos

All of the tested vehicles are available in Canada. **Report and ratings, pages 59-61**

		Acceleration (sec.)				Fuel Economy (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
MIDSIZE SUVs (2-ROW)								
Honda Passport	\$41,990–\$48,990	2.6	6.8	1.9	17.2	16.3	8.5	11.4
Chevrolet Blazer	\$35,100–\$48,700	2.8	6.8	2.1	17.2	17.6	8.9	12.1
LUXURY ENTRY-LEVEL SUV								
Lexus UX	\$37,100–\$48,500	3.5	9.3	2.9	19.3	7.4	5.7	6.3
LUXURY COMPACT CAR								
Volvo S60	\$42,400–\$53,900	3.1	7.6	2.1	17.7	14.1	6.1	9.1

✓ **HONDA PASSPORT**  
PRICE AS TESTED  
\$39,937 (U.S.)

**73**  
OVERALL  
SCORE



**CHEVROLET BLAZER**  
PRICE AS TESTED  
\$43,290 (U.S.)

**67**  
OVERALL  
SCORE



✓ **LEXUS UX**  
PRICE AS TESTED  
\$37,740 (U.S.)

**75**  
OVERALL  
SCORE



**VOLVO S60**  
PRICE AS TESTED  
\$47,110 (U.S.)

**61**  
OVERALL  
SCORE



## Contact Info

How to reach  
manufacturers  
in Canada.

**Honeywell**  
[honeywellhomecomfort.com](http://honeywellhomecomfort.com)

**Whynter**  
[whynter.com](http://whynter.com)