Our testing and advice help you shop safely for these largely unregulated products.

PLUS

WHEN PRODUCT RECALLS FAIL AND HOW TO PROTECT YOURSELF

GREAT GIFTS UNDER $50

TOP TIRE PICKS AND BEST-PRICED RETAILERS
Your Road Map to Easy Car Shopping

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*Between 7/1/18 and 9/30/18, the average savings off MSRP presented by TrueCar Certified Dealers participating in the Consumer Reports Build & Buy Car Buying Service, based on users who received in-stock price offers and who TrueCar identified as purchasing a new vehicle of the same make and model as one of the in-stock price offers from a Certified Dealer as of 10/31/18, was $3,016. Your actual savings may vary based on multiple factors, including the vehicle you select, region, dealer, and applicable vehicle-specific manufacturer incentives, which are subject to change. The MSRP is determined by the manufacturer and might not reflect the price at which vehicles are generally sold in the dealer’s trade area as not all vehicles are sold at MSRP. Each dealer sets its own pricing.
Contents

26 Shop Smarter for Supplements
In this mostly unregulated market, consumers are largely left to fend for themselves. To help guide you, we examine medical research and put some botanical products to the test. Learn how to shop more safely and wisely.

38 Generator Safety Guide
Improperly using your generator could expose you to deadly gas hazards. We’ve updated our ratings based on brand-new risk-reducing technology. Plus, our safety guide provides specific steps to protect you and your family.

42 When Recalls Fail
Why are faulty and dangerous devices and products still being used by consumers and sold in stores? We take a close look at the weaknesses of our current recall system—as well as what needs to change.

Making Sense of Supplements
Sixty-eight percent of Americans take supplements at least once a week, but what’s inside might not be effective—or even safe.

P. 26
Making Tracks
Our unparalleled, rigorous testing reveals what’s tops in tires.

DEPARTMENTS & COLUMNS

10 What We’re Testing in Our Labs …
Air mattresses for houseguests, TV sound bars, dishwashers, and more.

RATINGS

12 Ask Our Experts
Discover the best ways to use your convection oven, and where to install a smart thermostat. Plus: Last-minute tips for using 2019 flexible spending account funds.

CR Insights
Happy holiday gift shopping! We’ve gathered up some top-scoring products for $50 or less.

PRODUCT UPDATE

18 The Laptop Has Landed
Discover powerful, versatile, budget-friendly models that literally bend over backward to meet your needs.

RATINGS

ROAD REPORT

51 Ahead of the Curve
Auto ratings, news, and advice.

52 The Wheel Deal
Expert tips from the best tire testing program on the planet.

RATINGS

59 Road Test
We test the Audi A6, Ford Explorer, Hyundai Palisade, and Nissan Leaf Plus.

RATINGS

ABOUT CONSUMER REPORTS
Consumer Reports is an independent, nonprofit organization founded in 1936 that works side by side with consumers to create a safe, fair, and transparent marketplace. To achieve our mission, we test thousands of products and services in our labs each year and survey hundreds of thousands of consumers about their experiences with products and services. We pay for all the products we rate. We don’t accept paid advertising. In addition to our rigorous research, investigative journalism, and consumer advocacy, we work with other organizations, including media, consumer groups, research and testing consortiums, and philanthropic partners. We also license our content and data, as well as work with business partners to offer shopping and other consumer services, and may receive fees from these programs. We maintain a strict separation between our commercial operations and our testing and editorial operations. Our testing and editorial teams decide which products to test and review; our external business partners or other third parties do not dictate or control these decisions. Lastly, these partnerships and programs do not constitute CR’s endorsement of any products or services.

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Go to CR.org/lettertoeditor.

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Go to CR.org/tips.

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Go to CR.org/magazine or call 800-333-0663.

RATINGS
Overall Scores are based on a scale of 0 to 100. See page 63 for more details.

01 POOR
02 FAIR
03 GOOD
04 VERY GOOD
05 EXCELLENT
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From the President

What’s Wrong

With Recalls

EVERY DAY, we make certain assumptions about the safety and quality of the products we live with. We hunt for bargains, read reviews, and assume that what we buy and bring into our homes has been tested and proved to meet sensible standards. We know some products will work better or last longer than others, but how often do we consider the ways in which our purchases could result in harm—such as sickness, injury, or even death? If a product or food were reported to have hurt consumers, the manufacturer or government would surely let us know, right?

Not so fast. As unsettling as it is, it’s important to know that under our current regulatory system, dangerous items are sometimes put on the market and remain on the shelves. A variety of federal agencies oversee different industries, and some are more empowered than others. For example, federal law generally requires the agency overseeing household products to get manufacturers’ permission before releasing any identifying information about dangerous, or even deadly, products. The human costs of this broken system are impossible to ignore.

Consider this stark example: It took a Consumer Reports investigation—prompted by the government’s accidental release of case reports with product names—for Fisher-Price to recall its Rock ‘n Play Sleeper even after the product was already tied to dozens of infant deaths. Why is it that when they don’t, CR is on guard to make sure the market is safe, fair, and transparent for all of us.

Marta L. Tellado
President and CEO

Follow me on Twitter @MLTellado
Building a Better World, Together
Join with us to make a safer, fairer, healthier marketplace

Protecting Kids’ Privacy

WHAT’S AT STAKE
Everyone who uses the web has reason to be concerned about online privacy. But children are especially vulnerable to privacy violations at the hands of online marketers, data brokers, and identity thieves.

That’s why a federal law, the Children’s Online Privacy and Protection Act, requires that websites and apps get parents’ consent before collecting personal information from kids younger than 13.

HOW CR HAS YOUR BACK
CR was one of the groups that pressed Congress to pass COPPA in 1998, and we worked with the government officials who updated the rules in 2012.

We were also part of a coalition that alleged that Google-owned YouTube was collecting information about kids without parental consent and using it to target ads. In April 2018 the coalition filed a complaint with the Federal Trade Commission. And in a September 2019 announcement that echoed many of the coalition’s arguments, the FTC said Google and YouTube would pay $170 million to settle allegations of violating COPPA (which the companies neither admit nor deny).

CR is pleased that the FTC took action. But even though it was the largest civil penalty the FTC has ever obtained in a children’s privacy case, we don’t believe the punishment goes far enough to prevent future wrongdoing.

WHAT YOU CAN DO
For tips and tools for protecting your—and your kids’—online privacy, read “Your Guide to Digital Privacy” in the October 2019 issue. And to learn more about how CR is helping, including the work of our new Digital Lab, go to CR.org/dataprivacy.

Keeping Meat Labels Honest

WHAT’S AT STAKE
The average U.S. adult consumes about 21 pounds of processed meats per year, from deli meats to hot dogs to bacon.

The problem, as reported in our October 2019 article “Danger at the Deli,” is that the curing process used to enhance the flavor and color (and extend the preservation) of these products results in nitrite levels that have been linked to cancer.

What’s more, CR’s latest testing of 31 deli meats found that processed meats cured with nitrates and nitrites from natural sources had about the same amount of the chemicals as those cured with synthetic ones. That’s important because current Department of Agriculture rules require meat cured using nonsynthetic sources, such as celery powder, to be labeled “uncured” or “no nitrates or nitrites added,” creating the false impression of a safer or healthier product.

HOW CR HAS YOUR BACK
With our colleagues at the Center for Science in the Public Interest, CR submitted a petition to the USDA requesting a change to the misleading labeling rules. The petition, currently under review by the USDA, asks the agency to prohibit the ‘uncured’ and ‘no nitrates or nitrites added’ labels on meats processed using nonsynthetic sources of these chemicals. Instead, we’re asking for clear front-of-package labeling whenever they’re added, regardless of the source.

More than 32,000 CR members have signed the petition.

WHAT YOU CAN DO
To add your name, go to CR.org/curedmeatpetition. And stay up-to-date on food safety at CR.org/foodsafety.

Pushing for EV Choices

WHAT’S AT STAKE
In August, Colorado became the 11th zero-emissions-vehicle (ZEV) state, after passing rules requiring automakers to sell a growing share of electric vehicles (EVs) each year. EVs are cheaper to fuel and maintain than gas-fueled alternatives, and help to reduce smog and carbon pollution. Plus, a recent CR survey found that most prospective car buyers in Colorado are interested in EVs. Advocates of the program believe it will give consumers more zero-emissions options sooner, including SUVs and pickup trucks.

HOW CR HAS YOUR BACK
CR mobilized Colorado members to testify before the state’s Air Quality Control Commission in support of the new standard, and CR policy advocate Shannon Baker-Branstetter served as an expert witness during the rulemaking process. The measure was approved by an 8-1 vote, with commissioners citing the overwhelming public support from written submissions and in-person testimony as a driving force.

CR also released a report in September finding that several states are taxing EV drivers at rates much higher than the average driver pays in gas taxes, which is an ineffective way to make up for highway fund shortfalls and punishes drivers for choosing ZEVs over gas-burning alternatives.

WHAT YOU CAN DO
To learn more about electric cars and see CR’s ratings of eight current EVs, read our special report “The Electric Car Comes of Age” in the September 2019 issue or at CR.org/evs1219.
Our October 2019 article “Your Guide to Digital Privacy” revealed the everyday objects in your life that may be spying on you—from smart speakers to fitness trackers—and offered smart ways to protect your personal data. To join the conversation, go to CR.org/privacy1219.

Thank you, thank you, thank you for your October issue on cybersecurity! I've been trying to find good advice on each of the topics you covered. I'll now be spending some time going through two MacBooks, two iPhones, and one iPad, and many apps and websites, doing as much cleaning up, sanitizing, and securing of my data as I can. I recently Googled my name and was astounded to see how much of "me" was out there! Fortunately, nothing too private (yet?), but there are too many things I've used in the past as "secure" log-in words. Rather than slapped and fined, Google, Amazon, Facebook, et al., should be required to disclose up front, in simple English, what their policies are.

--Don Vogt, Santa Barbara, CA

The article on digital privacy asserted "what's most important is having strong, unique passwords for each account." Will that protect someone when an entire server (e.g., Facebook, the Pentagon, Twitter, etc.) is hacked?

--Jesse Greenman, Oakland, CA

Editor's Note: Data breaches are unfortunately common, and can give hackers access to a lot of information, potentially

including passwords. Still, if you avoid reusing the same password for multiple services, a severe breach on one system is less likely to affect another.

In your excellent report on digital privacy, you mention the need for long passwords but do not define what “long” means. I’ve read that 12 digits is a minimum password length to use. BTW, my router password is more than 35 characters long. It's a pain to use sometimes, but I don't think it will be cracked!

--Matt Pey, Bordentown, NJ

Editor's Note: Those devices could potentially be compromised, yes, but efforts are being made to prevent that. In fact, the Food and Drug Administration sometimes sends out cybersecurity security warnings when it sees a potential problem. For example, in June the FDA issued a caution about some older insulin pumps and recommended that people using those products seek replacements. And in January, a public-private consortium put out the Medical Device and Health IT Joint Security Plan, which advises healthcare entities and device makers on ways to minimize security risks for connected medical devices.

I recently experienced a four-day internet outage that affirmed my preference for a not-so-smart home. That would have been a catastrophe if everything was internet-dependent! Communications and streaming absences were bad enough.

--Jane Gordon, Portland, OR

I read with great interest your article on digital privacy and efforts to keep our information safe. But nowhere do I see any evidence of efforts to keep our medical devices safe. Are there any efforts out there to protect our insulin pumps, pacemakers, and more from being hacked? Think about all the exposure for people with all the new internet-connected devices ... Yikes!

--Linda Kelly, Kingman, AZ

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A MEATY DISCUSSION

YOUR ARTICLE “Danger at the Deli” (October 2019) made me pause and take notice. Like most consumers, I assumed the fresher the product, the less concerned one had to be regarding contamination. I’m a regular consumer of fresh sliced deli meats, and my favorite choices are well-advertised national brands. I’ve occasionally witnessed one of the two brands go bad in my fridge after several days, which had me convinced that preservatives were not part of the equation. My assumption is incorrect, obviously. Thanks for getting the word out.
—Robert Miller, Port Orchard, WA

DO YOUR WARNINGS about deli meat include the meat sliced to order at the deli counter in a chain store supermarket, or do the warnings apply to only presliced packaged and repackaged meat?
—James Austin, San Diego, CA

EDITOR’S NOTE

We tested for Listeria monocytogenes only in cold cuts sliced at the deli counter. Packaged deli meats aren’t immune from contamination, but the chances are higher in sliced meat, often due to in-store contamination. The risks from nitrates and nitrites, however, are the same in both deli-sliced and packaged processed meats. Though we didn’t test for these compounds in sliced meat, both are preserved with nitrates or nitrites. And both can have high levels of sodium.

RE: IMPOSSIBLE AND BEYOND Meat Burgers (“Meat Gets a Makeover,” October 2019). It’s about the insane cruelty of factory farming. It’s about saving the lives of the billions of animals [that die] for the sake of appetite. It’s about saving the rainforests as well as the earth. Just saying.
—Shelley Butler, via CR.org

ONE OF BEEF’S major environmental impacts is water consumption. Most U.S. beef is raised in arid western states. Beef and hay are enormously water consumptive. In Utah, 82 percent of water is used by Big Ag and about three-quarters of that goes to cattle/forage. Alfalfa is Utah’s largest crop, used far more water than all cities/towns combined. Western state populations are exploding and demanding more water. We’ll have to decide between cows and kids.
—Chuck Shaw, Escalante, UT

Giant portobello mushrooms, gently sautéed on both sides in olive or avocado oil for just a few minutes with a touch of low-sodium soy sauce or Bragg liquid aminos, are incredibly delicious and make great burger substitutes! Can’t stay away from them.
—Norma Sandler, via CR.org

READERS BITE INTO PLANT BURGERS

I’ve tried the Beyond Burger at Carl’s Jr. three times, and each time it was cooked perfectly, and I genuinely couldn’t taste the difference between it and a regular Carl’s Jr. “Famous Star with Cheese” burger, which really surprised me. For those without legume allergies, this is a great alternative to a ground beef burger.
—Ann Detsch, via CR.org

I tried the brand-name plant-based sandwich at Burger King called the Impossible Whopper. My partner and I did a blind taste test, comparing it with the standard Double Whopper. Could we tell the difference between the two? Oh, hell yes, we could! The Impossible Whopper was dull and tasteless. They’re going to have to do some work on it before I try it again.
—Jim Brown, via CR.org

EDITOR’S NOTE

You’re absolutely right. Passengers should never place their feet on the dashboard, because the force of a deploying airbag can drive their legs back, risking injury to their legs and to other parts of their bodies, including their heads and face, if their legs strike them.

NOTE: In our October story “Meat Gets a Makeover,” we should have specified that Just’s research focused only on the company’s plant-based products. There are still no large-scale studies on what impact lab-grown meat may have on the environment.

AVOIDING DEER

PER YOUR ARTICLE “How Likely Are You to Hit a Deer?” (Insights, October 2019): In a deer area, tailgating drivers are a real menace. If you have to suddenly brake because a deer has jumped into the road ahead of you, the tailgating driver behind you can’t possibly stop safely. I slow down to let tailgating drivers go past.
—Chris Rickwood, Surrey, British Columbia

RE: “THE RIGHT WAY to Sit Behind the Wheel” (Insights, October 2019). To wit: I feel that CR should have included a warning about passengers not putting their feet on the car’s dashboard as if it was a footrest.
—Gene Zagorsky, Flushing, NY

SITTING SAFELY IN THE CAR

Note: Passengers should never place their feet on the dashboard, because the force of a deploying airbag can drive their legs back, risking injury to their legs and to other parts of their bodies, including their heads and face, if their legs strike them.

I SLOUGHED off the warning about deer driving my feet firmly on the car’s dashboard. Passengers are a real menace. If you have to suddenly brake because a deer has jumped into the road ahead of you, the tailgating driver behind you can’t possibly stop safely. I slow down to let tailgating drivers go past.
—Chris Rickwood, Surrey, British Columbia

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ILLUSTRATION BY JASON SCHNEIDER
Ask Our Experts

**TV technology is better than ever—so why are we still being sold sound bars?**

Though sound quality on TVs—especially on high-end models—has improved in recent years, “many more affordable sets still don’t match the experience that even a decent sound bar can deliver,” says Claudio Ciacci, CR’s TV tester. (Superior sound technology can be expensive, and on some sets, it’s not prioritized.) As a result, the majority of the 200 or so TVs we test get only a Good or Fair rating for sound. We hold sound bars to a higher sound standard than TVs. So a sound bar with a Good rating will deliver richer sound than a TV with a Good sound rating. Our tests reveal that even a low-cost model (such as the Creative bar above) can enhance your TV listening experience.
We tested: 76 models
We test for: How well a model washes a full load of dishes with baked-on food when set to a normal cycle, how thoroughly a model dries items, noise, and more.

About the scores:
Median: 71
Range: 36-88

Fastest (95 Minutes)
Bosch Ascenta SHX3AR75UC $625

Quietest
Thermador DWHD660WFP $1,800

Self-Cleaning Filter
KitchenAid KDTM354DSS $775

We tested: 30 models
We test for: How fast a chainsaw can cut through a 10-inch-square oak beam; handling; safety, including kickback intensity; ease of use; and more.

About the scores:
Median: 66
Range: 24-80

Heavy-Duty & 5-Year Warranty
Echo CS-590-20 (gas) $400

Lightweight for Small Jobs
Stihl MS 180 C-BE (gas) $250

Powerful Battery
Dewalt DCCS670X1 $330

We tested: 4 double-height models
We test for: How much a mattress sinks when a heavy load is placed on it for more than 15 minutes, how quickly a mattress inflates, and more.

About the scores:
Median: 67
Range: 43-81

Best for Any Guest
Simmons Beautyrest Hi Loft Raised (62W x 83L) $68

Extra Wide
Intex Comfort Plush Elevated Dura-Beam (65W x 83L) $50

Longest Warranty (1 Year)
Insta-Bed Raised Air Mattress (61W x 81L) $110

We tested: 14 single-stage gas models
We test for: How quickly a model can remove snow without laboring, throwing distance, ease of handling and controls, and more.

About the scores:
Median: 65.5
Range: 38-78

Speedy Snow Removal
Toro 824 QXE 36003 $880

Great Value
Troy-Bilt Squall 179E $450

throws Snow Farthest
(Suitable for Wide Driveways)
Simplicity 1022EE $600

Note: We rate different products according to different testing protocols; as a result, Overall Scores of one product category are not comparable with another.
When should I use my oven’s convection function?

Many newer ranges and wall ovens offer a convection setting, typically with two modes: baking and roasting. When you turn on either of these modes, one or more fans inside the oven cavity circulate hot air while your food cooks. (Certain ovens also have an extra heating element, often dubbed “true” convection.) Manufacturers claim this helps to heat and brown food more evenly, and can reduce the overall cooking time.

But in practice, that’s not always the case. “The success of convection baking in our tests is hit or miss,” says Tara Casaregola, Consumer Reports’ test engineer for ranges and wall ovens. “Some ovens, such as the LG LRG3193ST, do better with convection baking mode turned on, but others do best simply on the conventional bake setting.” Casaregola adds that in some cases, the same oven might convection-bake beautiful cookies but still botch a cake.

She advises referencing the owner’s manual for your range. Some instruct you to shorten the cook time or reduce the temperature when using convection mode. It’s a good idea to do a test run of a favorite baking recipe to see how it affects your bake.

However, convection roasting (which may have a different name, such as Pure Convection, depending on the brand) is another story. This additional convection setting, offered on models such as the GE Profile PB911SJSS, is best for crisping and browning large cuts of meat, and is less fickle. When using convection roast, you can generally turn down the oven temperature 25°F below what the recipe calls for, and start testing for doneness earlier than you might think, until you’re accustomed to how your oven handles the job.

I haven’t spent all the funds in my flexible spending account for the year yet. What can I still do?

There’s plenty you can do with your FSA money so that you don’t lose it. With an FSA, which you can get only through an employer, you put pretax money away to spend on qualifying medical expenses not covered by your health insurance. Putting money into an FSA is a smart way to reduce your taxable income and cover healthcare costs, says Donna Rosato, a CR senior money editor.

Though many employers require you to spend the money by Dec. 31, some companies give you additional time, Rosato says, so check with yours. For 2019, 30 percent of employers that offer FSAs give up to an extra two and a half months to spend FSA money, and 43 percent allow you to carry over up to $500 into the next year, according to a survey of 2,763 human resources professionals.

If you do have an end-of-year deadline, don’t panic. A huge variety of services and products, from acupuncture and allergy testing to lip balm and sunscreen, are FSA-eligible. Go to FSAstore.com to see what qualifies. Almost everything sold on the site is eligible for FSA dollars. If you still find yourself struggling to spend it all, consider contributing less next year.

I’m getting a smart thermostat. Does it matter where in the house I place it?

The ideal placement of any thermostat is on an interior wall in a common space, away from anything that could create temperature extremes, such as direct sunlight, a drafty window, or an air vent. Avoid placing a thermostat in an isolated room that tends to get colder or hotter than the main part of the house. All of this helps the thermostat get a more accurate reading, says Peter Anzalone, who tests thermostats for CR.

The path of least resistance is to place your new thermostat in the same spot as the old one, where the wiring is. If it isn’t in an ideal location, you’ll need to pay an installer to rewire. But one easy, inexpensive solution (without rewiring) is to see whether your new smart thermostat is compatible with remote temperature sensors—small wireless devices that can be put in other rooms to monitor temperatures, enabling more balanced heating and cooling. The Nest Thermostat E, $170, for example, offers separate Nest Temperature Sensors for $39 each.
At CR, we take our stocking stuffers seriously—because we know that a well-priced, truly useful product can bring much joy. Browse our specially curated roundup of top-rated product suggestions, starting as low as $15. And heed our shopping tips so that you know where and how to find deals safely.

**GIFTS FOR $50 AND UNDER**

WestBend 2-Slice Black & Silver 78823

$25

This sleek toaster is a top performer, too: It passes our toasting evenness test with flying golden-brown colors and has a bagel setting to boot.
GIFTS FOR $50 AND UNDER

1. Amazon Basics Stainless Steel Electric Kettle $20
   - 85
   - Great for any tea enthusiast, this quick-to-boil 4-cup kettle earns the second-highest score in our ratings.

2. Hamilton Beach 12-Cup Programmable 49465R $25
   - 82
   - For coffee lovers on your list, here’s a glass carafe brewer that serves up 12 excellent cups in just 10 minutes.

3. Brita Stream Rapids OB55 $30
   - 81
   - An ultra-practical pick, this Brita filters water quickly as you pour it into your glass—and is tops in our tests.

4. Artisanal Kitchen Supply Pre-Seasoned Cast Iron Skillet (Bed Bath & Beyond) $25
   - 78
   - This sturdy, 12-inch cast-iron frying pan is a bargain and is excellent for searing steak and browning foods.

5. JLab Audio JBuds Air $50
   - 76
   - Offering very good sound quality for the price, these completely wireless Bluetooth buds are a smart choice.

6. Vremi Dutch Oven $45
   - 73
   - This enameled cast-iron Dutch oven is excellent for baking bread and works on an induction cooktop.

7. Asobu Insulated Portable Brewer KB900 $50
   - 73
   - For the coffee-loving commuter, this brewer makes cold brew and keeps it chilled for on-the-go drinking.

8. Pioneer Woman 6 Quart Portable Slow Cooker 33362 $40
   - 68
   - This cooker turned out tender meat and veggies in our 5- and 8-hour beef stew tests. Plus, the insert is oven-safe.

STILL CONFUSED BY ...

5 THINGS TO KNOW WHEN SHOPPING ON AMAZON

1. EVALUATE "AMAZON’S CHOICE"
   As you search on Amazon, you’ll see a black “Amazon’s Choice” badge on some listings, which Amazon says "recommends highly rated, well-priced products available to ship immediately.” That endorsement may sway you, but Amazon doesn’t disclose exactly how it selects products within those guidelines, so don’t assume that the product is of better quality or value without doing your own research.

2. CHOOSE YOUR SELLER WISELY
   When you buy an item directly from Amazon, you’ll see the phrase “Ships from and sold by Amazon.com” on the product listing. That means Amazon manages everything from shipping to customer service and returns. When you buy from a third-party seller, though, you might not get Amazon’s typical 30-day full-refund return policy. Click on the seller’s profile page link (under the “Add to Cart” and
A nice idea for a jogger, these sporty corded headphones offer very good sound quality for a bargain price.

Turning out excellent waffles, this nonstick model has a moat to collect excess batter and prevent messy drips.

Powerful but small enough to fit in a drawer, this immersion blender is a thoughtful gift for any cook with a small kitchen.

Muffin lovers will thank you for this very good baking machine. It also excels at toast and has a two-year warranty.

This sleek 6.9-inch tablet has roughly 8 hours of battery life—great for reading or watching movies.

This low-cost all-in-one color printer offers up very good photo prints and doubles as a scanner.

Our highest-scoring grinder of those under $100, this model holds 5.7 ounces of fresh coffee grounds and has 18 settings.

“Buy Now” buttons) to view that seller’s Returns and Refunds Policy. It’s also smart to look at the company reviews on the seller’s profile—they’ll help you see whether a seller tends to ship on time and sells quality products.

3. BEWARE OF “HIJACKED” REVIEWS
Rating stars indicate how many customers were satisfied (or not) with that specific item. But CR found that it’s worth digging into the written reviews as well. When we looked at reviews for an iPhone charger, for example, the page included positive reviews for other products, such as a computer keyboard cleaner. These reviews, which were “hijacked” from other product listings, could inflate a product’s rating. (Amazon is aware of the issue and is trying to fix it.)

4. BE SAVVY ABOUT SHIPPING
Prime items, identified by the Prime logo under the listing, offer members access to different shipping speeds. Some items have free standard shipping of four to five business days, and others offer the program’s signature two-day free shipping—but this means two business days after a product leaves the warehouse. So always check the estimated delivery date. Prime members in eligible ZIP codes may also see a same-day delivery option, but only if your order is over $35. (You may also see a countdown timer indicating the time by which you must place the order to receive your same-day delivery.) Alternatively, if you don’t need the product right away, Amazon sometimes offers a reward or discount when you agree to receive your order in six business days with “No-Rush Shipping” at checkout.

5. PRACTICE DEAL DILIGENCE
Don’t forget to comparison shop outside Amazon: You may find a better deal elsewhere. (In addition to competitive pricing, retailers such as Walmart now also offer two-day and next-day shipping on many items.) Amazon also has the ability to change prices frequently throughout the day, so it can pay to add a price tracker to your browser, such as CamelCameCamel, that can show you a product’s price history and send you price-drop notifications.

Note: We rate different products according to different testing protocols, as a result, Overall Scores of one product category are not comparable with another.
If you’re treating yourself to a classic fall dessert, you know that extra calories, carbohydrates, and fat are all a given. But pumpkin pie, which offers vitamin A, will often have roughly 100 fewer calories per slice than apple pie. That’s primarily because pumpkin pie has only a bottom crust while apple tends to have a top crust, too. More crust means more calories, as well as saturated fat from butter or shortening. If you’re really craving apple, though, try a crisp, which swaps a white flour pie crust for a whole-grain topping.

**BETTER PICK:** Pumpkin pie

Both spud types are nutrient-rich and supply potassium, a mineral that blunts the impact of sodium on blood pressure, as well as vitamin C—and they aren’t that different in carbohydrates or natural sugars. A white potato has some fiber, but one 4-ounce sweet potato provides 13 percent of your daily fiber needs and more than an adult’s daily recommended dose of vitamin A. If you scoop up some sweet potato casserole, though, skip the marshmallow topping—there’s plenty of better-for-you natural sweetness to savor without it.

**BETTER PICK:** Sweet potato

If you’re treating yourself to a classic fall dessert, you know that extra calories, carbohydrates, and fat are all a given. But pumpkin pie, which offers vitamin A, will often have roughly 100 fewer calories per slice than apple pie. That’s primarily because pumpkin pie has only a bottom crust while apple tends to have a top crust, too. More crust means more calories, as well as saturated fat from butter or shortening. If you’re really craving apple, though, try a crisp, which swaps a white flour pie crust for a whole-grain topping.

**BETTER PICK:** Pumpkin pie
CR MONEY SAVER

CAN RETAIL MEMBERSHIPS SAVE YOU MONEY?

Retail membership plans are multiplying; these programs charge a fee in exchange for exclusive member perks and savings. In turn, the retailers hope you’ll be more loyal and spend more with them. Before you sign up, ask yourself how often you’ll use these services. With that in mind, weigh the cost against potential savings and other benefits, as well as the cancellation or auto-renew policy. Retailers may also track or share your data: To become a member, you may need to share your name, address, phone number, and other information, such as date of birth. Some may even track what you’re buying and how often, and use that information to hone their business. So read any agreement carefully before you sign up.

To see the cost-benefit breakdowns of even more retail memberships, All-Access and Digital members can go to CR.org/retail1219.

### SELECT BENEFITS

- **Prime** provides free one-day delivery on over 10 million items, free two-day delivery on over 100 million items on Amazon.com, and free same-day delivery in 5,000 cities and towns on select items. Plus access to Prime music, Prime video, and Amazon’s Kindle Lending Library. Also: discounts at Whole Foods Market.

- **AMC Stubs Premiere** offers online ticketing fees are waived for members, and you can go through priority lanes at AMC box offices and concession stands. You’ll also get free upgrades on popcorn and fountain drinks, free refills on large popcorn, and 100 rewards points for every $1 spent (once you have 5,000 points, you’ll get a $5 reward).

- **Barnes & Noble Membership** includes 40 percent off hardcover best sellers, 10 percent off most other items, and free express shipping in one to three days.

- **Bed Bath & Beyond BEYOND+** gives you free standard shipping on most items and 20 percent off all purchases made in stores or online. Members also receive 30 percent off Decorist, a website that offers online interior design services from professional decorators.

- **CVS CAREPASS** offers 20 percent off CVS Health brand products and a $10 monthly CarePass reward to use in-store or online. Members also receive 30 percent off Decorist, a website that offers online interior design services from professional decorators.

- **Newegg PREMIER** includes a $10 monthly CarePass reward to use in-store or online. Members also receive 30 percent off Decorist, a website that offers online interior design services from professional decorators.

- **Wayfair MYWAY** offers a membership for up to four people, with free three-day shipping and free returns with no restocking fees—plus exclusive deals and a dedicated customer-service line. Newegg offers a full refund if you haven’t used any benefits in the current membership term.

THE BEST GIFT OF ALL: We like to think of our magazine as a gift that keeps on giving all year long! For $30, your recipient will receive a one-year gift (12 issues of Consumer Reports magazine) plus our Annual Buying Guide. Each gift also includes the annual Auto Issue plus a free holiday card that will be sent announcing your gift. After your first gift, additional gift subscriptions are only $15 each. Go to CR.org/Gift to place your orders.

**Note:** Amazon, Bed Bath & Beyond, and Wayfair participate in CR’s shopping program on CR.org. When you shop through their retailer links on our site, we may earn affiliate commissions. One hundred percent of the fees we collect is used to support our nonprofit mission.
The Laptop Has Landed

Move over, desktops. With power and speed in sleeker-than-ever packages, new laptops get the job done in style.

by Nicholas De Leon
Shopping for a computer

To storing every snapshot and video clip you’ve ever captured on your computer’s hard drive, you may want to consider investing in an external hard drive or cloud storage.

If your priority is computing power, it’s true that a desktop may give you slightly more power and performance for the buck. But today’s laptops pack more than enough oomph to browse the web, stream video, and run popular apps like Microsoft Word and Spotify without causing you to break a sweat—or break the bank.

If your computing chores aren’t complex, you can buy a powerful Windows-based laptop for as little as $500. And you’ll find Chromebooks that perform similar feats—using Google’s Chrome OS operating system—for even less money. (To learn more about these, see page 20.)

Ready to test-drive one of these sleek devices in a store? A little hands-on time is a good idea, but prepare to be serenaded by salespeople about the wonders of other recent tech leaps, too, everything from 4K screens to gamer-friendly graphics cards. (See “5 Money Traps,” on page 22.) These pricey best-in-show features aren’t worth the extra investment for most consumers.

In fact, you don’t have to spend big money to get a laptop that suits your needs and is relatively problem-free (see our reliability chart at left). Thanks to our test labs, which evaluate dozens of new computers each year, this guide reveals the key factors—such as portability, versatility, battery life, and, yes, price—that add up to the perfect machine for your lifestyle. Our rigorous test protocol also assesses such elements as ergonomics, display quality, and processing speed. We even incorporate brand reliability and owner satisfaction into our Overall Scores. So if you’re ready to leap to a new computer, here’s what you need to know.

### MOST & LEAST RELIABLE BRANDS

Everyone wants a long-lasting product, so should you invest in an extended warranty? According to a 2018 CR survey, the short answer is no. CR members who paid for extended warranties and service contracts rarely used them for repairs. And the median price paid for out-of-pocket repairs is relatively manageable: $118 for PC laptops and $165 for Apple laptops. Before you make the final call, though, it’s worth considering how the laptop brand you’re interested in stacks up when it comes to predicted reliability and owner satisfaction.

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<tr>
<td>Vaio</td>
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Source: Consumer Reports 2018 and 2019 Winter Surveys.
Product Update

Yes, you can find a fully functional laptop for $500—or even less if you consider a Chromebook. Using Google’s Chrome operating system, the latter relies heavily on web-based apps and cloud storage to reduce the need for onboard storage and processing power. If you just want to check your email, stream, and browse, Chromebooks are a simple, lightweight (usually about 3 pounds), and inexpensive way to do so. They also tend to be reliable and offer more battery life than laptops for web browsing. One model in our ratings lasted more than 17 hours.

THE FLEXIBLE CHROMEBOOK

LG Chromebook $1,300

LG is the industry’s new lightweight champ. This model has a 17-inch screen yet weighs just 2.9 pounds. Its performance rates Very Good; it has 512GB of storage space, and it offers 15.25 hours of battery life. (LG also makes a sleek 13-inch model at just 2.1 pounds.)

THE MAC FAN’S CHOICE

MacBook Air $1,100

Apple’s pioneering success in the consumer electronics market reflects Apple’s pioneering success in the computer industry. The modest size requires some trade-offs, though. It’s fine for email and word-processing tasks, but it’s a little on the slow side. There’s limited storage space, too. But the battery lasts a good 10.25 hours.

THE FEATHERWEIGHT

Surface Pro 6 $800

At mere 2.7 pounds, this 13.3-inch model reflects Apple’s pioneering success in the thin-and-light movement. The display is rated Excellent, the laptop has plenty of power for everyday tasks, and there’s enough battery power for 11.5 hours of web browsing. For some, though, the 128GB of storage space might be a tight squeeze.

THE NEWCOMER

Lenovo Yoga $750

If you want a truly compact laptop, this 10-inch model weighs all of 1.7 pounds. The modest size requires some trade-offs, though. It’s fine for email and word-processing tasks, but it’s a little on the slow side. There’s limited storage space, too. But the battery lasts a good 10.25 hours.

THE BARGAIN CHROMEBOOK

Acer Chromebook CB3 $230

It’s not packed with power, but this 14-inch Chromebook delivers solid performance, especially given the low price. It can handle such basic tasks as email, Facebook browsing, and a little online shopping as well as to the local coffee shop—and far beyond. Some models are so sleek and light that you can hold them in one hand like a clipboard. (And most don’t sacrifice battery life.) If travel is your priority, you might find your perfect companion below.

THE BARGAIN CONVERTIBLE

Lenovo Flex 15 $750

Today’s 2-in-1 models can transform to offer a tablet-like experience (though they’re much more powerful than a traditional tablet). Without “detachables,” you simply remove the touch screen from the keyboard completely. “Convertibles” have hinges that let you fold the keyboard behind the screen or position it as a kickstand. That versatility has become a popular option. More than a quarter of the models we’ve tested fall into this category only seven years after the first popular 2-in-1, the Lenovo Yoga, debuted.
How to Turn Your Laptop Into a Desktop

If you’ve been accustomed to a desktop, you can still consider a laptop knowing that it’s easy to turn it into a desktop configuration. With these accessories, you can place yourself properly at a desk but still unplug for maximum mobility when you need it.

MIND YOUR MUSCLES
Laptop users tend to work in settings that can contort the body: airplane seats, crowded coffee shops, porch swings, even a bed. Sitting at a desk instead encourages proper posture, especially if you sit with your feet flat on the floor, your arms at a 90-degree angle, and your elbows close to your torso. Reclining slightly can also help prevent backaches and fatigue. Try to take a 5-minute break from your computer chair every half-hour or hour.

A CLASSIC KEYBOARD
The keyboards on laptops are meant to be compact, so they aren’t always comfy for hours of typing. (The “butterfly keyboards” on some Apple models have generated reliability complaints, too.) Alan Hedge, an ergonomics expert and professor emeritus at Cornell University, says that a shallow keyboard doesn’t give your fingers adequate distance, or “travel,” to type effectively. For more ease, use a larger, deeper external keyboard.

A BIG SCREEN
Richard Fisco, who oversees electronics testing at CR, says that a large external monitor should help you sit more comfortably. That’s in part because you can easily adjust its orientation and placement so that the top of the screen is at eye level. Also, you don’t need a pricey “docking station” to connect your laptop to a monitor. An inexpensive video cable should do, and a USB adapter if your laptop doesn’t have an HDMI port.

A MIGHTY MOUSE
Some ergonomic mouse masterpieces can cost up to $100, but you can spend less than half that for one that’s more comfortable than your laptop’s cramped track pad. If you’re considering a wireless model, make sure to check the battery life and whether the mouse has rechargeable batteries. Also, take it for a test-drive, because hand size and scrolling style differ by person.

THE BIG-SCREEN CONVERTIBLE

Dell XPS 15
$1,600
This 15.6-inch convertible from Dell’s high-end laptop line scores well in our lab tests, turning in fast performance and good battery life for a model this size. The Intel Core i7 processor makes it well suited to demanding tasks such as video editing.
OVERPRICED DONGLES
In the feverish pursuit of thinner, lighter laptop designs, many computer makers have jettisoned old-school USB and Ethernet ports in favor of a smaller USB-C port. That means you might need to buy dongles (or adapters) that plug into your new laptop to continue using your old mouse or printer. Prices vary widely from store to store, and while one dongle might not seem expensive, a few can quickly run up your costs. Compare prices at major electronics retailers like Best Buy and Micro Center, which offer cords that start around $10.

A FANCY DISPLAY
A 4K Ultra High Definition display looks great, but you don’t need one unless you stream a lot of 4K movies or edit photos for a living. For standard Netflix fare, a traditional 1080p (Full HD) screen will serve you just fine and consume far less battery power. It costs a whole lot less, too. In the case of Dell’s 13-inch XPS laptop, the 4K display adds about $300 to the price.

AN ALL-POWERFUL PROCESSOR
Yes, it’s true that as you move from an Intel Core i3 to a Core i5, Core i7, and Core i9 the processing power increases. But you don’t need an i7 for browsing the web. It’s more appropriate for truly demanding tasks such as video editing or high-end gaming. If you go with the Intel Core i5—or AMD’s Ryzen 5—it will handle everyday jobs with plenty of speed.

GAME-READY GRAPHICS CARDS
If you’re a diehard gamer or a professional film editor, you might spring for a graphics card (aka graphics processing unit) made by Nvidia or AMD. But if you haven’t played a video game since the days of Frogger and Pac-Man, just say no thanks. You don’t need a laptop made to zip through graphics and video data, especially when it adds $100 or more to the overall cost.

SUPER-SIZED STORAGE
It’s hard to envision how much space you need to stow all of your photos and videos, especially when media files have increased in size because of advances in resolution. But don’t get suckered into paying for gigabytes you won’t use. Antonette Asedillo, who oversees computer testing for CR, says that a 256GB solid-state drive should suffice for the average user, especially if you also store files in a cloud service. (If you want a lot more onboard storage, look at laptops with traditional hard drives, which routinely come with 1TB.)

5 Money Traps
These upsells can raise your purchase price needlessly. Our advice? Don’t bite.
Lean Machines These laptops, Chromebooks, and desktops navigated our rigorous tests, with many of them emerging as recommended models.

<table>
<thead>
<tr>
<th>Brand + Model</th>
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<th>Price</th>
<th>Survey Results</th>
<th>Test Results</th>
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POOR | EXCELLENT | RECOMMENDED | S BEST BUY

DECEMBER 2019 CR.ORG 23

10/11/19 10:52 AM
## Ratings – Lean Machines

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### CHROMEBOOKS

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<tr>
<th>Brand + Model</th>
<th>Overall Score</th>
<th>Price</th>
<th>Survey Results</th>
<th>Test Results</th>
<th>Features</th>
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<tbody>
<tr>
<td>Asus Chromebook Flip C434TA-DSM4T</td>
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<td>$550</td>
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<td>$</td>
<td>$</td>
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<tr>
<td>Acer Chromebook CB713-1W-36XR</td>
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<tr>
<td>Google Pixelbook</td>
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<tr>
<td>HP Chromebook 14-DA0011DX x360</td>
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<td>$500</td>
<td>$</td>
<td>$</td>
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<tr>
<td>HP Chromebook 15-DE0035CL</td>
<td>78</td>
<td>$550</td>
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<td>Asus Chromebook Flip C214MA-1502TS</td>
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<td>$</td>
<td>$</td>
<td>$</td>
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<tr>
<td>HP X2 12-F014DX</td>
<td>78</td>
<td>$450</td>
<td>$</td>
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### 15- to 16-Inch Laptops

<table>
<thead>
<tr>
<th>Brand + Model</th>
<th>Overall Score</th>
<th>Price</th>
<th>Survey Results</th>
<th>Test Results</th>
<th>Features</th>
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</thead>
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<td>CR BEST BUY</td>
<td>CR BEST BUY</td>
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<td>Predicated</td>
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<td>reliability</td>
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<td>scores</td>
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<td>Observer</td>
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<td>satisfaction</td>
<td>satisfaction</td>
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<td></td>
<td></td>
<td>Ergonomics</td>
<td>Ergonomics</td>
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<td>Performance</td>
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<td>Display</td>
<td>Display</td>
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<td></td>
<td></td>
<td>Battery life,</td>
<td>Battery life,</td>
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<td></td>
<td></td>
<td></td>
<td>Mask (hr.)</td>
<td>Mask (hr.)</td>
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<td>Battery life,</td>
<td>Battery life,</td>
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<td>Mask (hr.)</td>
<td>Mask (hr.)</td>
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<td></td>
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<td></td>
<td>Weight (lbs)</td>
<td>Weight (lbs)</td>
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<td></td>
<td></td>
<td></td>
<td>Display size</td>
<td>Display size</td>
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<td>(in.)</td>
<td>(in.)</td>
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<td></td>
<td></td>
<td></td>
<td>Processor</td>
<td>Processor</td>
<td></td>
</tr>
</tbody>
</table>

#### CHROMEBOOKS Continued

- **Asus Chromebook Flip C302CA-DHM4**: 77 | $480 | ![ ]( ) | ![ ]( ) |
- **Acer Chromebook C732-C6WU**: 73 | $290 | ![ ]( ) | ![ ]( ) |
- **Dell Inspiron Chromebook C7486-3250GRY**: 72 | $400 | ![ ]( ) | ![ ]( ) |
- **Acer Chromebook CB315-2H-25TX**: 71 | $300 | ![ ]( ) | ![ ]( ) |
- **Acer Chromebook CB3-431-12K1**: 70 | $230 | ![ ]( ) | ![ ]( ) |
- **Asus Chromebook C223NA-DH02**: 70 | $230 | ![ ]( ) | ![ ]( ) |
- **Asus Chromebook C423NA-DH02**: 69 | $270 | ![ ]( ) | ![ ]( ) |
- **HP Chromebook 14-DB0061CL**: 68 | $300 | ![ ]( ) | ![ ]( ) |
- **Samsung Chromebook Plus V2**: 68 | $520 | ![ ]( ) | ![ ]( ) |
- **HP Chromebook 14-CA061DX**: 68 | $210 | ![ ]( ) | ![ ]( ) |

#### ALL-IN-ONE DESKTOPS

- **Apple 27-inch iMac 5K Display (2019, MRQY2LL/A)**: 88 | $1,800 | ![ ]( ) | ![ ]( ) |
- **Apple 21.5-inch iMac With 4K Display MNQY2LL/A**: 86 | $1,500 | ![ ]( ) | ![ ]( ) |
- **Apple 21.5-inch iMac MMQA2LL/A**: 83 | $1,100 | ![ ]( ) | ![ ]( ) |
- **Asus Zen AIO ZN242GDT-08**: 79 | $1,100 | ![ ]( ) | ![ ]( ) |
- **Lenovo ideacentre 520-24ARR**: 75 | $550 | ![ ]( ) | ![ ]( ) |

**How we Test:** 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 break or experience problems within the first three years. Owner satisfaction reflects the proportion of CR members who are extremely likely to recommend the computer they bought. In cases where we have insufficient survey data to provide a brand-level rating, indicated by a gray dash (-), we assume the model has average reliability and satisfaction. The Ergonomics score evaluates the quality of the keyboard, pointing device, and accessibility features. Portability is based on battery life, size, and weight, including the keyboard dock for detachable laptops. For Performance we evaluate how well the model operates while running apps and 3D games, and browsing the web. Versatility assesses technical support, warranty provisions, and useful hardware features such as memory card slots and audio/video connections. The Display score looks at size, color, brightness, and glare. The 2- and 3-column marks models with a “C” for convertibles and a “D” to signify detachables.
Shop Smarter for Supplements
Turmeric ... echinacea ... ginger ... beetroot. Plant-derived supplements (known as botanicals) make many health enhancement claims, and yet the market is largely unregulated. If you're currently taking these, or considering taking them, our testing and expert advice will help you shop wisely—and more safely.

BY KEVIN LORIA • PHOTOGRAPHS BY NIGEL COX
THE PROMISE OF SUPPLEMENTS is pretty powerful: That they'll ease your pain, boost your immunity, settle your stomach, strengthen your heart, sharpen your memory, and more. Little wonder, then, that supplement sales in the U.S. reached $46 billion in 2018 and are predicted to exceed $52 billion by 2020. In fact, 68 percent of Americans take supplements at least once a week, according to a recent nationally representative Consumer Reports survey of 2,006 adults.

So it's perhaps remarkable that there's not, to date, a lot of solid evidence that supplements do what people hope they will. Manufacturers are not required to demonstrate to the government that their products are effective or safe before they are sold—as they must with prescription and over-the-counter drugs, such as Advil. People have long used botanicals like echinacea to help with infections such as the common cold, and turmeric to curb inflammation and pain. But both—despite showing promising results in lab settings—fail to provide significant benefits over a placebo in most structured clinical trials. For example, an August 2019 review looked at 19 clinical trials of turmeric and its active compound, curcumin, to see whether either could reduce inflammation in patients with chronic inflammatory diseases, such as osteoarthritis. It found no sign that either had a significant effect. “There are simply not good studies that support a lot of supplement claims,” says Robert McLean, M.D., a rheumatologist at Yale New Haven Hospital and president of the American College of Physicians.

Among the most widely used supplements in our survey are multivitamins and vitamins, followed by fish oil, calcium, and probiotics. But the market for botanicals—a category of supplements derived from plants—has grown from about $4.2 billion in 2000 to more than $8.8 billion in 2018, according to Nutrition Business Journal. Our survey found that among people who had taken supplements in the previous year, 38 percent had taken at least one botanical.

One reason supplement sales may remain stubbornly robust is because “there's a strong placebo effect,” McLean says. “People will feel better if they think they're going to feel better.”

That means consumers are often left guessing about efficacy. Suyash Raj, a research technician, concedes “it’s very hard to quantify” the exact effect of the two botanical supplements he takes. But he has looked at studies to research their safety, and says they seem to help him with stress. “I feel better,” he says—adding that “of course that could be a placebo [effect].” Similarly, Stacy Bond, a writer and public radio producer, now takes multiple supplements to help deal with a few health concerns. While she says she’s not sure they’re all effective, “there’s something, I think, maybe before I was lacking that I’m now getting from the supplements.”

Also muddying the evidentiary waters: Research shows that people who buy supplements tend to be healthier than the average person in the first place. CR’s survey also found that 48 percent of Americans believe supplements have been tested for safety by the Food and Drug Administration, even though the agency does not do comprehensive testing of them. Another 71 percent believe supplements are safe. But many pose dangers, says Pieter Cohen, M.D., an internist at Harvard Medical School who has studied supplements extensively. One 2015 study by government researchers
Who Takes Supplements and Why?

People of all ages take supplements, but older Americans are most likely to take multiple types.*

<table>
<thead>
<tr>
<th>Generation</th>
<th>None</th>
<th>One</th>
<th>Two</th>
<th>Three</th>
<th>Four</th>
<th>Five</th>
<th>Six-Plus</th>
</tr>
</thead>
<tbody>
<tr>
<td>MILLENNIAL</td>
<td>8%</td>
<td>22%</td>
<td>25%</td>
<td>25%</td>
<td>7%</td>
<td>5%</td>
<td>8%</td>
</tr>
<tr>
<td>BORN BETWEEN</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1981 AND 1996</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GENERATION X</td>
<td>9%</td>
<td>16%</td>
<td>24%</td>
<td>22%</td>
<td>11%</td>
<td>5%</td>
<td>14%</td>
</tr>
<tr>
<td>BORN BETWEEN</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>1965 AND 1980</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BABY BOOMER</td>
<td>6%</td>
<td>18%</td>
<td>21%</td>
<td>17%</td>
<td>12%</td>
<td>9%</td>
<td>17%</td>
</tr>
<tr>
<td>BORN BETWEEN</td>
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<tr>
<td>1948 AND 1964</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SILENT GENERATION</td>
<td>7%</td>
<td>13%</td>
<td>15%</td>
<td>15%</td>
<td>17%</td>
<td>7%</td>
<td>26%</td>
</tr>
<tr>
<td>BORN BETWEEN</td>
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<td></td>
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</tr>
<tr>
<td>1928 AND 1945</td>
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</tbody>
</table>

*Number of different supplements taken in the past year among people who have ever taken supplements.

How often, and for how long, have Americans taken supplements?

- 36% Percentage of people who have ever used supplements and have taken them for 5 years or longer
- 68% Percentage of Americans who take a supplement at least once a week
- 54% Percentage of Americans who take a supplement once a day
- 71% Percentage of Americans who say supplements are safe**
- 48% Percentage of Americans who think supplements are tested by the Food and Drug Administration**
- 38% Percentage of Americans who think supplements are safer than Rx or over-the-counter drugs**
- 33% Percentage of Americans who think the term “natural” means a supplement is safe or wholesome**
- 32% Percentage of Americans who think supplements usually work as well as Rx drugs**

**Percentage of people who said the statements were true or mostly true.
Source: Consumer Reports nationally representative survey of 2,006 adults.
found that supplement use led to more than 23,000 emergency room visits a year, most often because of heart problems triggered by supplements taken for weight loss and energy.

“There’s a lack of oversight, a lack of safety, and a lack of rigorous science,” says Daniel Lasoff, M.D., a medical toxicologist at the University of California, San Diego’s department of emergency medicine.

CR tested turmeric and echinacea, and our findings revealed problems with potency and purity even among some of the most widely used brands. (See “CR Tests: Turmeric and Echinacea,” on page 36.) And yet “dietary supplements have benefits to offer,” says Richard van Breemen, Ph.D., a professor of pharmaceutical sciences and the director of the Linus Pauling Institute at Oregon State University, which focuses on vitamin, mineral, and plant-derived chemical research. He cites black cohosh (see “A Guide to 10 Popular Botanicals,” on page 32) as an example where some women say it eases their menopausal symptoms, even though scientists don’t understand how it works. But before supplements can be used effectively to address specific ailments, “we need more research on botanicals to figure out the optimum preparations and dosages,” he says, adding that more information is also needed on their long-term safety.

**The Potency of Plants**

The top reasons for taking botanicals, aside from turmeric and echinacea (see “Lifestyle Changes That Work—Without the Risks,” on page 35), were “to improve or maintain overall health” and “to strengthen general immunity,” according to our survey.

Plants have, in fact, been used for medicinal purposes for thousands of years. Today, approximately half of prescription medicines in use are derived from plants, microbes, and fungi found in the natural world, according to van Breemen at Oregon State. But the key difference is that prescription drugs used to treat cancer and other diseases are standardized, with each dose containing the exact same quantity of active ingredients.

Such standardization is not mandatory for supplements in the U.S. This is partly why figuring out which botanicals are safe and effective—and which may be useless or risky—can be particularly challenging. Botanicals include turmeric, St. John’s wort, green tea extract, and valerian. (CBD, or cannabidiol, is botanical in origin, which is why many people think of it as a botanical supplement. But the FDA currently considers it illegal to sell the trendy compound from the cannabis plant as a supplement because it’s approved as a drug to treat rare forms of epilepsy. See more at CR.org/cbd.)

Part of the challenge is that plant-derived pills can be extremely potent—and that potency can be dangerous. According to Harvard’s Cohen, some botanicals—red yeast rice, used for heart problems, and the now-banned ephedra, once found in weight-loss supplements—can deliver the same amount of a “natural” chemical as a prescription drug. That means that they can have side effects that are similar to (though less predictable than) those of drugs, according to Cynthia Rider, Ph.D., a toxicologist at the National Toxicology Program at the National Institute of Environmental Health Sciences (NIEHS).

Take, for example, vinpocetine, a synthetic substance derived from a chemical found in the Vinca minor plant. In some countries it’s sold as a prescription drug to treat stroke or cognitive impairment. However, in the U.S. it isn’t an FDA-approved prescription drug but is sold as a botanical ingredient in some memory

[CONT. ON PAGE 34]
If you’re shopping for supplements in a store, don’t expect much help from the pharmacist or other staffers. That’s the conclusion we drew after sending 10 secret shoppers to ask about echinacea and turmeric in 34 stores (branches of Costco, CVS, GNC, Kroger, Target, The Vitamin Shoppe, Walgreens, and Walmart) in seven states. In most cases, pharmacists weren’t familiar with potential risks for the supplements on their shelves and rarely warned customers about problems such as interactions with prescription medications. A notable few did; when one saw the list of Rx medications our shopper was taking, he wisely advised her not to take any supplements without consulting her physician. Because the Food and Drug Administration doesn’t verify that supplements contain what they say they do or whether they are contaminated with heavy metals, bacteria, or pesticides before they are sold, some third-party groups have taken on the role.

These groups (see chart at right) include ConsumerLab.com, NSF International, and U.S. Pharmacopeia (USP). USP is a nonprofit organization that sets what CR experts say are the most widely accepted standards for supplements. (It also sets mandatory standards for pharmaceuticals.) The not-for-profit NSF offers two types of certification: NSF Contents Certified and NSF Certified for Sport. ConsumerLab.com, a for-profit company, regularly tests and certifies products. A more recent addition is UL, a for-profit company known for testing electronics. Some of these organizations, such as USP (quality-supplements.org) and NSF (info.nsf.org/certified/dietary), list verified or certified products on their websites. Even if a supplement has been certified to show that it contains what’s on its label, it could still cause serious side effects, according to Pieter Cohen, M.D., an internist at Harvard Medical School who has worked closely with NSF. In May, CVS announced that it had completed an initiative to make sure every supplement it sells has been through third-party testing. Seven percent of products didn’t pass the screening, a CVS spokesperson says, mostly because of failures to meet label claims. (The CVS products in CR’s tests were sold before CVS had fully implemented its new initiative.) Many other stamps you’ll see on bottles (“verified” or “approved”) are meaningless, Cohen says.

### How to Choose Products Wisely

<table>
<thead>
<tr>
<th>How does it acquire test samples?</th>
<th>CONSUMER LAB.COM</th>
<th>NSF INTERNATIONAL</th>
<th>UL</th>
<th>U.S. PHARMACOPEIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchased when a manufacturer requests testing.</td>
<td>Provided by the manufacturer.</td>
<td>Manufacturer-provided or selected by UL at manufacturing location.</td>
<td>Provided by the manufacturer.</td>
<td></td>
</tr>
<tr>
<td>How often does it retest or spot-check?</td>
<td>Once every 12 to 24 months, using samples from stores.</td>
<td>Once per year, using samples provided by manufacturer (occasionally purchased in stores).</td>
<td>At least once per year.</td>
<td>One to six times per year, using samples purchased in stores.</td>
</tr>
<tr>
<td>How much does it charge to have products certified or ingredients verified?</td>
<td>$3,000 to $5,000 per product.</td>
<td>$3,000 to $5,000 per product, plus an audit fee of about $13,000.</td>
<td>$300 to $3,500 for active-ingredient testing.</td>
<td>Varies. Depending on ingredients, can be $3,000 to $15,000 per product, plus an initial audit fee of $15,000 and a label fee of 1 cent per bottle.</td>
</tr>
<tr>
<td>Are there products it won’t test?</td>
<td>Products containing ingredients known to be unsafe.</td>
<td>Sex enhancement or weight loss products and those with ingredients known to be illegal or unsafe, not recognized by the FDA, or that there’s no test for.</td>
<td>Products containing ingredients known to be unsafe, illegal, or not recognized as dietary ingredients by the FDA.</td>
<td>Products that contain ingredients known to be unsafe, that aren’t recognized as dietary ingredients by the FDA, or that there’s no validated test for.</td>
</tr>
</tbody>
</table>
A Guide to
10 Popular Botanicals

All these supplement ingredients are derived from plants. But they vary in efficacy and safety. For a partial list of supplement ingredients to outright avoid, see CR.org/ingredientstoavoid.
### Beetroot

**Reasons for Use**
Generally sold as a powder that can be mixed into a juice, to improve athletic performance.

**How Well It Works**
Though research has yielded conflicting results, studies suggest it might improve performance in endurance sports, such as running, swimming, rowing, and cycling.

**Known Risks**
More research is needed, but there have not been major safety concerns identified with moderate consumption (2 cups a day) for several weeks, as is commonly recommended.

### Black Cohosh

**Reasons for Use**
To treat menopausal symptoms and sometimes menstrual cramps, or to induce labor.

**How Well It Works**
Knowledge is limited, with insufficient evidence to support use.

**Known Risks**
While black cohosh itself has been shown to be generally safe when taken for as long as a year, many black cohosh products have been found to contain unlisted herbs mixed in. Cases of liver damage have also been linked to black cohosh, potentially because of the other herbs.

### Chamomile

**Reasons for Use**
For sleeplessness, anxiety, and gastrointestinal conditions.

**How Well It Works**
It’s not well-studied, though preliminary research indicates that it may be helpful for anxiety and may ease an upset stomach if taken in combination with other herbs, including milk thistle and peppermint.

**Known Risks**
As a tea, it’s generally considered safe. Some people allergic to plants such as ragweed may have a reaction to chamomile. It can also interact with drugs used after organ transplants as well as with some blood thinners.

### Cranberry

**Reasons for Use**
Mostly used to treat urinary tract infections (UTIs).

**How Well It Works**
Evidence is mixed. Some studies indicate that cranberry may reduce UTI risk for certain people, but research hasn’t shown that it works as a UTI treatment.

**Known Risks**
Drinking cranberry juice is generally safe, though it’s usually high in sugar. Large quantities can lead to upset stomach, and drinking a lot of cranberry juice on a regular basis can increase the risk of kidney stones. Cranberry supplements may interact with blood-thinning drugs.

### Green Tea

**Reasons for Use**
Mainly to improve alertness, relieve digestive symptoms, and promote weight loss.

**How Well It Works**
Green tea seems to make people more alert, probably because of the caffeine. There’s not good evidence that it helps people lose weight.

**Known Risks**
Drinking green tea in moderate amounts is believed to be safe. But green tea extract has been linked to serious problems, including liver damage, elevated blood pressure, increased heart rate, and even death. CR recommends avoiding green tea extract supplements.

### Milk Thistle

**Reasons for Use**
Mostly used for liver problems related to conditions such as hepatitis and cirrhosis.

**How Well It Works**
Results have been uneven. Some research shows certain patients who take milk thistle have milder symptoms from liver disease; other studies have found it’s no better than a placebo.

**Known Risks**
Well-tolerated in recommended doses, though some report gastrointestinal problems. Can trigger allergic reactions, especially for people also allergic to ragweed. Diabetics should also use caution with milk thistle because it may lower blood sugar levels.

### Palmetto

**Reasons for Use**
Primarily for depression; sometimes to treat menopausal symptoms, attention deficit hyperactivity disorder, and obsessive-compulsive disorder.

**How Well It Works**
It seemed to ease depression in a few studies, but results are mixed. Evidence indicates it is not helpful for ADHD or other conditions.

**Known Risks**
It can interact in life-threatening ways with certain drugs and has been shown to weaken antidepressants; birth control pills; some cancer drugs, and warfarin. It has also been linked to side effects such as anxiety, fatigue, and sexual dysfunction.

### St. John’s Wort

**Reasons for Use**
Mainly used to treat insomnia, though some also use it to treat anxiety, depression, or menopause symptoms.

**How Well It Works**
It’s unclear how much valerian helps with sleep because there’s not much rigorous research on the topic and results of existing studies have varied. There’s too little evidence to know whether it can help with other conditions.

**Known Risks**
Some people experience mild side effects, such as headaches and itching. There are not major safety concerns with short-term use in adults; the effects of long-term use are unknown.

### Ginger

**Reasons for Use**
Commonly used to treat nausea and vomiting and sometimes for other conditions, including arthritis and motion sickness.

**How Well It Works**
Ginger may help with nausea related to pregnancy and chemotherapy, studies have shown. Evidence is less certain on whether it can ease other types of nausea or conditions.

**Known Risks**
Usually considered safe when used as a spice. Some users may experience gas and heartburn; it may also be problematic for people with gallstones. And it can interact with blood-thinning meds.
supplements. Vinpocetine can cause dangerously low blood pressure, and birth defects or miscarriage if taken by a pregnant woman.

The form and source of raw ingredients also vary: Research indicates that some overseas suppliers of turmeric spice have sometimes intentionally added lead to it to brighten its distinctive color, making it especially risky when consumed regularly. The same plant grown in California and India can have different levels of active compounds. Additionally, many plants can suck up heavy metals from the soil as they grow, turning a safe plant dangerous. And botanical supplements are sometimes manufactured in unseanrty conditions, allowing bacteria to be introduced into the products.

One particularly harmful side effect linked to supplements is liver damage. In 2004, the percentage of all liver damage cases in the U.S. involving herbal or dietary supplements was estimated at 7 percent; by 2014, that number was estimated to have climbed to 20 percent, mostly because of green tea extract in weight loss supplements, and steroids illegally added to bodybuilding supplements.

Active compounds in supplements can also amplify the effects of prescription drugs or render other medications ineffective. Ginkgo biloba, for example, can thin the blood, increasing the effect of a prescription blood thinner, such as warfarin.

“I have totally seen this perception of ‘natural’ equals safe,” says Rider at the NIEHS. “I think it is not a fair assumption.”

The results of CR’s tests of echinacea and turmeric conform with the kinds of problems also seen by Tod Cooperman, M.D., the president and founder of ConsumerLab.com, an organization that regularly tests supplements and certifies products that pass its quality control tests.

Representatives of the supplement industry point to products with major problems or inconsistencies as outliers. “There are some supplements in the marketplace that either don’t contain what their label says they are supposed to contain or they contain things that are not supposed to be there, but that is a very small minority of the industry,” says Steve Mister, president and CEO of the Council for Responsible Nutrition, a dietary supplements trade organization.

Yet according to Cooperman, more than 25 percent of the botanical supplements that ConsumerLab.com examines fail the organization’s testing, either because of bacterial or heavy metal contamination or because they don’t contain what’s listed on the label. Botanical supplements are much more likely to fail these tests than mineral or vitamin supplements because, he says, plants often have different levels of active compounds and can pick up contamination from the environment where they were grown or packaged.

**MORE THAN 80,000 SUPPLEMENT PRODUCTS MAY BE ON THE MARKET RIGHT NOW, AND THE NUMBER CONTINUES TO GROW.**

**PROTECTIONS ON THE WAY?**

The FDA doesn’t test supplements for safety or screen them for contaminants before they are sold, but it does require that supplements contain the ingredients listed on their labels. However, the agency doesn’t perform comprehensive tests to verify compliance. And although complying with U.S. Pharmacopeia (USP) quality standards—including tests for identity, potency, and purity—is mandatory for prescription and over-the-counter drugs, doing so is voluntary for supplements. Most manufacturers do not opt in—especially when it comes to botanicals, where standardization can be a challenge, proprietary blends are common, and there is less agreement about appropriate dosage.

The FDA generally recalls a supplement if it receives a large number of reports (from consumers, doctors, manufacturers, and others) indicating that it might be causing serious illnesses—because of contamination with salmonella or prescription-drug ingredients, for example. The agency has issued 34 recalls for dietary supplements over the past two years, according to an FDA database. But a product that simply doesn’t contain what it should could potentially fly under the radar indefinitely, Harvard’s Cohen says.

Earlier this year, the FDA indicated that it would be taking steps to more strictly regulate the supplement marketplace, and launched a new online list to warn consumers about certain supplement ingredients. An FDA spokesperson also told CR that the agency has continued to step up enforcement against bad actors. It cited, among other examples, the recent seizure of 300,000 containers of dietary supplements manufactured in substandard conditions, and recalls of drugs illegally sold as supplements.

Even though these increased
People often take echinacea to bolster immunity and ward off colds or other viruses. They turn to turmeric to alleviate pain or to reduce inflammation due to psoriasis or rheumatoid arthritis. In our survey, turmeric was the most popular supplement for chronic health problems.

Some studies suggest that taking echinacea might make you slightly less susceptible to colds, and preliminary research indicates that curcumin could potentially help with knee pain from osteoarthritis. But conclusive evidence that these products work is lacking, according to experts who have studied them and the National Center for Complementary and Integrative Health at the National Institutes of Health.

There are, however, other, proven nonpharmacological ways you can get these desired health benefits.

**STRENGTHEN YOUR IMMUNE SYSTEM**

- Get between 7 and 9 hours of sleep nightly.
  This will improve your ability to fight off viral infections such as the common cold, says Robert McLean, M.D., a rheumatologist at Yale New Haven Hospital and president of the American College of Physicians.

- Increase your intake of nutrient-dense foods.
  These include fatty fish (sardines and salmon), which provide vitamin D, key for immune-system function, says Julie Stefanski, a registered dietitian nutritionist and spokesperson for the Academy of Nutrition and Dietetics.

  - **Rehab your diet with superfoods.** These include dark leafy greens, raspberries and blackberries, and citrus and broccoli, all good sources of vitamin C, which supports the immune system and healing. Pumpkin and sweet potatoes provide vitamin A for a strong immune system. And foods such as olive oil, chia seeds, and avocado provide vital nutrients that help to fight infection.

**REDUCE INFLAMMATION**

If you’re dealing with inflammation from an injury, ice can reduce pain and swelling. For minor pains, an over-the-counter nonsteroidal anti-inflammatory drug, such as ibuprofen, can also provide short-term relief, McLean says.

You’ll also want to avoid soda, processed meat, and too much alcohol (more than one drink a day for women or two drinks a day for men). Regular exercise and adequate sleep have also been shown to help with chronic inflammation. If you think you might have a medical condition, such as celiac disease, where certain foods trigger inflammation, talk to your doctor.
CR Tests: 
Turmeric and Echinacea

To better understand what’s inside botanical supplements, Consumer Reports decided to put samples of two widely used ones to the test to determine their potency and purity: turmeric (sometimes referred to or sold as curcumin, which is one of its active compounds) and echinacea. In 2018, echinacea and turmeric were listed as the second and third most popular botanical supplements (after horehound, an ingredient in Ricola cough drops) in the annual market report from the American Botanical Council, a nonprofit group that supports herbal medicine. (Echinacea is sold on its own, and it’s also an ingredient in Airborne, an herbal blend that is claimed to fight colds.) Between 2017 and 2018, sales of turmeric grew 30.5 percent.

Of the 16 echinacea and 13 turmeric products we tested, we identified concerns with more than a third of them, including elevated levels of lead and bacteria, as well as low levels of key active compounds. (We tested only pills, not gummies, powders, or teas.) Given the lack of regulation surrounding dietary supplements, companies can use a wide variety of standards—including their own. CR’s scientists selected the testing methods and thresholds used in our evaluations based on their expert judgment. Our results are meant to help consumers compare their options and are not indicators of a product’s compliance with any given standard.

Here’s what we found.
Higher aerobic bacteria levels don’t necessarily make a supplement unsafe to take, but they can indicate that products were manufactured or processed in unsanitary conditions. The products listed here exceed the USP threshold for aerobic bacteria. But a Nature’s Way representative said these numbers are acceptable under guidelines from the American Herbal Products Association, an industry group. Organic India said the company had been having problems with counterfeiting and could not confirm to CR that the products tested were theirs.

Michael McGuffin, president of the AHPA, said the USP standard “is not the only way you can assure a product is good.” But the fact that supplement companies can choose among many standards—or no standard—highlights why it’s so difficult for consumers to know what they’re getting, says Tunde Akinleye, a chemist in Consumer Reports’ food safety division who led our testing.

**Key Active Compounds**

For echinacea, the important chemicals are known as phenols; in turmeric, they are called curcuminoids.

One of the echinacea products we tested contained less than 20 percent of the phenol count listed on its label. And two other echinacea products didn’t contain any detectable amount of a key phenol associated with the echinacea species listed on the label. This could mean that the listed species wasn’t present or that low-quality echinacea was used, says CR’s Akinleye.

CR reached out to all three companies whose products were affected. Mason told CR that the company was “not making any claims to any standardized extract.” A spokesperson from GNC said, “Our extensive testing has found that this product meets the label claim.” Whole Foods did not respond to repeated requests for comment.

**AFFECTED PRODUCTS**

CVS HEALTH TURMERIC CURCUMIN
CVS HEALTH ECHINACEA
FINESST NUTRITION (WALGREENS) ECHINACEA
NATURE’S BOUNTY ECHINACEA, WHOLE HERB
PURITAN’S PRIDE PREMIUM ECHINACEA
REXXALL (DOLLAR GENERAL) WHOLE HERB ECHINACEA
SUNDOWN NATURALS WHOLE HERB ECHINACEA

**PRODUCTS**

GAIA HERBS ECHINACEA SUPREME
GAIA HERBS TURMERIC SUPREME EXTRA STRENGTH
GNC HERBAL PLUS TURMERIC CURCUMIN
IRWIN NATURALS WHOLE-BODY TURMERIC EXTRA
NATURE MADE TURMERIC CURCUMIN
NATURE’S BOUNTY TURMERIC SUPREME
NATURE’S TRUTH ECHINACEA
NATURE’S WAY STANDARDIZED TURMERIC
OREGON’S WILD HARVEST ECHINACEA
QUNOL EXTRA STRENGTH TURMERIC CURCUMIN COMPLEX
REXXALL (DOLLAR GENERAL) NATURALIST TURMERIC CURCUMIN
RITE AID PHARMACY ECHINACEA
SPRING VALLEY (WALMART) ECHINACEA
SUNDOWN NATURALS TURMERIC
UP & UP (TARGET) TURMERIC
THE VITAMIN SHOPPE ECHINACEA EXTRACT
THE VITAMIN SHOPPE TRIPLE STRENGTH TURMERIC WITH CURCUMIN
**GENERATOR SAFETY GUIDE**

New technology that reduces the risk of carbon monoxide poisoning from portable generators could save your life. We’ve revamped our ratings to encourage manufacturers to make these safety features standard.

**BY PAUL HOPE**

**USE PROPER CORDS**

If you have a transfer switch, use the supplied cord. If you don’t, buy outdoor-rated 12-gauge extension cords to connect individual appliances directly. Don’t group multiple high-wattage appliances on one cord, even with a surge protector.

**GET A TRANSFER SWITCH**

Installed by an electrician, this safety device powers critical hardwired circuits while protecting utility workers from electrocution when power is restored.

**KEEP IT DRY**

Always run a generator at least 20 feet from your house.

**PROTECT YOUR POWER**

Install an eyebolt into a buried concrete block to tether your generator with a padlock.

**EXHAUST**

Always direct exhaust away from any occupied space.

**ILLUSTRATION BY RODRIGO DAMATI**
ONE MONDAY MORNING last April, 38-year-old Dustin Patch called in sick to Big City Motors in Sioux Falls, S.D., where he worked as a finance officer. The week before, he’d been complaining of headaches. He lived in nearby Hartford, and had recently purchased a portable generator so he could keep a sump pump running in his basement. Severe storms had caused flooding and power outages throughout the spring. He had set up his new generator in the attached garage.

A divorced father, Dustin shared custody of four young boys, though none were with him the night before he called in sick. That morning his two older sons stopped

INSTALL CARBON MONOXIDE (CO) DETECTORS

To guard against CO poisoning, install detectors on every level of your house and in hallways outside each bedroom. Test the batteries monthly; replace units per manufacturer’s instructions.
by to grab their bikes and ride to school, and according to Dustin’s mother, Sharon, he told them he didn’t feel well. After school, his eldest son, Gavin, who is 12, found his father collapsed on the stairway from the kitchen to the garage. First responders pronounced him dead at the scene, and a death certificate would state that Dustin Patch died of carbon monoxide poisoning due to operating a generator inside.

“His basement had flooded just a few weeks earlier, and he was probably just working in a hurry because he didn’t want it to happen again,” says Sharon Patch. “He lived for those four boys, and he was such a good father.”

**A SILENT KILLER**

Portable generators have long concerned safety advocates because their engines emit carbon monoxide (CO) at a high rate, and people may not be aware of the hazard posed by the deadly gas, which is colorless, odorless, and tasteless. From 2005 to 2017, more than 900 people died of carbon monoxide poisoning while using portable generators, according to the Consumer Product Safety Commission (CPSC), and about 15,400 people were sickened enough to require treatment at an emergency room.

“Carbon monoxide is called the silent killer not only because it’s undetectable by the senses but because of the sequence in which it kills you,” says David Farcy, M.D., an emergency room physician in hurricane-battered Florida and president of the American Academy of Emergency Medicine. “While lower-level exposure might make you feel sick, at higher levels it can incapacitate you, not unlike excessive drinking. Many people fall asleep completely shortly before dying from the effects of the gas.”

For many people, generators are emergency equipment they use under duress during power outages—desperate circumstances in which they don’t always remember to follow safety guidelines. But like any other machine or tool with an engine, a generator should never be operated in an enclosed space. That goes for 2,000-watt units you might use for a tailgate party to 8,000-watt models on wheels that can power an entire house. (Home standby generators also produce carbon monoxide, but they don’t pose the same threat because they’re permanently installed outdoors and are typically subject to building codes designed to ensure safety.)

In about 93 percent of the deaths reported to the CPSC, the generator was inside the victim’s living space. And in cases where the agency has data, there was an attempt to vent the exhaust outside about one-third of the time by cracking open a window, opening a garage door, or even with makeshift ductwork. At one point before he died, Dustin Patch had been running his generator in the garage with the garage door cracked open, according to his mother. That’s not even remotely safe. Consumer Reports’ tests to re-create this scenario recorded dangerous CO levels.

**IMPROVED TECHNOLOGY**

To reduce the risk of carbon monoxide poisoning, some new generators feature a built-in sensor that triggers an automatic shutoff if the gas builds up to dangerous levels in an enclosed space, and some also have engines that emit less CO in the first place. Recent CR test data show that these safety features are likely to save lives. That’s why we’ve revamped our portable generator ratings to reward models that have new safety features—and penalize those that don’t.

“We believe safety technology is critical for portable generators, and as an organization we can no longer recommend any model that doesn’t have some form of it,” says Liam McCormack, CR’s vice president of research, testing, and insights. “We’re incentivizing the industry to move in the right direction, as we have in the past with innovative lifesaving features on cars, such as electronic stability control, which is now standard. The goal is to achieve broad adoption of effective generator safety technology, as we believe every consumer should have access to safe products.”

CR recently tested five portable generators that have an automatic shutoff, and all passed our new CO safety technology test, shutting down before CO reached specified limits in our enclosed chamber. (See the ratings on the facing page.)

But our findings also revealed potentially life-threatening gaps that an automatic shut-off fails to address. When we ran an experiment simulating someone using a portable generator in the doorway of a garage—with the door open in an attempt at ventilation but with the exhaust directed inward—all five generators failed to shut off as CO quickly built up to unsafe levels.

“It’s foreseeable that a homeowner could end up using a generator in an attached garage with the garage door open,” says John Galeotafoire, an associate director for testing at CR. “After all, a generator shouldn’t get wet, yet power outages often occur during rain or snowstorms. If a

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> "We believe safety technology is critical for portable generators, and as an organization we can no longer recommend any model that doesn’t have some form of it. ... The goal is to achieve broad adoption of effective generator safety technology."

Liam McCormack, vice president of research, testing, and insights at CR
The other safety standard comes from UL, which sets and certifies product safety standards. For a generator to meet the UL 2201 carbon monoxide safety standard, in addition to having an automatic shutoff, its engine must significantly reduce carbon monoxide emissions. UL’s shutoff levels are lower than PGMA’s: a 150 ppm average during a 10-minute period or a peak of 400 ppm. It’s a belt-and-suspenders approach that so far has been adopted by both Techtronic Industries (TTI), which makes brands including Ryobi, and Echo.

Michael Gardner, TTI’s vice president of new product development, says the company’s rationale is based on a broad view of the risk. “Our review of the data led us to believe that after a hurricane, many people are running a generator for 24 hours a day—and often in close proximity to the house to prevent it from being stolen,” he says. “That realization led us to conclude we needed to develop generators that addressed the perils of outdoor use, too. And that automatic CO shutoffs alone weren’t enough.”

The CPSC is reviewing data on both standards to determine whether compliance with either, or some combination of the two, will adequately protect consumers. In the meantime, because the standards are voluntary, it’s entirely up to manufacturers to comply with one or the other—or neither.

Gardner told CR that going forward, all of TTI’s new generators will be equipped with one safety feature or more to mitigate the risk of CO poisoning. Generac told CR that it has introduced nine new models with an automatic CO shutoff. “Generac is committed to the safety of all portable generator users,” says Ryan Schmitt, its product manager for portable generators and accessories. Consumer Reports says that having two separate standards isn’t ideal. “Manufacturers now have two voluntary safety standards intended to help reduce the CO hazard,” says William Wallace, CR’s manager of home and safety policy. “Ultimately, to best protect consumers, there should be a single, stronger standard enforced by the Consumer Product Safety Commission.”

### Competing Standards

One standard was created by the Portable Generator Manufacturers’ Association (PGMA), a trade group, and approved by the American National Standards Institute (ANSI). For a generator to meet the PGMA standard, it must have a shutoff mechanism that automatically stops the engine before carbon monoxide reaches 800 ppm or the average exceeds 400 ppm over any 10-minute period.

“Our standard came about after a review of CPSC data that showed nearly all deaths associated with carbon monoxide from generators occurred in enclosed spaces or indoors,” says Joe Harding, technical director at PGMA. “It’s been tested in thousands of simulations and is designed to protect consumers and prevent nearly all deaths.”

### 5 of the Safest Generators

A portable generator must have an automatic CO shutoff and meet certain performance benchmarks to earn a CR recommendation. These five models all have the shutoff.

<table>
<thead>
<tr>
<th>Model</th>
<th>Type</th>
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<th>Hours Run Time</th>
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<tr>
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<td>7000W</td>
<td>$1150</td>
<td>8-14</td>
</tr>
<tr>
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<tr>
<td>Craftsman 030731</td>
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</tr>
</tbody>
</table>

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TAINTED FOOD

THE DEPARTMENT OF AGRICULTURE CAN'T FORCE RECALLS OF CONTAMINATED MEAT, LEAVING THAT TO THE COMPANIES THEMSELVES. AS A RESULT, FOOD CAN BE SOLD EVEN AFTER IT HAS BEEN LINKED TO ILLNESS.
Harmful products are supposed to stay out of the reach of consumers. Yet many dangerous items remain in homes and stores. Why that happens, what needs to change, and how to protect yourself.

by
Rachel Rabkin Peachman

Illustrations by
Joan Wong
Antibiotic-Resistant strains of salmonella are linked to contaminated chicken, sickening many and hospitalizing more than 200 people for almost a year and a half, though it was known that the plants processing the chicken had failed federal food safety standards. Why did the outbreak go on so long before the unsafe chicken was pulled from store shelves?

A breast implant lacking premarket safety research is linked to a rare cancer, but years pass and women die before regulators acknowledge the connection and a manufacturer recalls the devices. Why did it take patient outcry before the potentially deadly implants were taken off the market?

An inclined sleeper for babies is put on the market without adequate safety testing or adherence to infant sleep guidelines. Over the next decade, as the sleeper becomes a best seller, dozens of babies die while using it. Why did it take public exposure before the manufacturer recalled the product?

In 21st century America, it’s easy to assume that the products we put on our plates, in our homes, and in our bodies are safe and effective. Many people expect that we have robust consumer protections in place—a system that vets products thoroughly before allowing them to be sold and that recalls products swiftly if they prove to be dangerous.

But product safety regulation and the recall process are part of a complicated and imperfect system that varies widely depending on the type of product, the industries involved, and the government agencies tasked with overseeing it. For instance, a recall does not get put into motion automatically when a product is known to cause harm. Recalls, if they happen at all, can take years to be initiated, often only after public protest and sometimes following injuries or deaths.

Moreover, when a recall is issued, consumers often aren’t made aware. Almost 70 percent of Americans said that they had not heard about a recall in the past five years for any product they own, according to a Consumer Reports nationally representative survey of 1,010 adults, though millions of products are recalled each year. And only 21 percent of Americans said they had heard about a recall and responded to it in that time frame. Of those, about two-thirds said the issue had to do with their car, 19 percent said it involved food, 9 percent a health product, and 9 percent a children’s product.

That disparity is not surprising, says David Friedman, CR’s vice president of advocacy and a former acting administrator of the National Highway Traffic Safety Administration. Unlike other federal agencies, NHTSA requires manufacturers to notify car owners directly about recalls. To track recalls, it helps that every car has a unique vehicle identification number and every owner has a registration. Other agencies—the Food and Drug Administration, the Department of Agriculture, and the Consumer Product Safety Commission—generally have fewer tools and requirements for recalls. In some cases, laws can actually shield agencies from accountability and protect companies from liability, Friedman says.

Even when consumers learn about a recall, they often aren’t given simple, effective ways to respond. Some entail disassembling and mailing in part of the product for a refund, or not using the product until a replacement part is mailed—a process that can take months. As a result, many recalled products remain in use, risking further injury. How, then, can consumers ensure that the products they buy have been safety tested and have not caused problems since their release? In some cases, it’s impossible to fully know. But the examples described here provide a sense of how regulatory oversight sometimes works for—and against—consumers. Plus, we share steps you can take to protect yourself and your family.

Contaminated Chicken
Noah Craten, of Glendale, Ariz., was 17 months old in October 2013 when he developed a fever that wouldn’t let up. Three weeks later, after multiple trips to the doctor, the toddler was found to have a life-threatening brain abscess caused by a bacterium called Salmonella Heidelberg.

Just before Noah got sick, his grandmother—who often ate with the family—got food poisoning and was diagnosed with a salmonella infection. But the pediatrician ruled out salmonella because the boy didn’t have severe gastrointestinal symptoms, says Amanda Craten, Noah’s mom. Yet after Noah had brain surgery and doctors tested the abscess fluid, they learned his illness was caused by a salmonella strain traced to chicken from Foster Farms, a major poultry producer. The family regularly ate that chicken, according to a lawsuit the Cratens ultimately won against the company.

“I was sobbing when he told me it was salmonella, because I suspected it from the beginning,” Craten says.

Noah, now 7, and his grandmother were among a reported 634 people across the U.S. who became ill during a multistate salmonella outbreak linked to Foster Farms chicken that began in March 2013. It wasn’t until July 2014–16 months later—that the company issued a recall, one that included only a small portion of chicken produced over those months. Noah still lives with a severe brain injury that impairs his speech and vision and affects his behavior. The Cratens believe the infection could
Cranston believes the infection could affect his vision and affect his behavior. The injury that impaired his speech and ultimately won against the company. The family regularly ate that chicken, according to a lawsuit the Cranston family–got food poisoning and was taken to protect yourself and your family. The toddler was found to have a life-threatening brain abscess caused by a salmonella strain traced to chicken.

Three weeks later, after multiple trips to the pediatrician ruled out salmonella, because the boy didn’t have severe gastro-intestinal symptoms, says Amanda Cranston, a former FSIS administrator and FDA deputy commissioner who is now co-chairman of the board of Stop Foodborne Illness, a food safety group. No wonder managers say they didn’t think the chicken was contaminated.

“mandatory recall authority would not enable the agency to do anything that it doesn’t already have the power to do in order to protect public health.”

Consumer advocates disagree. In the case of Foster Farms, the FSIS cited the company’s processing plants more than 480 times during the outbreak for not complying with food safety standards. Yet business was allowed to continue as people got sick. In October 2013, CR also urged the company to recall after our tests found salmonella isolated from a Foster Farms sample that matched an outbreak strain. But the chicken remained on store shelves.

A second reason Foster Farms didn’t act faster: The FSIS doesn’t consider salmonella an adulterant (a forbidden contaminant) in meat partly because it’s so common on farms and in animals, says Pat Basu, D.V.M., former FSIS chief public health veterinarian. So producers don’t have to withhold or recall chicken with the bacteria. Instead, the burden is on the consumer “to cook the chicken well, to the recommended 165 degrees, and not cross-contaminate the kitchen,” says Francisco Diez-Gonzalez, Ph.D., director of the Center for Food Safety at the University of Georgia.

Despite that approach, salmonella still causes about 1.2 million illnesses, 23,000 hospitalizations, and 450 deaths in the U.S. each year, according to the Centers for Disease Control and Prevention.

A separate problem: The FSIS doesn’t oversee the farms where food animals are raised. That’s the jurisdiction of the USDA’s Animal and Plant Health Inspection Service, which regulates animal health and welfare, not food safety. “The USDA’s [food safety] authority begins on the loading dock,” says Sandra Eskin, director of food safety at The Pew Charitable Trusts, a public interest group.

What the FSIS can do: send warning letters to companies, issue public health alerts, seize products, and request a voluntary recall, among other tactics. But it’s up to the company to initiate a recall.

An FSIS spokesperson told CR that “it’s a big political hurdle,” says Michael Taylor, a former FSIS administrator and FDA deputy commissioner who is now co-chairman of the board of Stop Foodborne Illness, a food safety group. Why didn’t Foster Farms issue a recall sooner? For one thing, it didn’t have to. The USDA’s Food Safety and Inspection Service (FSIS) can’t force food producers to recall food, even if it has sickened consumers for months. Advocates have long urged giving the USDA more recall power, something producers oppose.

“It’s a big political hurdle,” says Michael Taylor, a former FSIS administrator and FDA deputy commissioner who is now co-chairman of the board of Stop Foodborne Illness, a food safety group. No wonder managers say they didn’t think the chicken was contaminated.

“mandatory recall authority would not enable the agency to do anything that it doesn’t already have the power to do in order to protect public health.”

Consumer advocates disagree. In the case of Foster Farms, the FSIS cited the company’s processing plants more than 480 times during the outbreak for not complying with food safety standards. Yet business was allowed to continue as people got sick. In October 2013, CR also urged the company to recall after our tests found salmonella isolated from a Foster Farms sample that matched an outbreak strain. But the chicken remained on store shelves.

A second reason Foster Farms didn’t act faster: The FSIS doesn’t consider salmonella an adulterant (a forbidden contaminant) in meat partly because it’s so common on farms and in animals, says Pat Basu, D.V.M., former FSIS chief public health veterinarian. So producers don’t have to withhold or recall chicken with the bacteria. Instead, the burden is on the consumer “to cook the chicken well, to the recommended 165 degrees, and not cross-contaminate the kitchen,” says Francisco Diez-Gonzalez, Ph.D., director of the Center for Food Safety at the University of Georgia.

Despite that approach, salmonella still causes about 1.2 million illnesses, 23,000 hospitalizations, and 450 deaths in the U.S. each year, according to the Centers for Disease Control and Prevention.

A separate problem: The FSIS doesn’t oversee the farms where food animals are raised. That’s the jurisdiction of the USDA’s Animal and Plant Health Inspection Service, which regulates animal health and welfare, not food safety. “The USDA’s [food safety] authority begins on the loading dock,” says Sandra Eskin, director of food safety at The Pew Charitable Trusts, a public interest group.
Yet back on the farm, “there are extremely high rates of infections,” says Taylor, the former FSIS and FDA official. “It’s a problem when you know where the issue originates yet it’s not subject to regulation.”

Other factors can delay food recalls. Diez-Gonzalez notes that it takes time, resources, and coordination between hospitals, health agencies, and patients, who have to itemize what they recently ate. “It can be a challenge to determine what sickened individuals have in common,” he says.

That difficulty not only impacts the USDA, which oversees meat and poultry, but also the FDA, which oversees most other foods, from leafy greens to packaged foods.

Last, after regulators identify a likely outbreak source, the threshold to prove a link is high. “Investigators are looking for the smoking gun,” Diez-Gonzalez says. So while hundreds of people said they’d eaten Foster Farms chicken and tested positive for an outbreak strain, the recall didn’t happen until FSIS inspectors found an unopened package of contaminated Foster Farms chicken in the freezer of a patient who’d tested positive for the same strain and had proof of its purchase.

“It’s an unreasonably narrow standard that FSIS is applying,” says Thomas Gremillion, director of food policy at the Consumer Federation of America. “It’s just bewildering.”

Since the outbreak, the FSIS established tougher standards for salmonella in chicken, and Foster Farms invested more than $75 million in food safety. When CR asked why the company didn’t recall its chicken sooner, Foster Farms declined to comment directly but noted that since April 2014, tests found salmonella in less than 5 percent of its chicken, much lower than what the USDA allows.

Though reducing salmonella in meat is a step in the right direction, “we haven’t seen that translate into reduced cases of human illness” overall, says Sarah Sorscher, a deputy director at the advocacy group Center for Science in the Public Interest. She suggests that for substantial change, farmers should do more to prevent infection by, for example, using animal vaccines.

Eskin, at Pew, argues that the USDA should have the power to enforce food safety standards from the farm to the retailer—and the power to mandate recalls.

While some in the industry support change, progress can be slow. “Sadly, it takes disasters, more outbreaks, more coverage, and more questioning by consumers,” Taylor says.

In the meantime, it’s key for consumers to curb contamination in food at home, says James E. Rogers, Ph.D., CR’s director of food safety research and testing and a former FSIS microbiologist. He advises storing meat in disposable bags apart from other foods; not washing raw meat, which spreads bacteria; using a separate cutting board for meat; washing counters, utensils, and hands after handling meat; and using a meat thermometer to ensure that you cook to recommended temperatures.
Difference for Consumers

**Dangerous Breast Implants**

Raylene Hollrah was 33 years old in 2007 when she was diagnosed with breast cancer and underwent a mastectomy. A year and a half later, when she was ready for reconstructive surgery, she chose a silicone-filled implant with a textured surface made by Allergan. Hollrah, from Hermann, Mo., believed a selling point of the implant was that she’d automatically be enrolled in a 10-year study “so I could help other women,” she says.

What Hollrah didn’t know is that medical devices—including breast implants, artificial joints, and pacemakers—are subject to much less rigorous premarket testing than drugs are. That’s partly because the FDA didn’t begin regulating medical devices or requiring research on their efficacy and safety until 1976, after many devices were already in use.

Silicone breast implants were introduced in the 1960s with little to no safety research, says Diana Zuckerman, Ph.D., president of the National Center for Health Research. Even after the FDA began regulating them, the agency didn’t require premarket studies until 1991—when it determined there was insufficient safety research, and soon after put a moratorium on sales.

In 2006, when the FDA did approve silicone implants, it was on the condition that manufacturers conduct post-market studies, one of which included Hollrah. But that wasn’t made clear to her early on. And as time passed, more problems emerged.

In 2011, the FDA announced a link between silicone- and saline-filled implants and a form of cancer called anaplastic large cell lymphoma (ALCL). But Hollrah didn’t learn about breast
implant associated ALCL, or BIA-ALCL, until 2013, when one of her implants swelled and she tested positive. “I removed breast cancer,” Hollrah says, “and then I put something right back in my body that gave me cancer again.”

Around the time of Hollrah’s diagnosis, Allergan dropped her from its post-approval study. In fact, Allergan lost track of many participants, in part because it was difficult to follow up with the women, who were given no real incentives to stay involved in the studies, Zuckerman says. As a result, the research was never completed. Yet the FDA did not penalize manufacturers or recall the implants.

Fortunately for Hollrah, her cancer was caught early. She had her implants removed in 2013 and is now cancer-free. But it wasn’t until July 2019 that the FDA announced the recall of Allergan’s textured implants due to a reported worldwide total of 573 BIA-ALCL cases, 481 of them from Allergan, including 33 deaths.

When asked why it took eight years after the FDA acknowledged the risk of BIA-ALCL for the agency to request a recall, an FDA spokesperson said it took the action after learning, in the spring of 2019, of “a significant increase in known cases of BIA-ALCL.”

Though the recall is a victory for women affected by BIA-ALCL, other concerns remain. For one, “when medical devices are recalled, there’s typically not a rigorous process to reclaim the flawed products,” says Lisa McGiffert, a co-founder of the Patient Safety Action Network and a former patient-safety expert at CR.

There’s also no established system for device manufacturers to find and notify doctors and patients about a recall. Hollrah notes that she has yet to receive a recall notification from Allergan.

For its part, Allergan says that “patient safety is a priority” and that it is committed to ensuring the safe and effective use of its products.

Still, hundreds of thousands of women are estimated to have a recalled device in their bodies and no easy choices. The FDA recommends implant removal only for women with a diagnosis of BIA-ALCL. But women don’t always have obvious symptoms. “Although BIA-ALCL is treatable if caught early, no one wants to wait to see if they get cancer,” says Sara Castro, an attorney at Farr law firm in Punta Gorda, Fla., who is working with affected women.

Another hurdle: Though Allergan will pay for replacement implants in the case of a cancer diagnosis or implant defect, it doesn’t cover the surgical costs of preventive implant removal. Most insurers won’t cover it, either.

Scot Glasberg, M.D., past president of the American Society of Plastic Surgeons and a consultant for Allergan, says that “if a woman has any concerns whatsoever, she should see a plastic surgeon who is board certified,” specializes in breast implants, and is knowledgeable about BIA-ALCL to go over her screening and testing options.

Women considering breast-implant surgery (or any medical device procedure) should ask their surgeon for an informed consent form that details what the device contains, and known risks. “This form is not mandated yet,” says Hollrah, who did not have that protection before her surgery and has since worked with Zuckerman, Glasberg, and others to create one.

Madris Tomes, a former program manager at the FDA who now runs Device Events—which gathers adverse event reports on medical devices—recommends researching your device. One free source is an online FDA database called MAUDE (Manufacturer and User Facility Device Experience). “Two-thirds of all recalls begin as an adverse event report,” Tomes says.

**Risky Infant Sleepers**

When family asked Hailey and Ty Hampton what they needed before the birth of their twin boys, Liam and Lennox, the couple didn’t hesitate: two Fisher-Price Rock ‘n Play Sleepers. Other new parents were raving about them. The Hamptons, from Nauvoo, Ala., wanted the babies to sleep in the couple’s bedroom but not in their
bed, which they knew was dangerous. “The Rock ’n Play Sleepers were our alternative,” Ty says.

But on Feb. 20, 2019, when Ty went to give the twins their bottles, he noticed Liam’s head was tilted oddly in the sleeper, according to a lawsuit the Hamptons filed against Fisher-Price. When Ty picked up the baby, his body was limp and cold. After frantic efforts to revive him, Liam was pronounced dead at the hospital.

The Hamptons, devastated, had no idea what caused Liam’s death. But less than two months later, they learned that dozens of other infants had died in Rock ’n Play Sleepers and that Fisher-Price and the CPSC had known about the deaths for years.

Like many parents, the Hamptons had assumed the sleeper was safe. But a CR investigation published in April found that it had never been adequately tested and posed several risks. Medical guidelines say babies should sleep on their backs, alone, unrestrained, on a firm, flat surface free of soft bedding. But the Rock ’n Play Sleeper positions babies at an angle of about 30 degrees, which may cause a baby’s head to tilt forward, compressing the airway and leading to suffocation. It also has soft padding and restraints, which increase the risks of suffocation and strangulation.

It was only after CR linked the sleepers with at least 32 infant deaths going back to 2011 that Fisher-Price recalled almost 5 million of them. At least 54 infants are now known to have died in these or similar sleepers.

William Wallace, CR’s manager of home and safety policy, says the recall was long overdue. “It’s outrageous that Fisher-Price and the CPSC knew about deaths linked to this product for years and didn’t take steps that could have prevented tragedies.”

When CR asked Fisher-Price in early April about the deaths associated with the Rock ’n Play Sleeper, a company spokesperson said, “We do not believe any deaths have been caused by the product,” and noted that some of the fatalities were due to mitigating circumstances or the product not being used according to instructions.

How could so many deaths not warrant a recall? At the heart of the holdup is a controversial law that restricts and sometimes prevents the CPSC from releasing company- and product-specific information, even when the products are connected to injuries or deaths.

The law, called Section 6(b) of the Consumer Product Safety Act, says that in most cases the agency must get a company’s permission before it publicly reveals a safety problem. And once a company agrees, the two negotiate the

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**What Consumers Should Do**

**RESPOND TO RECALLS:** If a product you own has been recalled, follow the manufacturer’s instructions—by calling the company or checking its website—on how to repair or return it. If you choose not to participate in the recall, don’t give the product away or sell it. Instead, throw it out so that it can’t be used by others.

**STAY INFORMED:** Track recalls and safety alerts at recalls.gov, which will direct you to each federal agency’s recalls page. That includes the Consumer Product Safety Commission (household and other products), the National Highway Traffic Safety Administration (vehicles, car seats, and related equipment), the Food and Drug Administration (most other foods, medical devices, drugs, and supplements), and the National Highway Traffic Safety Administration (vehicles, car seats, and related equipment). At each site, you can see recalls and sign up to receive email alerts. CR members can also track recalls related to their vehicles at CR.org/carelert.

**REPORT PROBLEMS:** Each agency’s recalls page also provides a way for consumers to report problems relating to the products it regulates.

**REGISTER YOUR PRODUCTS:** If your product comes with a registration card, don’t toss it. Instead, fill it out and mail it in or, if possible, fill it out online. That allows the company to notify you if the product is recalled or needs a repair.

**RESEARCH SECON DHAND PURCHASES:** Though it’s illegal for retailers and individuals to sell new or used products that have been recalled, some sellers, particularly of used goods, may not adhere to this law consistently. Policies are more uneven with used-car dealers, because federal law does not explicitly prohibit the sale of used vehicles with open recalls. When buying any used product from an individual, ask for the brand, model, serial number, and date the product was manufactured. That information is often on the product itself or in the instruction manual. Also, take extra care when buying used cars; look up the VIN number on nhtsa.gov/recalls/vin to see whether the car is part of a recall.
The agency does not have an official stance on Section 6(b), but two members—Robert Adler, acting chairman, and Elliot Kaye, commissioner—have spoken against it. “We need the anti-consumer safety and anti-transparency requirements of Section 6(b) ... to be eliminated,” Kaye said recently. “People die because of Section 6(b). It is that simple.”

Even when recalls are initiated, it’s often hard to remove products from circulation. As CR’s recent survey showed, most Americans don’t hear about, much less respond to, product recalls. And most companies recalling products don’t face strict requirements to reach out to consumers. As a result, recall completion rates are often less than 10 percent, according to the CPSC. In fact, 1 in 10 day care centers was still using Rock ‘n Play Sleepers or other inclined sleepers months after the recalls were announced, according to a report focused on three states by U.S. PIRG and Kids in Danger (KID), two consumer-safety advocacy groups.

“Industry should make the same multifaceted efforts they do to advertise their products to notify consumers about recalls, and then take more significant steps to retrieve recalled items,” says Nancy Cowles, executive director of KID. “And government needs to be a strong advocate for consumers by enforcing product safety regulations both pre- and post-market.”

KID is one of several groups, including the American Academy of Pediatrics and CR, that urges parents not to use infant inclined sleepers and supports a bill banning them, which was introduced after the April recall.

The CPSC’s Adler explains that while recalls should be improved, “we also need to keep dangerous products from getting into the market in the first place,” he says. “You want agencies like CPSC to be the fence at the top of the cliff, not the ambulance at the bottom.”

While the delayed recall of the Rock ‘n Play Sleeper—and the lives lost while it stayed on the market—is a glaring example of what can happen when product hazards are shrouded in secrecy, it’s not an isolated case. Section 6(b) also hid for years the number of tip-over deaths associated with Ikea furniture, delaying the recall of millions of dressers.

Though the CPSC can technically mandate a recall, it rarely takes that step, in part because companies could sue the agency, says Pamela Gilbert, previously CPSC’s executive director. The agency does not have an official stance on Section 6(b), but two members—Robert Adler, acting chairman, and Elliot Kaye, commissioner—have spoken against it. “We need the anti-consumer safety and anti-transparency requirements of Section 6(b) ... to be eliminated,” Kaye said recently. “People die because of Section 6(b). It is that simple.”

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How Future Recalls Can Be Better
**DASHBOARD DECODER**

What Does This Icon Mean?

- The Avengers are on the way
- Automatic turning stabilizer is engaged
- The engine is in awesome shape
- The auto stop/start system is functioning

This symbol identifies the automatic stop/start system, a fuel-saving feature found on most vehicles sold today. The system stops the engine when the car or truck is brought to a standstill (such as at a stoplight), then restarts it when the brake pedal is released.

**ASK OUR EXPERTS**

How should I store my car when I won’t need it for a while?

Storing a vehicle for an extended time period requires more than just parking it in your garage:
- **Wash and wax** the body to prevent accumulated dirt, bugs, or tree sap from bonding to the surface.
- **Change the oil and oil filter** to prevent contaminants from sitting in the engine.
- **Use a battery maintainer** to keep the battery topped off without damaging it by overcharging.
- **Leave the hood open** (because rodents like dark spaces) and use rodent repellent or mothballs, stashed in pantyhose, to discourage critters from nesting or chewing engine wiring.

**TRENDS**

**Traveling Light**

A recent study showed that 48 percent of car trips in the 25 most congested U.S. cities are 3 miles or less, and concluded that replacing those trips with “micromobility”—or shared bicycles, e-bikes, and e-scooters—would cut emissions and could ease congestion. More than half the trips in the following cities are 3 miles or less.

<table>
<thead>
<tr>
<th>CITY</th>
<th>0-1</th>
<th>1-2</th>
<th>2-3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Honolulu</td>
<td>25%</td>
<td>19%</td>
<td>12%</td>
</tr>
<tr>
<td>New Orleans</td>
<td>22%</td>
<td>17%</td>
<td>12%</td>
</tr>
<tr>
<td>Nashville</td>
<td>22%</td>
<td>17%</td>
<td>12%</td>
</tr>
<tr>
<td>Chicago</td>
<td>22%</td>
<td>17%</td>
<td>12%</td>
</tr>
<tr>
<td>Charlotte</td>
<td>20%</td>
<td>18%</td>
<td>13%</td>
</tr>
</tbody>
</table>

Source: INRIX Research

**THE VITAL STATISTIC**

71%

Percentage of drivers ages 34 and younger who say their vehicle’s automatic emergency braking (AEB) system helped them avoid a crash. Just 53 percent of those ages 65 and older say that AEB similarly helped them.

**GM SUVs and Trucks**

General Motors is recalling almost 3.5 million vehicles because the brake assist system may fail, which could require more distance to stop, potentially leading to a crash. The recall affects Chevrolet Silverado and GMC Sierra pickup trucks and Chevrolet Tahoe, GMC Yukon, Chevrolet Suburban, and Cadillac Escalade SUVs. The vehicles were manufactured between 2014 and 2018.

**What to do:** Dealers will update the software at no charge. Go to my.gm.com/recalls for more information.

**ILLUSTRATIONS BY MATTHEW HOLLISTER**

DECEMBER 2019 CR.ORG 51
The Wheel Deal

To be confident in your tire purchase, use our ratings and the advice of our experts, who put tires through the most rigorous independent testing program in the country.

by Jeff S. Bartlett

IN A PERFECT world, tire purchases would be planned ahead of time, so you could research the best deals for a safe, high-performing product. This is especially true when winter approaches, the time of year you’re more likely to need extra grip to battle heavy rain, snow, and icy roads.

But what if you get a flat that requires you to quickly replace one tire, and the other three are just fine? Or your mechanic surprises you with the news that your tires are worn and need to be replaced soon—maybe even right now?

Buying under those conditions can be stressful, confusing, and expensive. That’s why it’s best to arm yourself ahead of time with expert insights drawn from CR’s extensive tire testing program. Here, we provide answers to tricky but common questions about buying tires. And the results from our latest tire retailer survey can show you the best places to shop, based on CR member experiences at a wide range of stores.

What if I need to replace only a single tire?
For a tire that’s damaged beyond a simple repair, you may be able to get away with replacing just that one if the other three show only light treadwear.

If the other tire on the same axle shows significant wear, we suggest you buy at least two new, matched tires. You’ll want to put this new pair on the rear to ensure vehicle stability.

For an all-wheel-drive vehicle, you may have to replace all four tires because the AWD components can be particularly sensitive to a mismatch. Following this advice will ensure balanced handling and traction at all corners. Plus, replacing all four tires means you’re free to consider a different model with higher performance and longer tread life. (More than 60 percent of CR members surveyed changed the brand and/or model with their most recent tire purchase.) It also could result in a better overall deal from the tire retailer.

Here’s a clever maneuver when buying just one tire: You can have the tread of the new tire shaved down by a machine to match the depth of the other three. This service costs $25 to $35 per tire through Tire Rack, an online retailer.

Can I mix and match tire brands on the same car?
We don’t recommend this. Certainly never mix tire types, such as all-season and winter/snow, because it could be unsafe. If you decide to buy just one or two tires, stick with the brand and model already on the car. Of course, you want the same size, load index (how much weight each tire can support), and speed rating, too. This ensures that the vehicle dynamics are not upset by varying performance, which might pose a safety risk.

How much can I trust treadwear predictions?
The answer: It’s very complicated. A treadwear rating (known as Uniform Tire Quality Grading, or UTQG) is a
Road Report

comparative rating. The higher the number, the longer the tread life. For example, a tire graded 400 would wear four times as long as one graded 100. Manufacturers assign the grades for their own tires. The treadwear ratings, along with those for temperature and traction, are on the sidewall. Even so, there’s no cited mileage that’s easy for shoppers to understand.

Treadwear warranties, which offer insurance based on miles used, do provide some guidance for shoppers. But it can still be largely an apples-to-oranges comparison from brand to brand. Real-world tread life depends on multiple factors, such as vehicle, driving style, geography, tire pressure, road surface, temperatures, and wheel alignment.

To remove all this guesswork, CR predicts how long tires will last based on 16,000 or 20,000 miles of on-the-road testing and precise measurements. We conduct our extensive treadwear testing the same way within each category for a powerful apples-to-apples comparison across models. That provides a straightforward alternative to the UTQG ratings or mileages listed in warranties.

To get the most tread life from your tires, check the pressure monthly. And consult the owner’s manual for the proper schedule to rotate the tires and perform wheel alignments. Cut corners and you could lose life from the tires.

Is it worth it to get a road-hazard warranty?

Road-hazard warranties cover part or all of the expense of replacing a tire damaged while in use. Many major tire retailers offer coverage either free or for a fee (an average of about $17 per tire, according to our survey). Some tire manufacturers also offer hazard warranties. (In our survey, more members got a road-hazard warranty free with the purchase of their tires than paid for it.) Road-hazard protection can come in handy, especially if you have a history of getting flats. Seek this as a perk from your tire retailer, but avoid paying extra unless you get a great deal.

It should be noted that almost all tires carry some form of basic warranty from the manufacturer for defects. They’re also referred to as materials and workmanship warranties. The coverage is typically limited to a specific time period or level of wear.

Do I really need a four-wheel alignment with a purchase?

Yes. An alignment, which promotes even treadwear, is key to making your tires last. This should be done when you buy a set of tires, and in accordance with the maintenance schedule in your car owner’s manual. Some tire retailers offer this as a free service.

Should I buy all-season or winter/snow tires?

Most new cars come with all-season tires, a type engineered to provide good, year-round performance.

Winter/snow tires, designated by a mountain/snowflake symbol on the sidewall, are specially crafted to provide optimum traction in cold temperatures and have tread designed specifically for gripping snow. They are ideal for those who must travel through harsh, snowy conditions. But they typically have a shorter tread life, and their grip on cleared roads is typically not as good as that of all-season tires. Winter/snow tires should be installed as a set of four just for the rough winter months, and traditional all-seasons used for the rest of the year.

A subcategory of tires called all-weather provides the balanced performance of all-seasons, but with enhanced winter grip. They also have the mountain/snowflake symbol denoting winter grip, yet they have the benefit of not needing to be changed seasonally. The all-weather tires we tested are footnoted in the ratings.
A wide range of vendors, from big-box walk-in stores to online retailers, sell tires for cars, SUVs, and trucks. Our most recent survey of CR members, covering about 36,000 tire purchase and/or installation experiences, shows the importance of choosing the right retailer. Ninety percent of tire buyers said they were highly satisfied with their purchase, and 88 percent were highly satisfied with the installation. But there were clear differences among the retailers, with the top-rated ones pulling ahead on positive measures for sales staff, installation time, free perks, and checkout ease. The survey covered purchases from fall 2017 to fall 2018. (All-Access and Digital members can find detailed ratings at CR.org/tirestores1219.)

For Amazon and other online-only purchases, installation cost was the average reported by CR members who used a third-party installer.

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A dash indicates insufficient survey data to provide estimated tire and/or installation costs.
## Ratings

**Traction Action** Winter and summer tires are designed for specific times of the year, and all-season tires provide traction all year long.

<table>
<thead>
<tr>
<th>Brand + Model</th>
<th>Overall Score</th>
<th>Price</th>
<th>Speed Rating</th>
<th>Three-Season Driving</th>
<th>Winter Driving</th>
<th>Comfort</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PERFORMANCE WINTER/SNOW</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td>Vredestein Wintrac Pro</td>
<td>78</td>
<td>$180</td>
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<td>V</td>
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<td>1 1 1 1</td>
<td>2</td>
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<td>70</td>
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<td><strong>ULTRA-HIGH-PERFORMANCE ALL-SEASON</strong></td>
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### Winter/Snow

- Cooper Discoverer True North
- Hankook Winter I*cept iZ2
- Continental WinterContact SI
- Michelin X-Ice XI3
- Nokian HakkaPeliitta R3
- General Altimax Arctic 12
- Bridgestone Blizzak WS80
- Nexen Winguard Ice Plus
- Falken HS449 Eruowinter
- Dunlop Winter Maxx 2

### All-Season Truck

- Continental CrossContact LX20 EcoPlus
- Michelin Premier LTX
- Firestone Destination LE 2
- Pirelli Scorpion Verde All Season Plus
- Michelin Defender LTX M/S
- Cooper Discoverer SRX
- General Grabber HTS60
- Kumho Crugen HT51
- Hankook Dynapro HT
- Nexen Roadian HTX RH5
- Laufenn X Fit HT
- Goodyear Wrangler Fortitude HT
- Bridgestone Dueler LTH
- Nokian WR G3 SUV
- Bridgestone Dueler H/L Alenza Plus
- Uniroyal Laredo Cross Country Tour

All-Access and Digital members can find the latest, complete ratings at CR.org/tires.

**HOW WE TEST:** Speed Rating denotes a tire’s maximum speed when carrying the load defined by the load index, represented by letters: S (112 mph), T (118 mph), H (125 mph), V (140 mph), W (168 mph), Y (186 mph), and ZR (149-plus mph). Hydroplaning resistance denotes resistance to skimming along the surface of standing water. Snow traction denotes how far a vehicle has to travel to accelerate from 5 to 20 mph on flat, packed snow. Ride and Noise are evaluated subjectively on rough and smooth roads. Rolling resistance, as measured by a dynamometer, is a factor in fuel economy. Tested tread life indicates wear potential based on our 16,000- or 20,000-mile vehicle driving test. Overall Score is based on the performance of the tire in all our tests. Price is how much we paid for a single tested tire.
Audi A6
Impressive Sedan With a Balky Powertrain

**ROAD-TEST SCORE 93**

**HIGHS** Handling, braking, quiet interior, seat comfort, fit and finish

**LOWS** Uneven power delivery, scant interior storage

**POWERTRAIN** 248-hp, 2.0-liter 4-cylinder turbocharged engine; 7-speed dual-clutch automatic transmission; all-wheel drive

**FUEL** 26 mpg on premium fuel

**PRICE AS TESTED** $59,390

**OVERALL SCORE 84**

**AUDI’S A6** is among the top midsize luxury cars we’ve tested. It has class-leading fuel economy, lively handling, user-friendly high-tech features, and an elegant interior. Yet its low-speed manners and less than plush ride detract from the road-test score.

The four-cylinder turbocharged engine and dual-clutch automatic transmission shine during spirited driving. At the same time, the Audi’s 26 mpg overall is tied with the BMW 530i for the best fuel economy in the category.

**LONGER DRIVES** are a treat in the A6’s quiet cabin, with premium materials of high-quality wood, leather, and aluminum trim. The front and rear seats are firm and supportive, and visibility is good all around.

The two touch screens that control the audio, phone, and navigation functions might intimidate drivers at first, but we found them quite logical to use.

A bigger concern: The Audi’s hesitation when pulling away from a stop or trying to jump into a gap in traffic at urban speeds is frustrating.

Passengers can feel the texture of the road surface even though the suspension filters out harsh impacts from potholes and ruts.

Forward collision warning (FCW) and automatic emergency braking (AEB) are standard, but blind spot warning (BSW) and rear cross traffic warning (RCTW) are part of option packages.

---

Ford Explorer
Doesn’t Reach New Heights

**ROAD-TEST SCORE 78**

**HIGHS** Agility, controls, interior room

**LOWS** Ride, low-speed transmission shifts, price

**POWERTRAIN** 300-hp, 2.3-liter 4-cylinder turbocharged engine; 10-speed automatic transmission; all-wheel drive

**FUEL** 21 mpg on regular fuel

**PRICE AS TESTED** $49,940

**OVERALL SCORE 69**

**WE LIKE THE** redesigned Explorer’s agile handling, quiet cabin, and spacious first- and second-row seats. But the driving experience is marred by a clunky transmission, noisy engine, and stiff-edged ride. These faults hurt the Explorer’s CR road-test score, earning it a middling rank among the three-row midsize SUVs we’ve tested. Further, some comparably equipped rivals, such as the Hyundai Palisade and Subaru Ascent, cost about $6,000 less.

The Explorer’s rear-drive-based platform contributes to its newfound handling chops and improved tow rating of 5,300 pounds on our test vehicle. The all-wheel-drive model proved adept through corners, with quick-to-respond steering and a firm suspension that gave drivers confidence.

Most people will find it easy to find a comfortable driving position, thanks to plenty of headroom, a wide range of seat adjustments, a large left footrest, and well-padded armrests. The controls are simple and the infotainment system is intuitive. The cabin stays hushed even at highway speeds, although the turbo four-cylinder engine gets raspy when accelerating.

There’s plenty of oomph to get up to speed quickly, yet at 21 mpg overall, the Explorer doesn’t have a fuel-economy advantage over some of its smoother V6 competitors. Plus, low-speed shifts from the 10-speed automatic are noticeably rough. The ride is less compliant than many rivals’, transmitting bumps in the road into the cabin. The SUV’s fit and finish feels a bit cheap, with too much hard plastic. It comes standard with FCW, AEB with pedestrian detection, BSW, lane departure warning (LDW), and lane keeping assist (LKA).
Road Report

**Hyundai Palisade**
Strong, New Challenger

ROAD-TEST SCORE 88
- **HIGHs** Powertrain, interior room, access, quiet cabin
- **LOWs** Agility, gear selector

**POWERTRAIN** 291-hp, 3.8-liter V6 engine, 8-speed automatic transmission, all-wheel drive
- FUEL 21 mpg on regular fuel
- PRICE AS TESTED $43,415

**THE ALL-NEW, THREE-ROW** Palisade is an extremely functional family vehicle, distinguished by a no-nonsense powertrain and thoughtfully designed interior. It joins the Kia Telluride (also built by Hyundai) in disrupting the rankings within this popular vehicle class.

The Palisade’s V6 engine is smoother and punchier than some of its rivals’ turbo four-cylinders. This quiet engine provides effortless acceleration and returns a reasonable 21 mpg overall.

The SUV does a decent job of absorbing bumps, though the large 20-inch wheels—common on the Palisade—compromise ride comfort. Handling is marred by steering that’s not very responsive, and there’s body roll during routine driving. But the Palisade we tested demonstrated tenacious grip and well-tuned stability control through our avoidance maneuver.

The vehicle can seat seven or eight people depending on whether it has a second-row bench or two separate seats. Test drivers of various sizes found it quite easy to get comfortable. The roomy cabin has convenient features, such as readily accessible USB ports for the rear passengers and a handy release for the second-row seat to allow access to the third row. The infotainment system and most controls are simple to use, except for the push-button gear selector.

Standard advanced safety features include PCW, AEB with pedestrian detection, LKA, and a driver attention monitor. But buyers should note that BSW is only optional. This key safety feature is standard on the Telluride, which could make the Palisade a smarter buy.

**Nissan Leaf Plus**
More Range, but Still Outclassed

ROAD-TEST SCORE 73
- **HIGHs** Low running costs, no tailpipe emissions, quick and quiet acceleration
- **LOWs** Range, handling, driving position, long charging times

**POWERTRAIN** 214-hp, electric motor, 1-speed direct transmission, front-wheel drive
- RANGE 215 miles
- PRICE AS TESTED $44,330

Nissan now sells two versions of the Leaf EV. The new Leaf Plus gets a bigger, 62-kWh battery and has an EPA-estimated range of 215 miles. That’s a big difference compared with the standard Leaf’s 40-kWh battery and 150-mile range, and it puts the range of the Leaf Plus closer to similarly priced competitors.

But when it comes to everyday use, the Plus is outclassed by “affordable” EVs, such as the Hyundai Kona Electric and Kia Niro EV.

The larger battery gives the Leaf Plus its extra range, but it takes 10.5 hours to charge from empty. Still, the more powerful motor gives it a quicker 0-to-60 mph time by 1 second. Both versions have the same humming handling, and they feel stiff over sharp bumps.

The compact hatchback’s cargo area is deep and roomy. But our test car’s optional Bose audio system creates a lump that takes significant space from the cargo floor.

The elevated driving position provides a good view of the road ahead. But we found it a rather awkward fit because the steering wheel doesn’t telescope for reach, and the center console rubs against the driver’s right knee. In addition, the rear seat is snug.

An 8-inch touch screen is standard on the Leaf Plus. However, drivers can only access EV-specific data and customize the safety features through a smaller display in the instrument panel, which we found awkward to use.

FCW and AEB are standard, but BSW is optional. The optional ProPilot Assist system can help keep the car in its lane and adjust speed to keep pace with traffic.
Ratings  Eclectic Offerings  Consumer Reports’ extensive testing reveals that even high-scoring vehicles can have some flaws.

<table>
<thead>
<tr>
<th>Make • Model</th>
<th>Overall Score</th>
<th>Price</th>
<th>Survey Results</th>
<th>Safety</th>
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<td>RECOMMENDED</td>
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**MID-SIZED SUVs (3-ROW)**

- **Subaru Ascent Limited** 96  $43,887  Std. 3.6 8.0 129 52.0
- **Kia Telluride EX** 90  $40,855  Std. 3.6 8.0 127 53.5
- **Toyota Highlander XLE (V6) (2019)** 85  $41,169  Std. 3.5 7.4 134 48.5
- **Hyundai Palisade SEL** 84  $43,415  Std. 3.8 7.1 132 52.5
- **Kia Sorento EX (V6)** 78  $41,925  Opt. 3.3 8.1 137 49.0
- **Mazda CX-9 Touring** 78  $40,470  Std. 3.7 7.8 139 50.0
- **Honda Pilot EX-L** 74  $40,655  Std. 3.5 7.5 136 49.5
- **Ford Explorer XLT (2.3T)** 69  $49,940  Std. 2.3 7.4 136 51.5
- **Nissan Pathfinder SL** 66  $40,470  Std. 3.5 7.7 137 47.0
- **Dodge Durango GT (V6)** 65  $43,525  Opt. 3.6 8.3 136 48.0
- **Chevrolet Traverse Premier** 65  $49,845  Opt. 3.6 7.3 130 50.5
- **Volkswagen Atlas SEL (V6)** 62  $44,185  Std. 3.6 8.7 135 51.0

**LUXURY MID-SIZED CARS**

- **Lincoln Continental Select (2.7T, AWD)** 89  $55,590  Std. 3.7 6.6 127 51.5
- **Genesis G80 3.8 (AWD)** 84  $52,450  Std. 3.8 7.2 129 53.0
- **Audi A6 Premium Plus (2.0T)** 84  $59,390  Std. 3.0 6.8 129 55.5
- **Lexus GS 350** 83  $58,858  Std. 3.5 8.2 137 53.5
- **Infiniti Q70 Luxe** 78  $53,825  Opt. 3.7 5.8 128 54.5
- **BMW 330i xDrive** 71  $65,210  Std. 3.0 7.2 130 52.5
- **Acura RLX Tech** 71  $55,345  Std. 3.0 6.5 128 51.5
- **Cadillac CT6 Luxury (3.6, AWD)** 65  $64,485  Std. 3.6 6.5 125 52.0
- **Mercedes-Benz E300 (4MATIC)** 65  $59,585  Std. 2.0 7.1 128 54.5
- **Volvo S90 T6 Momentum (AWD)** 56  $61,855  Std. 2.0 7.2 130 52.5
- **Jaguar XF Prestige (V6, AWD)** 46  $66,588  Opt. 2.0 5.8 128 51.0

**COMPACT ELECTRIC VEHICLES**

- **Kia Niro EV EX Premium** 79  $47,270  Std. 1.6 6.8 135 52.5
- **Hyundai Kona Electric Limited** 78  $42,330  Std. 1.6 6.6 135 53.5
- **Nissan Leaf SL Plus** 72  $44,330  Std. 1.6 7.0 139 52.5
- **Chevrolet Bolt Premier** 71  $43,155  Opt. 1.5 6.8 138 53.0
- **Nissan Leaf SL** 64  $38,115  Std. 1.6 8.0 141 53.5

**How We Test:** Recommended models did well in our Overall Score. This factors in Road-Test Results, Predicted reliability, Owner satisfaction, and Safety, which includes crash-test results and the availability of 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 1 to 5 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 for complete ratings.

DECEMBER 2019  CR.ORG  61
Holiday Hoodwinks

These odd offers might make you look twice

Scrooge-y Sale
This stingy discount won’t help these “clearance” reindeer fly off the shelves.
Submitted by David Onodera, via email

Snow Job?
Here’s a waffle maker that may be a true Christmas miracle.
Submitted by Cheri Lenhart, via email

Oh, Fudge!
Sometimes you just gotta spell out the whole word.
Submitted by Gary Gunderson, Olympia, WA

A Chilly Reception
A perfect solution to make sure your holiday houseguests don’t overstay their welcome.
Submitted by Beverly Carrigan, Colorado Springs, CO

Be on the lookout for goofs and glitches like these. Share them with us—by email at 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.
Our choices matter.
To our families, our communities,
and generations to come.

Together,
our choices
are powerful.

Thank you for helping us create a safe, fair, and transparent marketplace.
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, 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@cr.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.

RECALLS

Toyota
Corolla
2003-2006 TOYOTA MODELS
On certain cars, the passenger-front airbag that was installed during a prior recall repair may not unfold properly when it deploys and must be replaced.
What to do: Toyota will notify owners by mail and instruct them to take their vehicle to a dealer to replace the passenger-front airbag assembly.

2010-2016 MERCEDES-BENZ MODELS
On certain vehicles, environmental conditions may eventually degrade the propellant contained in the driver-front airbag, causing it to deploy with more force than normal. Fragments could be propelled toward vehicle occupants or cause damage to the airbag assembly, preventing its proper function.
Affected: 26,050 Sprinter 2500 and 3500 vehicles.
What to do: Owners will be notified by mail and instructed
到经销商处更换前排气囊模块。**注意:** 加拿大气候导致的推进剂降解正慢慢进行。本次召回旨在提供额外的未来预防措施。受影响车辆将被更换，其功能将得到恢复。此次召回取代了2016-159号召回。

### 2015-2019 VOLKSWAGEN MODELS

在某些车辆上，由于燃油管路积水或发动机舱湿气，燃油管路可能会破裂并导致燃油泄漏。受影响车辆的燃油管路将被更换。必须在经销商处进行更换。

### 2015-2018 FORD AND LINCOLN MODELS

在某些车辆上，随附的转向助力系统可能会导致转向器不工作。这种问题会导致车辆在驾驶过程中转向不稳。**受影响车辆:** 2015-2016 F-150和2017-2018 F-250、F-350、F-450和F-550。

**如何处理:** 与销售商联系，安装新的转向控制单元。

### 2015-2018 CHEVROLET TRAX

在某些车辆上，由于制造缺陷，前部控制臂可能会断裂或缺失。一个或多个螺栓可能是缺失的，经销商需要更换这些螺栓。

**受影响车辆:** 2015-2018 Trax。

**如何处理:** 将车辆开到经销商处。

### 2017-2018 AUDI MODELS

在某些车辆上，由于制造缺陷，气囊系统可能会在发生碰撞时无法关闭。**受影响车辆:** 2018-2019 A4、A5、RS5、S4、A7和Q7。

**如何处理:** 由销售商通知车主。

### 2018-2020 FORD AND LINCOLN MODELS


**如何处理:** 销售商通知车主。

### 2018-2020 RAM 1500

在某些车辆上，由于制造缺陷，前部控制臂可能会断裂或缺失。一个或多个螺栓可能是缺失的，经销商需要更换这些螺栓。

**受影响车辆:** 2018-2020 Ram 1500。

**如何处理:** 将车辆开到经销商处。

### 2018-2020 RAM 2500/3500

在某些车辆上，由于制造缺陷，前部控制臂可能会断裂或缺失。一个或多个螺栓可能是缺失的，经销商需要更换这些螺栓。

**受影响车辆:** 2018-2020 Ram 2500/3500。

**如何处理:** 将车辆开到经销商处。

### 2018-2020 RAM 1500/2500/3500

在某些车辆上，由于制造缺陷，前部控制臂可能会断裂或缺失。一个或多个螺栓可能是缺失的，经销商需要更换这些螺栓。

**受影响车辆:** 2018-2020 Ram 1500/2500/3500。

**如何处理:** 将车辆开到经销商处。

### 2018-2020 RAM 2500/3500/4500/5500

在某些车辆上，由于制造缺陷，前部控制臂可能会断裂或缺失。一个或多个螺栓可能是缺失的，经销商需要更换这些螺栓。

**受影响车辆:** 2018-2020 Ram 2500/3500/4500/5500。

**如何处理:** 将车辆开到经销商处。

### 2018-2020 FORD AND LINCOLN MODELS

在某些车辆上，由于制造缺陷，前部控制臂可能会断裂或缺失。一个或多个螺栓可能是缺失的，经销商需要更换这些螺栓。

**受影响车辆:** 2018-2020 F-150。

**如何处理:** 将车辆开到经销商处。

### 2018-2020 FORD AND LINCOLN MODELS

在某些车辆上，由于制造缺陷，前部控制臂可能会断裂或缺失。一个或多个螺栓可能是缺失的，经销商需要更换这些螺栓。

**受影响车辆:** 2018-2020 F-150。

**如何处理:** 将车辆开到经销商处。
Laptops & Desktops
Twenty-four of the tested laptops and desktops are available. All are recommended models.
Report and ratings, pages 18-25

<table>
<thead>
<tr>
<th>Brand + Model</th>
<th>Overall Score</th>
<th>Price</th>
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<tbody>
<tr>
<td><strong>12-TO 13-INCH LAPTOPS</strong></td>
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<tr>
<td>Apple MacBook Pro 13-inch with Touch Bar (2019, Core i5)</td>
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<td>Apple MacBook Air 13-inch (2019, MVFH2LL/A)</td>
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<td>Microsoft Surface Pro 6 (Core i7)</td>
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<td>Microsoft Surface Laptop 2 (Core i7)</td>
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<td>MSI Prestige PS42 Modern-074</td>
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<td>Acer Swift 5 SF514-52TP-52LH</td>
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<td><strong>15- TO 16-INCH LAPTOPS</strong></td>
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<td>Apple MacBook Pro 15-inch with Touch Bar (2019, Core i7)</td>
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<td>Apple 27-inch iMac 5K Display (2019, MRQY2LL/A)</td>
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**OVERALL SCORE**

- **ACER SWIFT 5 SF514-52TP-52LH** | $1,400 | **OVERALL SCORE** | 67 |
- **ASUS CHROMEBOOK FLIP C434TA-DSM4T** | $700 | **OVERALL SCORE** | 84 |
- **APPLE 27-INCH IMAC 5K DISPLAY (2019, MRQY2LL/A)** | $2,400 | **OVERALL SCORE** | 88 |
Autos

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

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<th>Acceleration (sec.)</th>
<th>Fuel Economy (liters per 100 km)</th>
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<td><strong>MIDSIZED SUVs (3-ROW)</strong></td>
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<td>Hyundai Palisade</td>
<td>$38,499–$53,999</td>
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<td>Ford Explorer</td>
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<td>Nissan Leaf</td>
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**HYUNDAI PALISADE**  
PRICE AS TESTED  
$43,415 (U.S.)  
OVERALL SCORE  
84

**FORD EXPLORER**  
PRICE AS TESTED  
$49,940 (U.S.)  
OVERALL SCORE  
69

**AUDI A6**  
PRICE AS TESTED  
$59,390 (U.S.)  
OVERALL SCORE  
84

**NISSAN LEAF**  
PRICE AS TESTED  
$44,330 (U.S.)  
OVERALL SCORE  
72

Contact Info
How to reach manufacturers in Canada.

Acer  
acer.com/ac/en/CA/content/home

Asus  
asus.com/ca-en

Dell  
dell.com/en-ca

Google  
google.com/intl/en_ca/chromebook/device/google-pixelbook

Lenovo  
lenovo.com/ca/en

Microsoft  
microsoft.com/en-ca

MSI  
ca.msi.com

Razer  
razer.com/ca-en