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● Excellent ● Very Good ○ Good ○ Fair ● Poor

Come to the Consumer Reports Annual Meeting

Please join us Saturday, Oct. 17, at our national headquarters, 101 Truman Avenue, Yonkers, N.Y. Doors open at 9:45 a.m.; the meeting begins at 10 a.m. You'll have a chance to mingle with our experts and hear about highlights at Consumer Reports. Lab viewings will run from 11:30 a.m. until 12:30 p.m. For details, go to ConsumerReports.org/annualmeeting.

About the Cover

A Consumer Reports photo team headed by award-winning photographer Evan Kafka traveled to Fort Creek Farm in Hancock County, Georgia, to capture what a day in the life of a sustainably raised cow looks like. As the work of our Food Safety and Sustainability Center reveals in important new tests, not all beef is created equal. And the differences have a profound impact not just on the safety of our burgers but also potentially on the entire food chain. In the photo below, Kafka is photographing our cow cover girl, Dixie, from Bob and Susan Woodall's herd of Hereford cattle. Only about 3 percent of the beef Americans consume comes from cows that are raised sustainably. We were cautioned that the herd might keep its distance, but Kafka turned out to be something of a Hereford whisperer. "I was struck by how gentle the cows were," he says. On page 30 of our report, "How Safe Is Your Beef?" find out how to help advocate for safer ground-beef production.



FROM THE PRESIDENT

'Is it Safe & Sustainable?'

We spend our lives trying to answer this question at Consumer Reports. This is because we know firsthand that you can't always tell from looking at a product how it will perform, or discern from a complex ingredients list whether a food is safe to eat and produced in a way that doesn't hurt the planet we all share. But as this month's issue highlights, product labels, especially those backed by meaningful standards, can be valuable tools.

In "How Safe Is Your Beef?" on page 26, we reveal the results of our scientific research conducted on 458 pounds of ground beef—bought in supermarkets just like the ones you shop in. We discovered that it matters which package of beef you pick up. We decipher labels such as "no antibiotics" and "grass-fed organic" and explain the different value they bring. We also underscore why labels like "grass-fed" represent farming practices that lead to raising animals more sustainably. It turns out that what is better for the cows may be better for you and me.

In this issue, we also take a look at a label of a different kind—the ubiquitous Energy Star logo that identifies the most energy-efficient products in more than 70 key household categories such as refrigerators, TVs, and lightbulbs. We fought for many years to give this label more teeth by requiring an independent third party to verify that manufacturers' energy claims matched actual performance. We applauded when this finally happened, but now the program is under attack, and we're asking you to join our fight to maintain the label's integrity. At the same time, we're pushing for improvements that will make the label an even stronger navigation tool for you.



Marta L. Tellado,
President and CEO

PRODUCT LABELS, ESPECIALLY THOSE BACKED BY MEANINGFUL STANDARDS, CAN BE VALUABLE TOOLS.

NEW DATA ON DANGEROUS HOSPITAL INFECTIONS

"How Your Hospital Can Make You Sick" (September 2015) describes how U.S. hospitals have turned into breeding grounds for infections that kill tens of thousands of people per year. For the report, we used Centers for Disease Control and Prevention data to rate hospitals on their ability to avoid those infections. Soon after our story went to press, the government released new statistics. We used that update to keep our hospital Ratings current.

The new data did not change our main finding. About a third of hospitals in our Ratings still get one of our two lowest scores for keeping C. diff (clostridium difficile) in check, about 40 percent get low marks for avoiding MRSA (methicillin-resistant staphylococcus aureus), and only 6 percent score well against both. Each year, those two bugs sicken 350,000 patients; at least 35,000 die with the infection. But nine hospitals that appeared in our "Lowest-Rated in Infection

Prevention" chart are now off that list; three others are now on it. Six hospitals joined our "Highest-Rated in Infection Prevention" list, and 12 fell off. Notably, Presence Saints Mary and Elizabeth Medical Center no longer makes our top list. But it still does well overall against infections despite being a large hospital serving a high percentage of minority patients, two factors linked to increased infection rates.



READ

You can find an updated version of the article, plus related information, at: ConsumerReports.org/cro/hospitalinfections2015

And online subscribers can always get access to our most complete and current hospital Ratings by going to: ConsumerReports.org/hospitalratings

READER LETTERS

The Cost of Too Many Drugs, the Benefits of Cord Cutting

Toll of Antibiotic Resistance

"The Rise of Superbugs" (August 2015) was timely and important. Physicians face a difficult choice: doing what's right (explaining why an antibiotic isn't necessary, [which takes] as little as 2 minutes or as long as 15 minutes) or doing what will make some patients happy (writing a prescription, [which takes] about 10 seconds). Most outpatient infections are treated by primary care physicians under pressure to see more patients in less time. Add efforts by insurers and Medicare to pay physicians based on patient satisfaction, and the problem is destined to get worse.

Some studies show that patients are just as satisfied receiving an explanation as they are an antibiotic; among those expecting an antibiotic, satisfaction is lower if they leave without one. Educating the public will help, but efforts to pay physicians less, forcing them to see more patients in less time, and asking them to be fearful of patient-satisfaction surveys may undo them.

—Michael Melgar, M.D., Great Neck, NY

"The Rise of Superbugs" left out an important reminder. More than 90 percent of those who think they are allergic to penicillin actually are not. Anyone told they have a penicillin allergy should be tested by a board-certified allergist. If they aren't allergic, they can be prescribed safer and less costly antibiotics.

—James L. Sublett, M.D., FAAAAI, President, American College of Allergy, Asthma & Immunology

Many nations in the developing world don't require a doctor's prescription for antibiotics. This leads to antibiotic misuse

and overuse. Combine that with more frequent travel to and from the developing world to yield a U.S. health crisis.

—Gene Nelson, Ph.D., San Luis Obispo, CA

Lose Cable to Win at TV

Concerning "How to Win at TV" (August 2015), you overlooked the simplest and totally free option. We live in a rural area and have 30-plus channels of free over-the-air TV with more being added periodically. There is so much content that sometimes we are recording two channels while watching a third. And digital over-the-air reception quality often exceeds cable and dish. Why pay for something you can get for free?

—Jim Koktavy, Rush City, MN

I thought your "How to Win at TV" story was hilarious. The only way to win with commercial TV is to cut the cord. I did it years ago; my only regret is that I didn't sooner. Paying to watch commercials will only make you miserable.

—William Hunter, Arden, NC

A Clarification

In a recent story about changing a car's brake fluid (Ask Our Experts, August 2015), we advised you to refer to an owner's manual for recommended service intervals. You may need to change brake fluid more frequently if you live in humid climes—even if the fluid is clean. Brake fluid picks up moisture from the air; if not regularly changed, that water will corrode brake components and reduce braking effectiveness.

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The UPDATE

SAFEGUARD YOUR RETIREMENT

High fees could be eroding your 401(k) plan. Here's how to fight back.



PLUS
**HIRE THE RIGHT
FINANCIAL PLANNER**
On page 14, get tips
to ensure he puts
your needs first.



Bogged Down by Baggage Rules?

One journey, two carriers, different policies. What to ask before booking.

THIS SEASON millions of Americans will arrange air travel that includes connecting flights on different airlines, each with its own baggage allowances and fees. Wonder which terms apply? Here's a cheat sheet:

- For trips that start or end in the U.S. or Canada, ask: Which flight is first? You'll follow the rules for that one. If you are flying from Atlanta to New York to Milan, the rules of the first carrier—Atlanta to New York—will also apply to the flight to Italy.
- For trips entirely outside the U.S. or Canada, ask: Which is most significant? The rules of the “most significant carrier” apply to trips entirely outside of the U.S. and Canada. That distinction, according to the International Air Transport Association,

often goes to the carrier that covers the most distance—but not always.

For example, if one flight crosses one of IATA's three global boundaries (Asia; the Americas; and Europe, the Middle East, and Africa), the rules of that airline apply. If no global boundaries are passed, the “most significant” carrier is the one to cross a regional boundary—from Beijing to Seoul, South Korea, for example. Without regional boundaries, such as on a multileg trip through Europe, the first flight is the most significant.

Airlines are required to disclose baggage allowances and fees that will be applied throughout your itinerary. But the way they do so varies, so always check the applicable rules when you book a multistop trip.

HEROES & WATCHDOGS

Putting a Stop to Medicare Rip-Offs

The Medicare Fraud Strike Force is a group of federal, state, and local investigators. Its mission is to catch crooks who scam patients and file fraudulent Medicare claims worth billions each year—which drives up health care costs for everyone.

This past summer, the team really earned its action-flick moniker: In June it cracked a scheme involving 243 doctors, nurses, and other individuals who allegedly participated in

\$712 million in false billings. Then in July, because of another strike force investigation, a cancer doctor in Detroit was sentenced to 45 years in prison for administering medically unnecessary cancer treatments (including chemotherapy) to 553 patients, some of whom didn't even have cancer.

Since 2007 the team has charged at least 2,300 defendants in cases totaling more than \$7 billion in fraudulent

payments, thanks in part to community tips.

Report suspected fraud at stopmedicarefraud.gov. And heed our advice to stay safe:

- Never give your Medicare number to someone claiming to be a government employee.
- Check your Medicare Summary Notice for items or services you never received or for which you were overcharged.
- Remember: Medicare doesn't make sales calls.

RECALLS & UPDATES



WIRELESS SPEAKER FIRE HAZARD

Apple is recalling about 222,000 Beats Pill XL portable wireless speakers because the battery can overheat, posing a fire hazard.

The speakers are plastic; 4 inches high, 13 inches wide, and 4 inches deep; and come in five colors. The company has had eight reports of overheating, including one with a burn to a user's finger and one with property damage. The speakers were sold at Apple stores and major retailers nationwide, and at apple.com and beatsbydre.com, from January 2014 through June 2015 for about \$300.

Customers can contact Apple at 800-275-2273 for an Apple Store credit or electronic payment.

FURNITURE TIP-OVER RISK

Ikea is offering a free wall-anchoring repair kit for all chests and dressers sold at the store—approximately 7 million Malm chests (which have been sold since 2002 for between \$80 and \$200) and 20 million other chests and dressers. The furniture can pose a tip-over hazard if not securely anchored to the wall. Ikea received reports of two children who died after Malm model chests tipped over and fell on them. Since 1989, the company is aware of three other deaths from tip-overs involving other models of chests and dressers.

You should stop using all children's chests and dressers taller than 23½ inches and adult chests and dressers taller than 29½ inches unless they are securely anchored to the wall. Get a free wall-anchoring kit at any Ikea store, call 888-966-4532, or go to ikea-usa.com/saferhomestogether.



READ

You'll always find the latest information about important car recalls at ConsumerReports.org/carrecalls

NUTRITION

FDA to Manufacturers: Cut the Fat

In the nutrition world, few food components are as widely reviled as trans fats, which hide out in chips, crackers, and countless other processed and deep-fried foods, and have been proved to increase your risk of heart disease. In June, the Food and Drug Administration announced that manufacturers have until 2018 to rid their products of the primary source of trans fats, partially hydrogenated oils (PHOs). It's an important step that the agency estimates will save \$140 billion in health care and other costs nationwide over 20 years. Here's the potential impact on your kitchen cabinet and your health:

THE TROUBLE WITH TRANS FAT PHOs are created by adding hydrogen to vegetable oil, making it solid at room temperature and less likely to spoil. Like saturated fat, trans fat not only increases your blood levels of LDL (bad) cholesterol but also lowers HDL (good) cholesterol. It may also cause inflammation and lead to heart attack or stroke. Research has also found links to type 2 diabetes and problems with memory and other cognitive functions.

Right now the FDA permits food manufacturers to label foods containing less than 0.5 grams of trans fat per serving as containing 0 grams, which means that certain products purporting to be trans fat-free may, in fact, have some.



By June 2018, PHOs cannot even be included as an ingredient. That will change the makeup of thousands of products whose manufacturers had been rounding down on nutrition labels.

THE NEW RULE AND YOUR TASTE BUDS If you haven't yet noticed a change, it probably means very little: Many processed-food manufacturers have already dropped PHOs from their products without any noticeable difference in flavor or texture. (Between 2003 and 2012 Americans' trans-fat consumption fell by 78 percent, according to an FDA estimate.)

THE NEW RULE AND YOUR HEALTH Early research yields hopeful results: One European study estimated that a ban on trans fats in restaurants in New York City and six counties resulted in 12 fewer deaths from cardiovascular disease per 100,000 people and a health care savings of \$3 million per 100,000 people each year.

According to the Grocery Manufacturers Association, some companies will switch to alternatives such as palm oil and palm kernel oil—either alone or combined with liquid canola, sunflower, or soybean oil. Both palm and palm kernel oils are high in saturated fat, which raises bad cholesterol levels. Some companies are developing soybeans—through conventional crossbreeding as well as by genetic engineering in a lab—that produce trans fat-free oil that is also lower in saturated fat than most typical trans-fat alternatives. But GMOs may lead to a variety of health and environmental problems, our experts say, and will carry no GMO labeling.

TRANS FATS' LONG GOODBYE Companies can petition for a specific use of PHOs in their products post-June 2018, as long as the additive meets the FDA's safety standards. (An FDA spokesperson told us that if the specific use is approved, the agency will publish an additive regulation.) For now your best bet is to keep checking ingredients lists for PHOs and, of course, to avoid processed, high-fat foods in general—as well as limiting beef, cheese, and full-fat dairy products, where small amounts of naturally occurring trans fats will still be found.

GET INVOLVED

Actions You Can Take in October

FIGHT FOR FAIR AIRLINE PRICES

The Department of Justice is investigating whether airlines illegally teamed up to keep ticket prices high by limiting the number of new flights and available seats for passengers. Such tactics would help explain why flyers often experience "fare shock" when searching for tickets these days. The airline industry has shrunk from nine major domestic carriers in 2001 to only four today, and Consumers Union, the advocacy arm of Consumer Reports, has urged investigators to take a hard look at how mergers have hurt competition. To learn more about the issue and to join our fight, go to ConsumersUnion.org/airlines.

SAVE THE WATCHDOG

After shady mortgage lenders and Wall Street cronies crippled our nation's economy, the federal government created the Consumer Financial Protection Bureau. The CFPB has put \$5 billion back in the pockets of 15 million consumers swindled by law-breaking businesses. But powerful interests in D.C. keep hampering the agency. First they tried to stop Congress from approving a CFPB director; we pushed back with our allies and won. Now Congress is considering bills that will weaken the watchdog. Help keep the CFPB strong by signing our petition to Congress at ConsumersUnion.org/watchdog.

CHECK UP ON YOUR DOCTOR

Choosing a physician is one of the most important health decisions you'll make. And while you scrutinize a doctor's training, don't forget to inquire about his or her disciplinary past. Our Safe Patient Project fights to require doctors on probation to inform patients of their wrongdoing, because research shows that those physicians are more likely to endanger patients again. Your state's medical board has info about whether a provider has been disciplined for offenses related to sexual misconduct, violence, incompetence, and even patient deaths. You can find contact information at fsmb.org/state-medical-boards/contacts.

How Student Status Adds Up to Savings

Find out which businesses offer significant and surprising discounts



SMART MOVE
At many national retailers, flashing a student ID will save you cash.

WITH THE START of the school year upon us, you may be sweating about how much cash you'll have to drop on clothing, electronics, and other back-to-school must-haves for your high school or college student.

American cash registers will be busy: According to the National Retail Federation, total spending for back-to-school and college is expected to reach \$68 billion this year.

If your child is a college student searching for a deal—or if you're one yourself—you'll find many stores and services offering discounts that take some of the sting out of all the expense. Some extend the discounts to younger students, from kindergartners through high schoolers.

You need only one thing to qualify for savings at most stores: evidence of enrollment. For online purchases, that can be as easy as signing up with a student discount program using a student e-mail address. For in-store purchases, simply flash a student ID at the register. Here are some of the bargains we found:



Apparel, Sporting Goods, and Footwear

- **Ann Taylor** The retailer offers a 15 percent discount for full-priced purchases in stores when shown a college student ID. It extends the offer for online purchases, too. In order to receive that discount, registration with UNiDAYS—a student discount service—is required. Registration is free.

Through UNiDAYS, additional discounts are available online from stores such as Claire's, Toms, Urban Outfitters, and

others. Be sure to go to myunidays.com for the full list of participating retailers.

- **Banana Republic, J.Crew, and Madewell** Each of these companies offers a 15 percent discount for in-store purchases when shown a college student ID. Teachers are also eligible to receive the discount.

- **Foot Locker and Lady Foot Locker** Students get 10 percent off online purchases of \$50 or more when they use a Student Advantage Discount Card, a program that offers reduced prices at various retailers and service providers. The discount cards are available for purchase online for \$22.50 for one year (add \$10 for each additional year). The price includes shipping and handling costs. To qualify for the card, students have to be 16 or older.

Food and Entertainment

- **AMC Select** AMC theaters have "Student Day" every Thursday, during which you or your child can get a reduced-price ticket when presenting a college or high school ID. Those who have the above-mentioned Student Advantage Discount Card are eligible to receive up to 40 percent off prepaid tickets.

- **Cinemark** Participating Cinemark theaters offer deals to students. Discount days and times vary by location.

- **Dairy Queen** High school and college students are eligible to receive a discount card or a "Student Meal Deal" at participating locations.

- **IHOP** Participating restaurants offer deals on select days and/or at select times. Discounts tend to vary by location, so check with your local IHOP.

- **Regal** Student discounts are offered on select shows, times/dates, and locations. For eligibility requirements and availability, contact your local Regal theater.



IF YOUR CHILD IS A COLLEGE STUDENT—OR YOU'RE ONE YOURSELF—MANY STORES AND SERVICES OFFER DISCOUNTS THAT TAKE SOME OF THE STING OUT OF ALL THE EXPENSE.



Electronics

- **Apple** Education pricing is available online for college students or college-bound high school graduates. Parents shopping for college students are also welcome to use the discount. You can save up to \$200 on a new Mac and up to \$20 on a new iPad.

- **HP** With HP Academy, college students and those in grades K through 12 can save up to 20 percent off HP products online. Other benefits include free shipping on all orders and personalized product recommendations. Registration is required.

- **JourneyEd** College students can receive a discount on software and other merchandise online. JourneyEd also offers discounted products for students in grades K through 12.

- **Lenovo** The computer company's online Academic Purchase Program offers college students—and those in grades K through 12—discounts on laptops, tablets, and desktop computers. All you need to do is indicate which educational institution you or your child attends. For those whose schools are not listed, simply click "Enter here to shop special deals" under "Can't find your school?" and you will be directed to student deals.

- **Sony** The Sony Student Store offers online discounts of up to 10 percent for college students. In order to receive the special pricing online, students must first

create a Student Member Account with Sony. To get a discount on an in-store purchase, you only need a student ID.



Travel

- **Amtrak** Student Advantage Discount cardholders can save 10 percent on Amtrak tickets purchased online three days in advance.

- **General Motors** Through the General Motors College Discount Program, college and graduate students can save money on any qualifying Buick, Chevrolet, and GMC vehicle. The size of the discount depends on the vehicle. See the full list of qualifying vehicles at gmcollegediscount.com/vehicle-eligibility.

- **Greyhound** Student Advantage Discount cardholders are eligible to save 20 percent on Greyhound fares purchased online or in person.

HEALTH ALERT

3 Vaccines You May Need Now

Flu: You Can Fend It Off (Really!) Though last year's flu vaccine was the least effective it has been in the last eight years—reducing risk of illness by only about 23 percent—experts say that even a not-so-good flu shot is far better than none. If you do get sick in spite of getting the vaccine, symptoms are often milder. “The vaccine may prevent you from having to go to the emergency room or intensive care unit, and protect you from dying,” says Vanderbilt University Medical Center infectious disease specialist William Schaffner, M.D. The Centers for Disease Control and Prevention (CDC) recommends that just about everyone age 6 months and older get an annual flu shot—ideally by October, before peak flu season. Schaffner anticipates that this year's vaccine will be about 65 percent effective for most people.

Measles: The Comeback Is a Big Deal This past spring, a Washington State woman became the first person in the U.S. in 12 years to die from measles, a highly contagious disease marked by rash, fever, eye infections, and a long-lasting, hacking cough. And according to the CDC, there were 667 measles cases in the U.S. in 2014, a more than 300 percent jump from the previous year. Though we may see fewer total cases in 2015 (as of the end of July, 181 people in the U.S. had come down with measles), outbreaks at just two Disney theme parks, accounting for 125 illnesses, are proof of how easily the disease can spread.

Consumer Reports' chief medical adviser, Marvin M. Lipman, M.D., says, “This is worrying news about a disease that officials declared eradicated in 2000, and one that is almost entirely vaccine-preventable.”

It doesn't take much to protect yourself for life. “Virtually the only people who get measles in the U.S. today are not immunized,” Schaffner says. The CDC's recommendations—two doses separated by at least 28 days—are about 97 percent effective, making the measles shot one of the most reliable. Most people in the U.S. get measles protection from the MMR (measles, mumps, and rubella) shot in childhood, but around 5 percent of kindergartners were unvaccinated against measles during the 2013 to 2014 school year. Not sure whether you were ever vaccinated? “Go get a dose,” Schaffner says. “In 10 days to two weeks, you'll have immunity.”

Shingles: If You're 60-Plus, You Need the Shot If you've had the chickenpox at any point, you're at risk for shingles, which often causes an extremely painful blistering rash and nerve pain (called postherpetic neuralgia, or PHN) that can linger long after the rash disappears. According to the CDC, 1 in 3 people will develop shingles in his or her lifetime, when the long-dormant chickenpox virus in the body reactivates.

To cut your chance of shingles by about 64 percent and the likelihood of persistent nerve pain by 67 percent, simply get the herpes zoster vaccine at age 60. “That's when we're most susceptible to the disease,” Lipman says. Yet in 2013, only 24 percent of adults age 60 and older did so, in part because of the misconception that once you've had shingles, you can't get it again. So unless you have a medical reason to skip the shingles shot (if you're taking medication that weakens immunity, or if you have a disease or an allergy to vaccines), do it! You'll avoid symptoms “so severe that many people can't sleep and often miss work,” Lipman says.



SCAM TRACKER

The Text That Spells Trouble

NOW THAT most people are alert to suspicious e-mails and phony phone calls, text messages are the new frontier for scammers out to con you. A new “SMiShing” scam—the term for a phishing (or phone) fraud that starts with a text (also called SMS)—relies on our tendency to automatically reply to a text without a second thought.

HOW IT WORKS You receive a text message that appears to come from Google and contains a verification code. It's promptly followed by another text saying, “Google has detected unusual activity on your e-mail account. Please reply with the verification code sent to your mobile device to stop unauthorized activity.” Don't fall for it. If you type in and send the code, the scammer will now be able to access your e-mail, gather information about you, and even change your account settings, perhaps forwarding future e-mail messages to his account.

HOW TO PROTECT YOURSELF

Never send a verification code to anyone via text or e-mail. Use those codes only on the log-in page of the account for which they were sent. If you get a verification code that you didn't request, it could be a sign that someone is tampering with your account. Contact your e-mail provider.

Though this scam uses Google to look legitimate, it's entirely possible that future fraud attempts will purport to come from your bank or brokerage account. Be vigilant, and when in doubt, contact your account provider—the real one.



SURE SHOTS Convenience stores can be a good choice, but shop for a deal.

ARE PHARMACY-BASED SHOTS SAFE?

YOU'VE PROBABLY SEEN flu shots advertised at the drugstore, but CVS, Rite Aid, Walgreens, and other chains and independents also administer vaccines such as hepatitis A and B, meningitis, pneumonia, shingles, Tdap (tetanus, diphtheria, and pertussis), and varicella (chickenpox). Many provide travel immunizations for typhoid, yellow fever, and other diseases as well. But is it OK to get a shot while you're out shopping?

Consumer Reports Best Buy Drugs says it's a safe and convenient way to stay up-to-date on a range of immunizations. (Have the pharmacist forward information about the shots to your doctor.) You might even save money because there's no co-pay for a doctor's office visit. (The drugstore will bill your insurance company for payment.) Paying out of pocket? Be aware that prices can vary from chain to chain: You'll pay \$85 for the pneumonia vaccine at CVS and Target, but just \$73 at Costco pharmacies. The dual hepatitis A and B vaccine costs \$169 at Target and \$114 at Walmart.



Does Your 401(k) Plan Need a Makeover?

Employees are demanding that their companies offer stronger retirement plans. Here's how you can, too.

GIVEN HOW TOUGH it can be for many people to save for retirement, it's unfortunate that some companies make it even more difficult. But a large number of 401(k) plans do just that by imposing high costs and offering subpar investment choices.

The problem is more widespread than you may realize. Robert Hiltonsmith, a senior policy analyst at Demos, a public-policy group that has examined 401(k) plans, says that Americans pay \$50 billion more than they should each year.

Consider the consequences of high costs. A study by the Center for American Progress, a think tank in Washington, D.C., found that if you invested in a retirement savings plan with costs of 1.3 percent annually (the average fee at companies with fewer than 100 employees), you'd end up paying almost \$125,000 more than if you were in another plan with low-cost funds that had fees of just 0.25 percent.

Until recently, employees were stuck with whatever retirement savings plan their company offered. In the last few years, however, they have been fighting back, suing their employers for failing to monitor high costs, favoring more expensive retail mutual funds over less costly options, and

funneling employee savings into investment products managed by affiliate companies.

And now, employees have the law on their side.

Earlier this year, in a lawsuit against Edison International, a company that operates electric utilities in Southern California, the Supreme Court unanimously ruled that because of the Employee Retirement Income Security Act, companies have a legal responsibility to continuously monitor investments in retirement savings plans and, if necessary, remove imprudent investments.

And last July, a similar lawsuit on behalf of employees and retirees at Lockheed Martin was settled out of court. There have been other cases against companies including Boeing, the Massachusetts Mutual Life Insurance Company, and Wal-Mart.

So how can you tell whether your plan is a dud?

Look at the expenses of the funds. You can find them by logging in to your account online or looking at the prospectus for the funds you own. They may also be listed in your plan's statement. In addition, the administrator of your 401(k) plan is required to notify you annually about the costs you're incurring. If you see a number of funds with expense ratios (the annual

cost of maintaining a mutual fund) of more than 0.75 percent, you probably have a high-fee plan, Hiltonsmith says.

Examine the funds provided by your plan. A large number of options isn't necessarily better. In fact, too many investment choices can be confusing and cause you to succumb to "analysis paralysis." A well-diversified 401(k) plan will include a selection of stock funds, including large-company and small-company funds; international funds; and perhaps a total market fund as well as a broad-based bond fund. Instead of offering only actively managed funds, the plan should also include cheaper index funds. They hold stocks of companies in a specific index—say, the Standard & Poor's 500—and often have expense ratios of less than 0.2 percent, much less than comparable actively managed funds.

Check whether your plan offers target-date funds. Those mutual funds automatically reallocate the mix of stocks, bonds, and cash as you age. Their fees may be higher than index funds—0.78 percent, on average, according to Morningstar, the investment research company—but they're a good way to manage risk as retirement draws nearer. About 70 percent of retirement savings plans now include target-date funds.

If your plan has expensive funds and falls short of good options, the solution may be to encourage your employer to improve it. Here's how to do that:

Find the fiduciary. That person is your primary contact for all correspondence and is listed in the documents. Or you can ask your employee-benefits manager for the correct name and contact information. Or search for your company plan online at brightscope.com. The fiduciary's name will be on your plan's page under the tab for Form 5500 data. (That's a federal disclosure form that must be filed for all retirement plans.)

Collect documents. Look up the fund expense ratios in the annual disclosure of your expenses. You'll see in the report an explanation of each fund's average annual returns over one, five, and 10 years; the comparable returns of a benchmark fund; and the average annual operating

costs as a percentage of assets and as a dollar figure per \$1,000 invested. You also should receive a quarterly fee statement showing additional expenses specific to you, including loan-administration fees.

Research new funds. Your plan may have a good variety of investment options but may not offer the least costly versions. Search for similar alternatives at such low-cost fund families as Vanguard or T. Rowe Price. Then compare the candidates with a comparable index fund at the website of the Financial Industry Regulatory Authority (finra.org/fundalyzer). You'll need the comparison to see whether your choices are better investment options.

Present your argument. Write to the fiduciary with the details of your research. Emphasize how the costs affect not only you but every employee who invests in those plans. Ask co-workers to sign your

letter. If a number of employees complain, the fiduciary is more likely to take the letter more seriously.

Consider alternatives. Even if the plan is crummy, if your company matches your contributions—and most do, although the amounts vary widely—it may be worth staying to get the free money. Contribute the minimum amount—usually at least 3 percent of your salary—to take full advantage of the match.

If the investment options are pricey and there's no match, stash your savings in an individual retirement account, where you make your own investment choices. Just remember that you can contribute only \$5,500 per year to an IRA—\$6,500 if you're 50 or older—compared with \$18,000 in a 401(k).

Check your spouse's plan. If it's better than yours, consider maximizing contributions to it.

Is Your Financial Planner Getting Rich at Your Expense?

Many consumers don't understand how their money advisers get paid.

If you're one of them, that could cost you handsomely.



A RECENT DECISION in a lengthy legal case involving two certified financial planners was hailed as a victory for consumers.

A husband and wife, Jeffrey and Kimberly Camarda of Fleming Island, Fla., had been marketing themselves as "fee-only"

financial planners, a term for those who charge clients a fixed rate for their services and don't earn commissions or bonuses when recommending financial products. But that wasn't true, according to the Certified Financial Planner Board

of Standards, which filed a disciplinary action against the pair. It claimed that the Camardas were selling insurance products from which they earned commissions without disclosing that potential conflict of interest, a violation of CFP Board rules. Then the couple sued the board, saying they were unfairly disciplined. But in July, a judge dismissed their lawsuit.

"Some advisers use 'fee-only' for marketing purposes instead of as a pledge to their clients," says Eleanor Blayney, a consumer advocate on the board. There's no way to tell just how many financial advisers misrepresent how they're compensated, she adds. What's clear is how much working with the wrong kind of adviser can cost you. A study from the White House by the Council of Economic Advisers, published in February, estimated that financial advisers who have conflicts of interest cause \$17 billion in losses every year to Americans, many of them in working and middle-class families. And that's just for those who are using IRAs to save for retirement.

Part of the problem is that there's no governmental regulatory body that polices all financial planners. Investment advisers and brokers who sell bonds, stocks, and other financial products must be registered with

Leave It or Roll It?

WHEN YOU CHANGE from one job to another, should you move your 401(k) to your new employer's plan or leave it where it is? That depends on how much you have invested in the plan and how it stacks up against the new one.

Leave it with your former employer. If it's an excellent plan and your employer allows you to stay, there may be no need to move those savings. The lower costs of a well-managed plan will more than compensate for what are usually modest maintenance fees that may be assessed on the accounts of former employees.

Mingle the money with your new employer's plan. Chances are that you're changing jobs not

just for better opportunities but also for better benefits. Some employers allow rollovers from a previous employer's plan. Compare the plans to see which offers more choices and lower fees.

Roll the assets into an IRA. If neither plan has a good choice of investments and the fees seem high, consider rolling over your 401(k) savings into an individual retirement account. Keep in mind, though, that you may incur a different set of costs. For example, buying and selling investments will usually result in commissions, and there may be other fees charged by the custodian of the fund.

Don't cash out. The worst



choice you can make is to withdraw from the 401(k) plan with your former employer and not roll the funds into a new plan or an IRA. After 60 days, the funds are taxable, and if you're younger than 59½, possibly

subject to tax penalties. In many states, taxes and penalties will claim almost half of the amount that's withdrawn (known as an early distribution). By any measure, that's a poor return on an investment.

the Securities and Exchange Commission or in some cases with state regulators. There's no such oversight for financial planners, who help clients with retirement planning, estate planning, saving for college, and other matters.

The CFP Board, however, will investigate complaints it receives or violations the organization uncovers itself. It can suspend or revoke the use of the certified financial planner designation, but it can't stop financial planners from giving advice.

The best line of defense against unscrupulous planners is to educate yourself. That can be confusing at first, because there are more than 150 designations for financial planners. But many of the titles are dubious; they can be earned after just a few hours of study and an open-book test. Adding to the confusion is that many suspect designations sound similar to legitimate ones.

We recommend using financial planners who have the CFP designation. That indicates that she has passed a comprehensive certification examination provided by the board, has at least three years of financial-planning experience, and is committed to continuing education in financial concerns.

It's also important to make sure you understand how the financial planner you

select is compensated. Not all CFPs are fee-only; some are paid by commission or a combination of fees and commission. The CFP Board requires only that planners make it clear to clients how they're compensated.

We recommend fee-only advisers because they offer the most protection from inherent conflicts of interest. They charge a flat fee, an hourly rate, or a percentage of assets under management, usually about 1 percent.

To start your search for a fee-only adviser, go to the following websites:

- **CFP Board** (letsmakeaplan.org). You'll find a directory of financial advisers who hold the CFP designation along with information on how they're compensated. You can also find out whether an adviser is in good standing and whether the CFP Board has ever brought a disciplinary action against him or her.

- **National Association of Personal Financial Advisors** (napfa.org). Members of this professional group, many of whom are CFPs, adhere to a strict fee-only standard. They can't accept compensation in any form from any source other than their clients. For those who advise on investments, NAPFA reviews a form they must file with the SEC ensuring

that they haven't started to accept commissions and are still fee-only advisers.

- **Garrett Planning Network** (garrettplanningnetwork.com). This national network of financial advisers includes only fee-only planners who charge for advice by the hour. They're especially good at helping clients with smaller projects, such as determining how much life insurance they need or whether it makes sense to refinance a mortgage. Most of the organization's members are CFPs.

Of course, just because an adviser is listed with one of those networks is no guarantee of honesty. It's your responsibility to have ongoing discussions with the one you choose about fees and how they're calculated. If she charges you on an hourly basis, for example, ask her to put in writing how many hours it will take to finish a project and what the total cost will be. Also take note if your adviser starts to recommend financial products from which she could earn a commission. If she refers you to an attorney, accountant, insurance professional, or a mortgage adviser, also ask if she earns referral fees for doing so. In the end, most financial planners are ethical. But savvy consumers can reassure themselves by paying close attention.



**60 SECONDS
TO BLACKOUT?**
Branches laden
with heavy, wet
snow can snap
suddenly—taking
down power lines
with them.

Dark and Stormy Nights

As extreme weather becomes more common across the country, the decision about whether to buy a generator is more urgent than ever. Here's what you need to know.

YOU'RE SETTLED IN SAFE AT HOME when suddenly the lights go out and the comforting hums of fridge and furnace go dead. As you rummage around in a drawer for the flashlights and batteries, you're probably kicking yourself for not investing in a generator after the last storm. Don't let that happen during the next one. The best of the 45 generators we tested supply power for everything from the bare necessities to your whole house. Some generators deliver more juice than others. Some, including pricey inverter models, provide power that's cleaner

and won't make appliances run hotter and sensitive electronics run less reliably. Others include smart features, such as automatic shutdown if engine oil gets low. Here's advice on how to choose one wisely, install it properly, use it safely, and keep it running as long as possible.

CHOOSE STATIONARY OR PORTABLE. Stationary models are significantly more expensive, but they start automatically when the power goes out and often supply more power than portables. They also periodically run a self-diagnosis routine that can alert you, via the display panel or sometimes text or e-mail.

PHOTO: STEVE WEINIK/GETTY IMAGES

Running on natural gas or propane, they save you the hassle and safety risks of storing gallons of gasoline.

In addition to costing less, portables can be transported easily to another location. If you go for a portable, one handy new feature to look for is a removable console, connected via cable to the generator. You can plug directly into the console without running extension cords to the generator, which we don't recommend.

KNOW YOUR POWER NEEDS. Unless you want the generator to keep the whole house running, compile a list of priorities for what you want your portable model to power. At the very least you'll probably want to make sure essentials such as the refrigerator, sump pump, and heating system stay on. Additionally, you can map every outlet and switch in the house so that you'll know which circuit on your service panel powers what. Two people on cell phones can do that easily. Leave one person manning the panel while the other goes from room to room, checking what works as circuits are switched on and off. A circuit finder, \$25 to \$30, can help identify which circuit on your service panel powers a given receptacle.

Of course, for a fee a pro can also perform that diagnosis for you. The list of circuits will help you determine just what you want your generator to target. (See "How Much Generator Do You Need?" on page 18.)

CONSULT A PRO. Whichever type

of generator you choose, consult an electrician to ensure proper selection and installation. If you already know which items in your home you'll want to power, you could save hundreds by not paying for the labor required to map the circuits. If you're going for a stationary model, a pro should be able to help with your town or municipal requirements for proper location on your property, noise restrictions, and obtaining permits.

CONSIDER THIS UPGRADE. Extension cords are a hassle, and they can be hazardous. A transfer switch, about \$500 to \$900 with labor to install, links the generator to your circuit panel. That lets you power circuits, including those for hardwired appliances, directly. You'll need at least a 5,000-rated-watt generator to use one.

KEEP UP WITH MAINTENANCE. For a stationary generator, make a habit of checking its display to see whether maintenance is required. For a portable, your owner's manual will tell you how often to change the oil and which type to use. If your generator uses gasoline, add stabilizer to all of your stored fuel.

ALWAYS OPERATE SAFELY. Never run a generator indoors; it creates deadly levels of carbon monoxide. It should be run at least 15 feet from the house, away from doors and windows, and never in the basement, the garage, or any other enclosed space. Don't run a portable in the rain; model-specific tents are available online.

Are You Safe in the Hospital if the Lights Go Out?

It's a nightmare scenario that no hospital patient wants to consider: What if a storm knocks out lifesaving technology?

Ten years ago, more than 200 patients died after generators at several New Orleans hospitals and nursing homes failed during Hurricane Katrina. Three years ago, two New York hospitals—Bellevue Hospital Center and NYU Langone Medical Center—were evacuated when generators failed during Superstorm Sandy.

Hospitals must have backup power, and the Joint Commission, which accredits hospitals, says the facilities must test diesel generators at least 12 times annually. Thankfully, hospital power outages are rare—an average of one per year, according to a survey by the American Society for Healthcare Engineering.

Still, even one outage can be catastrophic, and experts have identified several weak spots. First, many generators are 50 or more years old, and they may be in basements, making them vulnerable to floods. Yet most hospitals can't afford to move the generators, and federal and state governments aren't likely to pick up the tab. In addition, though hospitals have emergency plans, there's no way to know how good they are until disaster strikes.

So if you or a family member enters a hospital during hurricane or tornado season, Dan Hanfling, M.D., co-chairman of the Institute of Medicine's Forum on Medical and Public Health Preparedness for Catastrophic Events, says you should prepare for the worst:

- **Plan for early discharge.** If a natural disaster looms, hospitals often discharge patients early, provided patients are well enough. So ask a family member or friend to be on call in case you need to be picked up early (and to care for you when you get home). And before you leave, get prescriptions filled and ask what you need to do when you get home.
- **Know evacuation plans.** Ask the hospital where it will move patients if it decides to evacuate. And in case you can't go home, find out where the nearest emergency shelter is.

STORM SPEAK

'Superstorm' is now part of our lexicon. But just what made 2012's Sandy so super? A hurricane followed by a nor'easter, it packed a potent one-two punch. Winds of 80-plus mph, epic waves, and the storm surge pummeled the East Coast—killing at least 147 and causing about \$50 billion in damages.



LEARN

Read more about what to do if a natural disaster strikes while you're in the hospital. Go to ConsumerReports.org/cro/hospital-emergencies

When the Bough Breaks

DURING A VIOLENT STORM any tree—even a healthy one—can be imperiled by wind, rain, snow, or hail. To improve your odds of not having one go down, monitor all of your trees for health during fine weather. If you're unlucky enough to have one fall, know that arborists will be in demand and slow to arrive after a storm. If you decide to pull out a chain saw and tackle the job yourself, follow this advice:

Wear proper gear. That includes snug clothing, sturdy boots, Kevlar chaps, protective gloves, a helmet with a face shield, and hearing protection.

Look for power lines. "You won't hear

things or see smoke," says Mark Chisholm of Aspen Tree Expert in Jackson, N.J., "but there's often current running under or in a tree you're cutting." Always treat any downed line as live and wait for the utility crew's OK.

Examine the tree for branches bent under pressure. "Rarely does a tree fall flat," says Scott Jamieson, a vice president of the Bartlett Tree Experts location in Stamford, Conn. "When one comes down in an unnatural position and you start cutting, some of that could spring back and throw wood right at you."

Have someone with you who can help in case of emergency.

CHAIN-SAW PICKS

Our Ratings of more than 40 chain saws include heavy-duty gas models such as the Echo CS-590-20 (at right), \$400; lighter-duty gas models including the Stihl MS 180 C-BE, \$230; the corded-electric Worx WG303.1, \$100; and the battery-powered Ego CS1401, \$300. Go to ConsumerReports.org for full Ratings.



Three More Tree Tools to Keep on Hand

If a tree comes down and you need to clear your driveway or walk in a hurry, a chain saw can come in handy. But it can be intimidating. And maintaining one takes some expertise. So, if you don't have a lot of big trees, consider these three less powerful options recommended by our chief outdoor-gear tester, Peter Sawchuk:



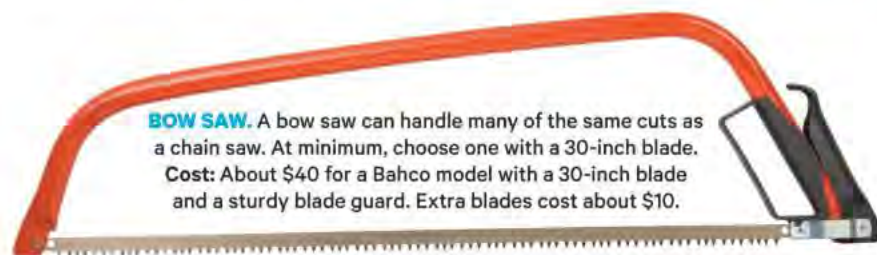
RECIPROCATING SAW. Suitable for cutting branches and roots too close to the ground for safe chainsawing.

COST: \$50 for the Ryobi 18-volt cordless P154, \$50 for the battery and charger, and \$7 for a 12-inch pruning blade.



LOPPERS. With long handles and pincers, they're great for snipping off small branches and twigs.

COST: About \$30 for the Fiskars 91416966J, a typical hand-operated model.



BOW SAW. A bow saw can handle many of the same cuts as a chain saw. At minimum, choose one with a 30-inch blade.

Cost: About \$40 for a Bahco model with a 30-inch blade and a sturdy blade guard. Extra blades cost about \$10.

How Much Generator Do You Need?

Here's what different-sized generators can power. Pick a model that generates wattage at least equal to the total for what you're powering. Manufacturers also suggest totaling the higher surge watts that some appliances—such as fridges and pumps—draw when they cycle on. One caveat: Small portables require you to connect appliances using extension cords, which is inconvenient and can even be potentially dangerous.

Small Portable

3,000 to 4,000 watts

What it powers The basics, including:

- Refrigerator (600 watts)
- Sump pump (600 watts)
- Several lights (400 watts)
- TV (200 watts)

Price range \$400 to \$800 for most; more for inverter models that use an alternative technology that makes wattage output smoother so that there are no power surges.

Midsized Portable and Small Stationary

5,000 to 8,500 watts

What it powers Same as small models, plus:

- Portable heater (1,300 watts)
- Computer (250 watts)
- Heating system (500 watts)
- Well pump (1,500 watts)
- More lights (400 watts)

Price range \$500 to \$1,000 for portable; \$1,800 to \$3,200 for stationary.

Large Portable

10,000 watts

What it powers Adds one of these:

- Small electric water heater (3,000 watts)
- Central air conditioner (5,000 watts)
- Electric range (5,000 watts)

Price range \$2,000 to \$3,000.

Large Stationary

10,000 to 15,000 watts

What it powers Same as large portable models, plus:

- Clothes washer (1,200 watts)
- Electric dryer (5,000 watts)

Price range \$3,500 to \$5,000 plus installation.

Ratings: Generators That Will Keep the Power On

Scores in context: Of the 45 generators we tested, the highest scored 93; the lowest, 35. Listed below are the top-scoring models, in order of performance within their respective categories. Recommended models offer top performance overall. CR Best Buys offer the very best for the money.

☑ CR Best Buy ☐ Recommended

● Excellent ● Very Good ○ Good ● Fair ● Poor

A. PORTABLE

Rec.	Rank	BRAND & MODEL	PRICE	SPECIFICATIONS			SCORE	TEST RESULTS			FEATURES		
				Claimed Output (watts)	Weight With Fuel (lb.)	Run Time (hr.) ⁽¹⁾		Power Delivery	Power Quality	Noise	Ease of Use	Fuel Shutoff	Low-Oil Shutoff
☑	1	Honda EU7000is ⁽²⁾	\$4,000	5,500	292	8-16	79	●	●	●	●	●	●
☑	2	Ridgid RD906812B	\$1,000	6,800	279	9-16	78	●	●	○	●	●	●
☑	3	Kohler PRO7.5E	\$1,400	6,300	290	10-15	73	●	●	○	●	●	●
☑	4	Generac RS7000E	\$900	7,000	235	9-15	72	●	●	●	●	●	●
☑	5	Troy-Bilt XP7000 30477	\$900	7,000	270	12-18	72	●	○	●	●	●	●
☑	6	Honda EM6500SXX2	\$2,800	5,500	273	8-13	70	●	●	○	●	●	●
☑	7	BlackMax BM90700B	\$1,000	7,000	242	9-12	70	●	●	●	●	●	●
☑	8	Briggs & Stratton 30470	\$900	7,000	270	8-12	69	●	●	●	●	●	●
☑	9	Briggs & Stratton 30549	\$1,100	7,500	280	9-15	69	●	●	●	●	●	●
☑	10	Westinghouse WH7500E	\$1,000	7,500	237	8-12	69	●	●	○	●	●	●
☑	11	Honda EU6500iS ⁽³⁾	\$4,000	5,500	286	5-11	69	○	●	●	●	●	●
☑	12	Predator 68530 ⁽⁴⁾	\$600	7,000	243	8-13	68	●	●	●	●	●	●
☑	13	Generac GP5500 5939	\$700	5,500	212	8-14	67	●	●	●	●	●	●
☑	14	NorthStar 165603 ⁽⁵⁾	\$1,500	6,600	252	8-12	66	●	○	○	●	●	●
☑	15	Champion 41537	\$1,000	7,500	245	7-11	66	●	●	●	●	●	●
☑	16	Yamaha EF7200DE	\$1,350	6,000	279	9-14	65	●	○	○	●	●	●
☑	17	Powermate PM0146500	\$850	6,500	228	9-13	65	●	●	●	●	●	●

B. SMALL STATIONARY

☑	1	Kohler 8.5 RES-QS7 ⁽⁶⁾	\$3,200	7,000 ⁽⁶⁾	NA	224 ⁽⁷⁾	92	●	●	●	●	●	●
☑	2	Generac 6237	\$2,250	7,000 ⁽⁶⁾	NA	336 ⁽⁷⁾	91	●	●	○	●	●	●
☑	3	Generac CorePower 5837	\$1,800	6,000 ⁽⁶⁾	NA	296 ⁽⁷⁾	77	●	●	○	●	●	●

C. LARGE STATIONARY

☑	1	Cummins 13GSBA-6722B ⁽⁸⁾	\$4,300	11,040 ⁽⁶⁾	NA	179 ⁽⁷⁾	93	●	●	●	●	●	●
☑	2	Kohler 14RESAL	\$3,700	12,000 ⁽⁶⁾	NA	182 ⁽⁷⁾	93	●	●	●	●	●	●
☑	3	Generac 6241	\$3,500	13,000 ⁽⁶⁾	NA	178 ⁽⁷⁾	91	●	●	○	●	●	●
☑	4	Briggs & Stratton 040401	\$4,300	13,600 ⁽⁶⁾	NA	175 ⁽⁷⁾	86	●	●	●	●	●	●

NA=not applicable; stationary unit. ⁽¹⁾ The average we measured over various loads. ⁽²⁾ Inverter model. ⁽³⁾ Price includes optional wheel kit. ⁽⁴⁾ Has feature but requires optional battery, about \$50. ⁽⁵⁾ Lacks a transfer switch. ⁽⁶⁾ Claimed output is with natural gas; output with propane is 1,000 to 2,000 watts higher (as tested). ⁽⁷⁾ With 250-gallon liquid-propane tank; runs indefinitely with natural gas.

How we test. We base our score on power delivery and quality, run time, noise, and ease of use. Claimed Output is the manufacturer's claimed maximum wattage for continuous operation. We cite Weight With Fuel to the nearest pound; natural-gas models are fueled externally. To test for Run Time, we measure each model's average over various loads on a full tank of gasoline or diesel fuel, a 20-pound propane tank, or for stationary models, a 250-gallon propane tank. Power Delivery represents how much wattage each model delivered, along with the generator's ability to meet surge-watt demands. Power Quality is our measurement of the smoothness, with consistent voltage, of the power delivered. We measure each generator's Noise at 23 and 50 feet from the generator. Our Ease of Use score covers starting, transport for portables, low-oil and fuel shutoff, and other features. Price is approximate retail.



A2 Ridgid



B2 Generac

Pick the Right Generator

TOP PORTABLES

- **A1** Honda \$4,000
- **A2** Ridgid \$1,000 **CR Best Buy**
- **A4** Generac \$900 **CR Best Buy**
- **A10** Westinghouse \$1,000
- **A12** Predator \$600 **CR Best Buy**

These gasoline-powered portables handle most needs and cost much less to set up than stationary models. **A1** is ultraquiet and easy on fuel, but it is pricey. **A2** delivered even more power and has a remote console for in-home operation. **A4** has a higher wattage rating still, plus a dial control for starting. Also consider **A10** if less noise is critical and the low-priced **A12** if you're not going to move it much.

FOR ADDED PEACE OF MIND

- **B2** Generac \$2,250 **CR Best Buy**
- **C2** Kohler \$3,700
- **C4** Briggs & Stratton \$4,300

Stationary (standby) generators turn on by themselves once the power goes and run on natural gas or propane. **B2** is a bit noisier but less pricey than the top Kohler. **C2** matched **C1** Cummins, with more wattage for less money. Also consider **C4** for larger homes with higher power needs.

HOW MUCH FUEL?

A 7,000-watt portable generator will use 12 to 20 gallons of gasoline per day if run continuously for 24 hours. More powerful generators use more fuel. (Store gasoline only in ANSI-approved containers.) A small 8,000-watt stationary model can run for eight to 15 days on a 250-gallon propane tank or indefinitely on a natural-gas line.



The Dirty Little Secrets of Toilet Paper

Some rolls have shrunk more than 20 percent

THINK THAT A ROLL is a roll is a roll? The truth is that for years, toilet paper manufacturers have been selling less product and masking the shrinkage with hyperbole and hard-to-quantify claims. According to John T. Gourville, a marketing professor at Harvard's business school, they get away with it because consumers have a better grasp of how much an

item costs than they do of the size it should be.

"They have in their minds that this toilet paper costs 79 cents and that one costs 89 cents," he explains. "They're not taking into account that one has fewer sheets."

Once one company downsizes its products, others follow to avoid appearing more expensive. The maker of Angel Soft brags that its double roll has 60 percent more sheets

20,800 is the average number of sheets each person in the U.S. uses per year—the length of 23 football fields.

than Charmin Ultra's double roll. Still, those brands have many sizes, and counting sheets isn't the only way to determine value—sheet size and thickness are also factors.

We contacted some customer-service representatives to find out what's behind all the shrinkage and received a variety of explanations. Many suggested that their products had become so good that consumers actually need less of it.

A customer rep for Kimberly-Clark, maker of Cottonelle and Scott, told us that the downsizing was a marketing decision in response to rising costs for manufacturing and distribution. A follow-up statement said that product innovations yielded "better, stronger tissue, so that you need fewer sheets to get the job done."

Procter & Gamble's customer rep told us that reducing the number of sheets actually enabled the company to improve the quality of its flagship Charmin TP. The newer version is more flexible than previous ones, the rep said, and consumers should need four times less.

Costco's decision to trim its Kirkland Signature multipacks from 36 to 30 rolls was also explained as a less-is-more approach. A customer rep said that the company took out the six rolls to provide a better product, and that the toilet paper was actually thicker than it was before.

Manufacturers have also boosted their brand offerings to include not just single and double rolls but "mega," "triple," and "jumbo" variations, and other sizes. That makes comparing products even more confusing. (Turn the page to see Angel Soft's expansive lineup.)

Some rolls are so bulky they may not even fit their bathroom enclosures, especially the ones in older homes. Not to worry, say the makers of Charmin. The brand's mega rolls come with a money-back guarantee if they don't fit. So be sure to hold on to your receipt and the package's UPC code just in case you need to claim your refund.

Our advice: Don't flush money down the drain. Find a brand you like and stock up when it's on sale.

A COMMERCIAL THAT'S A LITTLE TOO PERSONAL

Cottonelle's "Go Commando" campaign is based on the premise that it now has a "clean ripple texture" that removes more "per sheet than the leading national-value brand." But Kimberly-Clark pushes the theme—and the envelope—even further with TV commercials that invite consumers to switch to the brand and feel confident enough to leave their underwear at home. Our tests can't confirm that level of thoroughness, but here's what we can say about Cottonelle: Its Clean-Care toilet paper wasn't very strong, though it was soft. Its Ultra Comfort-Care was strong but not as soft.



The Incredible Shrinking Roll

SINCE 2009, CONSUMER REPORTS has tested bathroom tissue several times. And during that span, many manufacturers have shrunk the size of their rolls. To gauge the difference, we looked at nine current products, comparing the number of sheets per roll and the size of the sheets with previous versions. We used a so-called double roll, the most popular size, as our benchmark in most cases. Be aware that some brands, such as Kirkland Signature, downsize by decreasing the number of rolls per package.

PRODUCT	AMOUNT SMALLER	NOW		THEN	
		SHEET COUNT, SIZE (IN.)	SQ. FT., ROLL	SHEET COUNT, SIZE (IN.)	SQ. FT., ROLL
Cottonelle Ultra Comfort Care Double Roll	23%	166/3.9x4	18	200/4.2x4	23.3
Scott Extra Soft Mega Roll	21%	400/4x3.9	43.3	469/4.2x4	54.7
White Cloud Ultra Soft & Thick Double Roll	18%	176/3.9x4	19.1	200/4.2x4	23.3
Scott Naturals Tube Free Mega Roll	16%	400/4x3.9	43.3	440/4.2x4	51.3
Charmin Ultra Soft Double Roll	15%	164/3.9x4	17.8	176/4.3x4	21
Quilted Northern Ultra Plush Double Roll	12%	176/4x4	19.6	200/4x4	22.2
Scott Tissue 1000 Sheets	9%	1,000/4.1x3.7	105.3	4.5x3.7	115.6
Charmin Basic Double Roll	9%	264/3.9x4	28.6	264/4.3x4	31.5
Kirkland Signature Premium	0%	425/4.5x4	53.1	425/4.5x4	53.1

Note: Sheet size and percentages are approximate because of rounding. The chart doesn't take into account paper thickness or price changes.

Just Hope It Doesn't Rain!

The Annual Toilet Paper Wedding Dress Contest, sponsored by Cheap Chic Weddings and Charmin, showcases the paper's soft and strong qualities in a unique way, says Charmin's parent company.

Contestants don't have to walk down the aisle in their entries, though the dresses do have to be wearable.

Judging from the confection below, the dresses could even change the wedding dreams of many. And the \$10,000 grand prize is certainly enough to help pay for a real wedding.



ROLL CALL

AS COMPANIES SHAVE SHEETS, they're expanding product lines. The king of line extensions is Angel Soft. According to its manufacturer, Georgia-Pacific, there are seven roll sizes, from 132 to 528 sheets. (Six are pictured here.) The reason for all that choice? According to a customer-service representative, they're just different price points. But John T. Gourville, a professor of marketing at Harvard University, says it's an effort to corner the market. "One issue is shelf space," he points out. "By having a proliferation of sizes, you increase the likelihood that a consumer randomly buying toilet paper or shampoo will buy your brand. And being a good-selling brand, you can command more shelf space and take it away from a competitor."

Angel Soft
Regular
132 sheets

Angel Soft Big
198 sheets

Angel Soft
Double
264 sheets

Angel Soft
Jumbo
286 sheets

Angel Soft
Triple
396 sheets

Angel Soft
Mega
528 sheets



Ratings: Toilet Paper From Top to Bottom

Scores in context: Of the 21 toilet papers we tested, the highest scored 77, the lowest, 9.

CR Best Buy

Excellent Very Good Good Fair Poor

Rec.	Rank	BRAND & PRODUCT	PRICE (PER 100 SHEETS)	OVERALL SCORE	TEST RESULTS				FEATURES	
					Strength	Softness	Disintegration	Tearing Ease	Piles	Sheets Per Roll
✓	1	White Cloud Ultra Soft & Thick (Walmart)	25¢	77	●	●	●	●	3	176
	2	Nice Premium Ultra (Walgreens)	33¢	57	●	●	●	●	2	164
	3	Scott Extra Soft	20¢	53	○	○	●	●	1	400
	4	White Cloud Ultra Strong & Soft (Walmart)	27¢	52	●	●	○	●	2	165
	5	Quilted Northern Ultra Plush	43¢	50	●	●	●	●	3	176
	6	Cottonelle Ultra ComfortCare	35¢	49	●	○	●	●	2	166
	7	Total Home Premium Ultra Soft (CVS)	51¢	49	●	●	●	○	2	164
	8	Up & Up Ultra Soft (Target)	31¢	48	●	●	○	●	2	330
	9	Charmin Ultra Soft	41¢	46	●	●	●	○	2	328
	10	Scott Naturals Tube-Free	17¢	46	●	○	●	○	1	400
	11	Angel Soft Bath Tissue	31¢	46	○	○	●	●	2	264
	12	Scott Rapid Dissolving	30¢	46	○	○	●	○	1	264
	13	Charmin Ultra Strong	40¢	45	●	●	●	●	2	330
	14	Cottonelle CleanCare	34¢	45	●	●	○	●	1	208
	15	White Cloud Green Earth Bath Tissue (Walmart)	29¢	37	●	○	●	●	2	396
	16	Kirkland Signature (Costco)	13¢	37	●	●	○	○	2	425
	17	Seventh Generation Bath Tissue	18¢	32	●	●	●	○	2	300
	18	Charmin Basic	31¢	31	●	○	●	●	1	264
	19	Quilted Northern Ultra Soft & Strong with CleanStretch	43¢	30	●	●	●	○	2	190
	20	Scott 1000	9¢	16	●	●	●	○	1	1000
	21	Great Value Bathroom Tissue (Walmart)	6¢	9	●	●	●	●	1	1250

How We Torture Toilet Paper

YOU THINK YOU'RE picky about toilet paper? Consumer Reports uses machines and specially trained sensory panelists to determine which rolls combine softness, convenience, and strength.

How strong? We stack and insert eight sheets of each toilet paper into an Instron, a device also used to test sturdier materials like fabric and plastic. It slowly pushes a steel ball through the sheets. The force required to punch through the paper is measured and recorded. Stronger paper can withstand three times as much pressure as the weakest ones before ripping. The Instron also determines how hard you need to pull to rip two sheets along their perforation, or the "tearing ease."

How soft? Sensory panelists check for softness in a temperature- and humidity-controlled room so the toilet-paper fibers are evaluated under controlled conditions. First they make light,

circular motions over each sample with their fingertips. Next, they softly drag their fingers over the tissue in straight lines. Both tasks help them form an overall impression of softness. Then they test for pliability by gently manipulating the paper into a ball. The roughest, stiffest papers feel cracked, pointed, and ridged; the softest tend to be more pliable and conform smoothly to the hand.

Down the drain. Toilet paper can be a pain even after you use it. To find out what happens once it's flushed, we check to see how easily it disintegrates. That gives you an idea of how well it will move through a home's plumbing and septic systems. We put a 2x2-inch square from a sheet of toilet paper and a 2-inch stirring bar into a water-filled beaker on a stirring plate. The score is based on the time it takes for the sheet to disintegrate.

What's in a Name?

When it comes to toilet paper, labels may not mean much. At left are results from our latest tests, which found an "extra soft" toilet paper that wasn't (Scott Extra Soft), an "ultra strong" one that was pretty weak (White Cloud Ultra Strong & Soft), and a "great value" that was neither great nor offered much value (Great Value). A tube-free toilet paper lived up to its name (Scott Naturals Tube-Free), but it cost almost twice as much as its basic brandmate.

BEST ALL-AROUND

1 White Cloud Ultra Soft & Thick. Strong and soft, this three-ply paper sold at Walmart is easy on your plumbing.

SOFTTEST

2 Nice Premium Ultra. You'll have to sacrifice some strength to get the softest toilet paper. Walgreen's Nice two-ply product disintegrates and tears off easier than other softies we tested.

BEST FOR SEPTIC SYSTEMS

3 Scott Extra Soft. Though not the softest or strongest, it disintegrated better than most toilet papers we tested. So it's less likely to clog plumbing or create problems in your septic system.

Beware of Wipes

The packaging may say that wipes, those toilet-paper supplements, are flushable or safe for sewers and septic tanks. But after testing, we beg to differ. It took at least 10 minutes for the wipes we tested to break down into small pieces in our mixer filled with water, which provides more churning than waste pipes. When we left the wipes in water overnight, some disintegrated, some didn't.

The bottom line. Don't use your toilet as a wastebasket. Toss used wipes into an actual garbage can. The same advice holds true for tissues and paper towels.



AN EAR FOR QUALITY

The right headphones offer an audible treat whether you're working out, hanging out, or heading out

YOU KNOW A PRODUCT IS HOT when the fashion industry makes it a wildly overpriced accessory. Earlier this year, jewel-encrusted headphones from the Italian designers Dolce & Gabbana showed up on runways with a price tag of almost \$8,000. But you don't have to sacrifice months of mortgage payments for headphones you'll love.

Our in-depth tests of more than 150 headphones identified 28 models that offer great sound for less than \$200.

All of them should be a big step up from the freebies that may have come with your phone. To choose the right pair, ask yourself the following questions.

What's Your Idea of Comfort?

Some people love to wear turtlenecks, but others feel as if they're being strangled by them. Comfort is just as subjective when it comes to headphones. Many listeners are comfortable wearing insert-style earphones that go into the ear canal, or earbuds that rest in the bowl of the ear,

but others find them irritating. (Switching to a different-sized tip can help.) Some users prefer on-ear or over-ear headphones (picture earmuffs). But others balk at their bulk or complain that they interfere with eyeglasses or earrings. Also, they can make your ears hot and sweaty, especially if you wear them for a long stretch.

Are They Mainly for Exercising?

Almost two-thirds of headphone users wear them while working out, according to the research firm NPD. For vigorous activity, you want headphones that will stay in place and stand up to sweat or rain. One to consider: the **Scosche SportClip 3, \$30**, which is billed as splashproof and dustproof. It has bendable ear clips that fit around the ear, a plus if you're bouncing along a bumpy road or bending down to grab a barbell. The **Jabra Sport Pulse Wireless, \$200**, has a built-in heart-rate monitor that uses a sensor in one of the earbuds. It works with a free app for Android and Apple devices. Readings are quite accurate, according to our tests.

Do You Hate Cords?

Most headphones connect to devices with a cord, but we're seeing more wireless headphones that can save you from flapping cords and annoying tangles. The five Bluetooth models in the chart can operate up to 30 feet from a device. Keep in mind that they run on batteries (these use rechargeables), and it can be a pain if they die during a long trip.

Are You an In-Ear or Over-Ear Fan?

To figure out which one you are, consider the advantages of each type. For on-the-go listening, you might want headphones small enough to stash in a pocket or purse. Earbuds or inserts are as teeny as they come. Recommended models include the **Sennheiser CX 215, \$40**, and the **Panasonic RP-TCM125, \$20**.

If you're the talkative type, consider headphones that double as a phone headset. **Bose FreeStyle earbuds, \$130**, are highly rated and have a built-in microphone and in-line controls for switching from music to a call with the press of a button—no need to grab the phone.

B2 Grado
Prestige
SR80e

ON-EAR
HEADPHONES ARE
A GOOD CHOICE
FOR SERIOUS
MUSIC LISTENING.

D2 Polk Audio
Hinge Wireless



Headphone size is less of a concern at home, so on-ear and over-ear models are good choices for enjoying music or movies. (You'll see plenty of people sporting big DJ-style headphones in public, too.) Among the best in this price range are the over-ear **Grado SR225e**, \$200, and the on-ear **Grado SR80e**, \$100, both of which have excellent sound.

Either of those designs is a good choice for serious music listening. Most of the excellent-sounding headphones in our full Ratings (at ConsumerReports.org) are over-ear and on-ear models. On the other hand, if you listen mostly to MP3 music or audiobooks, top sound quality may not be as critical. In that case, you can save some bucks by choosing a lower-priced model with very good sound.

To block out chatty seatmates on a plane or prevent late-night listening from disturbing others, you'll want headphones with a sound-isolating design. Ear inserts, such as the **Sennheiser** and **Panasonic** mentioned above, fit snugly inside the ear. Closed, over-ear headphones such as the **Audio-Technica ATH-M50x**, \$170, which enclose the ear, also block outside sound and keep your music to yourself. To go a step further, consider a model that uses electronic noise-canceling technology (see below).

The Sounds of Silence

If you crave quiet in the midst of mayhem, headphones that use active noise-canceling technology (not included in the chart) are the way to go. Those battery-powered headphones have tiny microphones that pick up ambient sounds, then use electronic circuitry to counteract them, so you can listen to your tunes in peace. Two modestly priced models we recommend: the **Phiaton BT220 NC**, \$180, a wireless ear insert, and the **SMS Audio Street by 50-ANC**, \$180, a closed, over-ear pair.



LEARN

Online subscribers can see our full Ratings of regular and noise-canceling headphones at ConsumerReports.org



A2 Scosche SportClip 3



C3 JBL by Harman J46BT



A3 Bose FreeStyle

Ratings: Great Sound for \$200 or Less

Scores in context: Of the more than 150 models we tested, the highest scored 91; the lowest, 6. This chart shows recommended models that cost \$200 or less; CR Best Buys combine value and performance. Subscribers to ConsumerReports.org can see full Ratings online.

☒ CR Best Buy ☒ Recommended

● Excellent ● Very Good ○ Good ● Fair ● Poor

A. EAR INSERTS AND EARBUDS

Rec. Rank	Brand & Model	Price	Score	Test Results	Features
				Sound Quality	Type Design Has Built-In Mic/Controls
☒ 1	Westone ADV Alpha	\$150	80	●	Ear Insert Isolating ●
☒ 2	Scosche SportClip 3	\$30	76	●	Ear Insert Isolating ●
☒ 3	Bose FreeStyle	\$130	71	●	Earbud Non-Isolating ●
☒ 4	Marshall Mode EQ	\$100	71	●	Ear Insert Isolating ●
☒ 5	NAD Electronics VISO HP20	\$170	71	●	Ear Insert Isolating ●
☒ 6	Phiaton MS 100 BA	\$80	71	●	Ear Insert Isolating ●
☒ 7	Sennheiser Momentum In Ear	\$100	71	●	Ear Insert Isolating ●
☒ 8	Shure SE112	\$50	71	●	Ear Insert Isolating ●
☒ 9	Bowers & Wilkins C5 Series 2	\$180	66	●	Ear Insert Isolating ●
☒ 10	Denon Music Maniac AH-C50MA	\$50	66	●	Ear Insert Isolating ●
☒ 11	JBL by Harman J22i	\$60	66	●	Ear Insert Isolating ●
☒ 12	Optoma NuForce NE750M	\$100	66	●	Ear Insert Isolating ●
☒ 13	Panasonic RP-TCM125	\$20	66	●	Ear Insert Isolating ●
☒ 14	Razer Adaro In Ear	\$80	66	●	Ear Insert Isolating ●
☒ 15	Sennheiser CX 215	\$40	66	●	Ear Insert Isolating ●
☒ 16	Sennheiser CX 300-II Precision	\$60	66	●	Ear Insert Isolating ●

B. OVER EAR AND ON EAR

☒ 1	Grado Prestige SR225e	\$200	88	●	Over Ear Open Air
☒ 2	Grado Prestige SR80e	\$100	86	●	On Ear Open Air
☒ 3	Grado Prestige SR125e	\$150	80	●	On Ear Open Air
☒ 4	Grado Prestige SR60e	\$80	76	●	On Ear Open Air
☒ 5	Yamaha HPH-200	\$150	76	●	On Ear Open Air
☒ 6	Audio-Technica ATH-M50x	\$170	71	●	Over Ear Closed
☒ 7	Skullcandy Grind	\$60	66	●	On Ear Closed ●

C. WIRELESS EAR INSERTS

☒ 1	Beats by Dre Powerbeats 2	\$150	76	●	Ear Insert Non-Isolating ●
☒ 2	Jabra Sport Pulse Wireless	\$200	71	●	Ear Insert Isolating ●
☒ 3	JBL by Harman J46BT	\$80	71	●	Ear Insert Isolating ●

D. WIRELESS OVER EAR AND ON EAR

☒ 1	Pendulomic Stance S1+	\$200	71	●	Over Ear Closed ●
☒ 2	Polk Audio Hinge Wireless	\$200	66	●	On Ear Closed ●

Guide to the Features. An isolating design seals the ears, blocking out external noise to some degree. Most ear inserts, which plug into the ear, provide some isolation, as do many closed, over-ear headphones, which encase the ear. A built-in microphone and controls enable you to use headphones as a phone headset.



A MODEL EXAMPLE
Cows at Georgia's Fort Creek
Farm are raised on grass and
are not fed antibiotics.

How Safe Is Your Beef?

If you don't know how the ground beef you eat was raised, you may be putting yourself at higher risk of illness from dangerous bacteria. You okay with that?

The American love affair with ground beef endures. We put it between buns. Tuck it inside burritos. Stir it into chili. Even as U.S. red meat consumption has dropped overall in recent years, we still bought 4.6 billion pounds of beef in grocery and big-box stores over the past year. And more of the beef we buy today is

in the ground form—about 50 percent vs. 42 percent a decade ago. We like its convenience, and often its price.

The appetite persists despite solid evidence—including new test results here at Consumer Reports—that ground beef can make you seriously sick, particularly when it's cooked at rare or medium-rare temperatures under 160° F. "Up to 28 percent of

Americans eat ground beef that's raw or undercooked," says Hannah Gould, Ph.D., an epidemiologist at the Centers for Disease Control and Prevention (CDC).

All meat potentially contains bacteria that—if not destroyed by proper cooking—can cause food poisoning, but some meats are more risky than others. Beef, and especially ground

beef, has a combination of qualities that can make it particularly problematic—and the consequences of eating tainted beef can be severe.

Indeed, food poisoning outbreaks and recalls of bacteria-tainted ground beef are all too frequent. Just before the July 4 holiday this year, 13.5 tons of ground beef and steak destined for restaurants and other food-service operations were recalled on a single day because of possible contamination with a dangerous bacteria known as *E. coli* O157:H7. That particular bacterial strain can release a toxin that damages the lining of the intestine, often leading to abdominal cramps, bloody diarrhea, vomiting, and in some cases, life-threatening kidney damage. Though the contaminated meat was discovered by the meat-packing company's inspectors before any cases of food poisoning were reported, we haven't always been so lucky. Between 2003 and 2012, there were almost 80 outbreaks of *E. coli* O157 due to tainted beef, sickening 1,144 people, putting 316 in the hospital, and killing five. Ground beef was the source of the majority of those outbreaks. And incidences of food poisoning are vastly underreported. "For every case of *E. coli* O157 that we hear about, we estimate that another 26 cases actually occur," Gould says. She also reports that beef is the fourth most common cause of salmonella outbreaks—one of the most common foodborne illnesses in the U.S.—and for each reported illness caused by that bacteria, an estimated 29 other people are infected.

THE RISKS OF GOING RARE

It's not surprising to find bacteria on favorite foods such as chicken, turkey, and pork. But we usually choose to consume those meats well-cooked, which makes them safer to eat. Americans, however, often prefer their beef on the rare side. Undercooking steaks may increase your risk of food poisoning, but ground beef is more problematic. Bacteria can get on the meat during slaughter or processing. In whole cuts such as steak or roasts, the bacteria tend to stay on the surface, so

A Tale of Two Cows

All cattle begin their lives roaming pastures, grazing on grass. But once they are about a year old, their lives change dramatically depending on whether they are conventionally raised or 100 percent grass-fed cows.



CONVENTIONAL

GRASS-FED

WHERE THEY LIVE

For the first year or so, cattle are raised on pasture. Then they're moved to crowded feedlots, where each cow is confined to as little as 23 square feet. The space they occupy has no vegetation and can become muddy and covered in manure.



Cattle spend their entire lives grazing on grassland. The size of the herd is naturally limited by the acreage of the grassland. Thus, these animals are not subjected to the crowded, disease-promoting conditions of feedlots.



DIET



In the feedlot, corn and soy are the primary foods. But the cows may also be fed candy, chicken coop waste, and the slaughterhouse remains of pigs and chickens.

They may also be given plastic pellets, which are used as substitutes for the fiber they'd normally get from grazing on grass.

Cows eat grass and forage (such as legumes, cabbage, kale, and mustard plants) that grow in the pasture. Hay and silage (compacted grass) are used in winter or when forage is not top quality.



DRUGS



Antibiotics, hormones, and other drugs can be given to the cattle to promote growth and prevent disease.

Though grass-fed animals may be given antibiotics, their living conditions and diet generally make the need for them much less likely. Organic grass-fed cattle can't be given antibiotics or hormones, and the American Grassfed Association's labeling program prohibits those drugs, too.

SLAUGHTER

Large meat-processing plants slaughter as many as 400 head of cattle in an hour. Inhumane rapid processing may increase the chances of bacteria contaminating the meat.

Grass-fed farms generally take their animals to smaller regional plants, where slaughter practices may be more humane. Animal welfare certification labels verify humane practices.

when you cook them, the outside is likely to get hot enough to kill any bugs. But when beef is ground up, the bacteria get mixed throughout, contaminating all of the meat—including what's in the middle of your hamburger.

Also contributing to ground beef's bacteria level: The meat and fat trimmings often come from multiple animals, so meat from a single contaminated cow can end up in many packages of ground beef. Ground beef (like other ground meats) can also go through several grinding steps at processing plants and in stores, providing more opportunities for cross-contamination to occur. And then there's the way home cooks handle raw ground beef: kneading it with bare hands to form burger patties or a meatloaf. Unless you're scrupulous about washing your hands thoroughly afterward, bacteria can remain and contaminate everything you touch—from the surfaces in your kitchen to other foods you are preparing.

"There's no way to tell by looking at a package of meat or smelling it whether it has harmful bacteria or not," says Urvashi Rangan, Ph.D., executive director of the

Center for Food Safety and Sustainability at Consumer Reports. "You have to be on guard every time." That means keeping any raw meat on your countertop from touching other foods nearby and cooking ground beef to at least medium, which is 160° F. Eating a burger that's rarer can be risky. In one 2014 *E. coli* outbreak, five of the 12 people who got sick had eaten a burger at one of the locations of an Ohio pub chain called Bar 145°, which was named for the temperature "of a perfectly cooked medium-rare burger," according to the company's website.

PUTTING BEEF TO THE TEST

Given those concerns about the safety of ground beef, Consumer Reports decided to test for the prevalence and types of bacteria in ground beef. We purchased 300 packages—a total of 458 pounds (the equivalent of 1,832 quarter-pounders)—from 103 grocery, big-box, and natural food stores in 26 cities across the country. We bought all types of ground beef: conventional—the most common type of beef sold, in which cattle are typically fattened up with grain and soy in feedlots and fed

antibiotics and other drugs to promote growth and prevent disease—as well as beef that was raised in more sustainable ways, which have important implications for food safety and animal welfare. At a minimum, sustainably produced beef was raised without antibiotics. Even better are organic and grass-fed methods. Organic cattle are not given antibiotics or other drugs, and they are fed organic feed. Grass-fed cattle usually don't get antibiotics, and they spend their lives on pasture, not feedlots.

We analyzed the samples for five common types of bacteria found on beef—*Clostridium perfringens*, *E. coli* (including O157 and six other toxin-producing strains), enterococcus, salmonella, and staphylococcus aureus.

The routine use of antibiotics in farming has contributed to the rise of antibiotic-resistant bacteria, so once-easy-to-treat infections are becoming more serious and even deadly. We put the bacteria we found through an additional round of testing to see whether they were resistant to antibiotics in the same classes that are commonly used to

Labels to Look For

BASIC

No Antibiotics

Producers must provide the Department of Agriculture with paperwork showing that no antibiotics were used during the animal's life, but independent verification of those claims is not required. Beef with these labels can be fed grain, and there are no standards for humane treatment of the animals. Reliable terms are "no antibiotics administered" and "raised without antibiotics." If the package also says "USDA Processed Verified," a no antibiotics claim is more trustworthy. But beware of labels such as "no antibiotics used for growth promotion," which can still mean that antibiotics were used.

GOOD

Grass-Fed

The USDA requires that beef labeled "grass-fed" or "100 percent grass-fed" come from animals that have never been given grain and have access to pasture during the grazing season. Though the producer must provide written documentation and a signed affidavit, there is no required independent verification of the label. USDA grass-fed standards allow for antibiotic use, so look for grass-fed beef that also carries a no antibiotic claim. USDA Never Ever 3 seal is ideal because it guarantees that there are no antibiotics as well as no growth promotants (such as hormones) and no animal byproducts in the feed.

BETTER

Organic

Cattle are fed organic feed (no pesticides, synthetic fertilizer, or genetically engineered ingredients). They are not given antibiotics, hormones, or other drugs. Animals must be given access to pasture for most of their lives, but feedlots and grain feeding during their last few months are allowed.

American Grassfed Association

The animals are never given grain and have continuous access to pasture or a grass-based forage when the weather does not allow for pasture access. Antibiotics and growth hormones are prohibited. The Association verifies those practices. Pesticides and herbicides are allowed on the pastures the animals feed on, and they can also be fed genetically engineered alfalfa.

BEST

Grass-Fed Organic

With this combination of labels, you get meat from cattle that have not been fed grain and eat only organically grown grass and forage. Antibiotics, hormones, and other drugs are prohibited. If the package also has the Animal Welfare Approved seal, the Certified Humane seal, or the Global Animal Partnership (GAP) 5 or 5+ seal, animal welfare standards also apply.

treat infections in people. Last, we compared the results of samples from conventionally raised beef with the sustainably raised beef to see whether there were differences in the presence of antibiotic-resistant bacteria between the products.

The results were sobering. All 458 pounds of beef we examined contained bacteria that signified fecal contamination (enterococcus and/or non-toxin-producing *E. coli*), which can cause blood or urinary tract infections. Almost 20 percent contained *C. perfringens*, a bacteria that causes almost 1 million cases

of food poisoning annually. Ten percent of the samples had a strain of *S. aureus* bacteria that can produce a toxin that can make you sick. That toxin can't be destroyed—even with proper cooking.

Just 1 percent of our samples contained salmonella. That may not sound worrisome, but, says Rangan, “extrapolate that to the billions of pounds of ground beef we eat every year, and that’s a lot of burgers with the potential to make you sick.” Indeed, salmonella causes an estimated 1.2 million illnesses and 450 deaths in the U.S. each year.

One of the most significant findings of our research is that beef from conventionally raised cows was more likely to have bacteria overall, as well as bacteria that are resistant to antibiotics, than beef from sustainably raised cows. We found a type of antibiotic-resistant *S. aureus* bacteria called MRSA (methicillin-resistant staphylococcus aureus), which kills about 11,000 people in the U.S. every year, on three conventional samples (and none on sustainable samples). And 18 percent of conventional beef samples were contaminated with

FOODS THAT MAKE US SICK

Food poisoning strikes an estimated 48 million people in the U.S. each year. Beef is a top cause of outbreaks, causing more of them than chicken or pork.

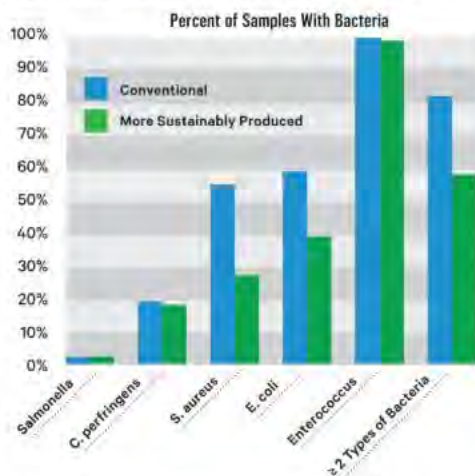


Fish	17%
Dairy	11%
Other	11%
Beef (all types)	9%
Mollusks	9%
Chicken	8%
Vegetable Row Crops	7%
Pork	7%
Fruits	7%
Turkey	4%
Grains-Beans	4%
Seeded Vegetables	3%
Eggs	3%

Source: Centers for Disease Control and Prevention.

HOW MUCH BACTERIA IS IN BEEF?

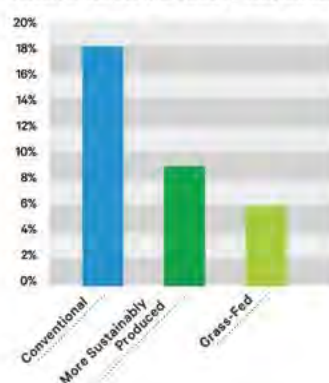
We tested 300 samples of conventional (181 samples) and more sustainably produced (119 samples) of raw ground beef purchased at supermarkets, big-box, and “natural” food stores in 26 metropolitan areas across the country. We classified beef as being more sustainably produced if it had one or more of the following characteristics: no antibiotics, organic, or grass-fed. Here are the percentages of samples in each type that contained each of the five bacteria we tested for and the samples that contained two or more types of bacteria.



WHERE SUPERBUGS LURK

Superbugs are bacteria that are resistant to three or more classes of antibiotics, making infections caused by them difficult if not impossible to treat. In our tests of 300 samples of raw ground beef, we found that conventional beef was twice as likely to be contaminated with superbugs than was all types of sustainably produced beef. But the biggest difference we found was between conventional and grass-fed beef. Just 6 percent of those samples contained superbugs.

Percent of Samples With Multidrug-Resistant Bacteria



superbugs—the dangerous bacteria that are resistant to three or more classes of antibiotics—compared with just 9 percent of beef from samples that were sustainably produced. “We know that sustainable methods are better for the environment and more humane to animals. But our tests also show that these methods can produce ground beef

that poses fewer public health risks,” Rangan says.

COWS: THEY ARE WHAT THEY EAT

The majority of beef (about 97 percent) for sale comes from “conventionally raised” cattle that begin their lives grazing in grassy pastures but are then shipped to and packed into feedlots

and fed mostly corn and soybeans for three months to almost a year. The animals may also be given antibiotics and hormones. That practice is considered to be the most cost-efficient way to fatten up cattle: It takes less time, labor, and land for conventionally raised cattle to reach their slaughter weight compared with those that feed on grass their whole lives. “The high-carbohydrate corn and soy diet causes cattle to become unnaturally obese creatures that would never exist in nature,” says farmer Will Harris, who decided 20 years ago to switch to raising grass-fed cattle at White Oak Pastures, his 2,500-acre fifth-generation family farm in Bluffton, Ga. “Conventional cattle reach 1,200-plus pounds in 16 to 18 months. On our farm, it takes 20 to 22 months to raise an 1,100-pound animal, which is what we consider slaughter weight.”

Cows’ digestive systems aren’t designed to easily process high-starch foods such as corn and soy. Cattle will gain weight faster on a grain-based diet than on a grass-based one. But it also creates an acidic environment in the cows’ digestive tract, which can lead to ulcers and

Join Consumer Reports’ Fight for Better Beef

Improvements in the way beef is labeled, processed, and inspected can go a long way to making beef safer. Consumer Reports believes the government should do the following:

1 Beef up inspection practices.

By law, meat slaughter and processing plants are subject to continuous inspection by the government. But due to staff cuts, one inspector may shuttle between a dozen or more plants. The Department of Agriculture should ensure that every plant has a dedicated inspector. In addition, the USDA conducts periodic random sampling for toxin-producing *E. coli* and salmonella, but the plants are given notice at least a day in advance for those inspections. That practice should stop because it gives the plant a chance to make changes that improve their test results temporarily.

2 Protect the public from salmonella.

E. coli O157 and other toxin-producing strains of the bacteria are considered adulterants, which means it is illegal to sell raw ground beef that tests positive for them. Salmonella is different—beef passes inspection if up to 7.5 percent of the samples tested are contaminated with the bad bug. The USDA should ban the sale of beef with disease-causing, antibiotic-resistant salmonella.

3 Prohibit chicken waste in cattle feed.

Cattle in feedlots are sometimes fed waste from the floors of chicken coops, which consists of spilled chicken feed and manure. Because chicken can be fed cattle waste, there’s a risk that spilled feed could transmit mad cow disease when it’s fed back to the cattle. And chicken manure can carry salmonella and other bacteria. The advocacy arm of Consumer Reports, together with other organizations, asked the Food and Drug Administration to stop that practice in 2009, but the agency has not taken action.

4 Crack down on the “natural” label.

In June 2014, we filed a petition with the USDA and the FDA to ban use of the natural label on meat because it is misleading. According to a 2014 Consumer Reports national survey, 60 percent of consumers believe meat labeled “natural” was raised without antibiotics and that the animal wasn’t given artificial ingredients in its food; 68 percent think it means no artificial growth hormones. None of that is true. The word “natural” can be used on packages of beef from cattle that were raised

on a feedlot, fed genetically modified grain or grain grown with pesticides, or given antibiotics or hormones.

5 Expand humane treatment to the requirements for “organic” labels.

In our survey, more than half of consumers think “organic” means that animals go outdoors and have plenty of indoor space, too. Although these cattle must have access to pastures for most of their lives, they can still be sent to feedlots before slaughter.

6 Ban antibiotic use for disease prevention.

This practice leads to antibiotic resistance and makes the drugs less effective for treating infections in people. Sick animals should get antibiotics, but producers should improve living and sanitary conditions to prevent illness.



ACT

Want to stop antibiotic use in healthy animals? There’s a bill in Congress to do just that. We’ll help you contact your member of Congress at ConsumersUnion.org/MeatWithoutDrugs



WHAT’S BETWEEN YOUR BUN?
For optimal safety, choose sustainable beef and cook it well.

infection. Research shows that this unnatural diet may also cause the cattle to shed more *E. coli* in their manure. In addition, cattle may be fed a variety of other substances to fatten them up. They include candy (such as gummy bears, lemon drops, and chocolate) to boost their sugar intake and plastic pellets to substitute for the fiber they would otherwise get from grass. Cattle feed can also contain parts of slaughtered hogs and chickens that are not used in food production, and dried manure and litter from chicken barns.

Conventional cattle farmers defend their methods, however. “If all cattle were grass-fed, we’d have less beef, and it would be less affordable,” says Mike Apley, Ph.D., a veterinarian, professor at Kansas State University College of Veterinary Medicine, and chair of the Antibiotic Resistance Working Group at the National Cattlemen’s Beef Association, a trade group. “Since grass doesn’t grow on pasture year-round in many parts of the country,” he says, “feedlots evolved to make the most efficient use of land, water, fuel, labor, and feed.”

LIFE ON THE FEEDLOT

Farmers such as Will Harris are also concerned about the humaneness of crowding cows into feedlots. “Animals that have never been off grass are put into a two-story truck and transported for 20-plus hours with no food, water, or rest,” Harris says. The animals are crowded into pens; the average feedlot in the U.S. houses about 4,300 head of cattle, according to Food & Water Watch’s 2015 Factory Farm Nation Report. On some of the country’s biggest feedlots, the cattle population averages 18,000.

“You always know when you’re approaching a feedlot. The unmistakable stench hits you first, then you see the hovering fecal dust cloud, followed by the sight of thousands of cattle packed into pens standing in their own waste

as far as you can see,” says Don Davis, a cattle farmer in Texas and president of the Grassfed Livestock Alliance. The manure contains potentially dangerous bacteria that gets on the cattle’s hides and can be transferred to the meat during slaughter. The conditions also stress the cattle, which makes them more susceptible to disease, and any illness that develops can quickly spread from animal to animal.

To control for that, cattle are often fed daily low doses of antibiotics to prevent disease. According to Apley, cattle in feedlots are given antibiotics to prevent coccidiosis, a common intestinal infection, but he notes that those drugs aren’t medically important for people. He also said that cattle are given an antibiotic called tylosin to ward off liver abscesses.

Should You Have the Steak Instead?

Steaks and roasts are less likely to make you sick than ground beef is because the bacteria that might be present on the surface of the meat is more easily killed during cooking. That’s why you can safely serve those cuts medium-rare—145° F. Just be sure to flip the steak twice during cooking to make sure that the heat is evenly distributed. The exception is beef that’s been mechanically tenderized, a process in which a machine punctures the meat with blades

or needles to break down the muscle fibers. That can drive bacteria into the center of the meat. A 2013 Canadian study concluded that the risk of illness from eating mechanically tenderized beef is about five times that of intact cuts of beef. Some retailers label the mechanically tenderized beef they sell, and starting in May 2016, U.S. meat producers will be required to do so. Until then, unless you’re sure that your steak has not been tenderized, cook it to 160° F.



GETTY IMAGES

Protein Portion Control

Ground beef is a great source of protein, but eating too much red meat can increase your risk of heart disease, colon cancer, and type 2 diabetes. Grass-fed beef can be leaner and slightly lower in artery-clogging saturated fat and slightly higher in healthy polyunsaturated fats than grain-fed beef is. But even so, you want to keep your portions small (about 3 to 4 ounces) and swap out beef at least a few times per week with other protein sources. Check out the protein substitutes below, which are lower in total fat and saturated fat. You also might want to consider going meatless one day per week to help lower your disease risk (and save money—beef is generally more expensive than many alternative sources of protein).

	Grass-Fed Burger	Tofu	Shrimp	Chicken Breast
Protein	22 grams	18 grams	15 grams	26 grams
Total Fat	14 grams	10 grams	1 gram	3 grams
Saturated Fat	6 grams	1 gram	0 grams	1 gram

Nutrition information is based on 4 ounces, raw.

That drug is in a class of antibiotics that the World Health Organization categorizes as “critically important” for human medicine. What’s more, in our tests we found that resistance to classes of antibiotics used to treat people was widespread. Three-quarters of the samples contained bacteria that were immune to at least one class of those drugs.

Antibiotics were also given to cattle to promote weight gain (although just how the drugs do that is unknown), but in 2013 the Food and Drug Administration issued voluntary guidelines to stop that practice. Previously, ranchers could buy those drugs over-the-counter and give them to their animals, but the FDA has proposed that antibiotics be used only under the supervision of a veterinarian. “That doesn’t mean, though, that antibiotics can’t be used for disease prevention anymore,” says Jean Halloran, director of Food Policy Initiatives at Consumer Reports. “Vets can still authorize their use to ‘ensure animal health,’ so the status quo of feeding healthy animals antibiotics every day can continue.” Widespread daily and unnecessary use



COW CARE When you see Animal Welfare Approved and Certified Humane labels on beef packages, you can trust that the animals were treated well.

of antibiotics in healthy animals in turn fuels the spread of antibiotic-resistant bacteria, which has become a serious public-health threat.

MEAT MONOPOLY

More than 80 percent of beef produced in the U.S. is processed by four companies. Cattle can be slaughtered at high-speed

rates—as many as 400 head per hour. Those slaughterhouses use a variety of methods to destroy bacteria on the carcass after the hide has been removed, such as hot water, chlorine-based, or lactic acid washes. But when so many cattle are being processed, sanitary practices may get short shrift. The result is that bacteria from cattle’s hides or digestive tracts can

WHY GRASS-FED COSTS MORE

When we purchased our test samples of ground beef, we paid an average of about \$2.50 more for grass-fed beef and \$3 more for grass-fed organic beef per pound than we did for conventional supermarket beef. (See below for the average prices we paid for each type of beef in our tests.) According to those figures, if you bought 2 pounds of ground beef each week, it would cost you an additional \$260 to \$310 per year to switch to grass-fed. The reason grass-fed beef is pricier has to do with beef producers’ profit margin: It can take a farmer up to a year longer (and an extra year’s worth of food, care, and labor) to get a grass-fed animal to reach slaughter weight than for a conventionally raised one. Grass-fed cattle also tend to be smaller at slaughter, so there’s less meat to sell per head. “Using antibiotics, hormones, and feedlots produces obscenely cheap beef,” says grass-fed rancher Will Harris. “When you don’t use them, your production costs are higher, so your prices need to be higher, too.” So

when you shop and spend, consider the benefits of supporting sustainable methods in place of conventional ones.

Conventional	\$4.95 per lb.
Without Antibiotics	\$6.55 per lb.
Organic	\$5.62 per lb.
Grass-Fed	\$7.38 per lb.
Grass-Fed Organic	\$7.83 per lb.

What’s in a Name?

GROUND BEEF. This can come from meat and fat trimmings from multiple animals, as well as other beef components, such as esophagus, diaphragm, or cheek of the animal. The maximum amount of fat by weight it can contain is 30 percent.

HAMBURGER. This is made from meat trimmings and other beef components. It can’t exceed 30 percent fat, but unlike ground beef, pure beef fat can be added to reach the desired level of fat content.

PURE BEEF PATTIES. Also called 100 percent beef patties, these are similar to ground beef but can contain partially defatted chopped beef. Regular “beef patties” can also contain defatted beef, and organ meats, water, binders, fillers, and extenders. Those latter ingredients must be listed on the label.

GROUND CHUCK. When you see a cut of beef denoted on the label—such as chuck, round, or sirloin—the meat and meat trimmings come from that part of the animal. No beef components can be added. However, it can still contain meat from multiple animals.

80/20. This refers to the percent of lean meat and fat by weight in the ground beef. Common lean-to-fat percentages are 70/30, 80/20, and 90/10. That doesn’t tell you the percent of calories from fat in the beef, however. For example, 51 percent of the calories in 90/10 beef come from fat.

LEAN/EXTRA LEAN. “Lean” must have less than 10 grams of total fat and less than 4.5 grams of saturated fat per 3.5-ounce serving. “Extra Lean” meat must contain less than 5 grams of total fat and less than 2 grams of saturated fat.

IN THIS SPECIAL SECTION

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✓ **CR Best Buy** Products with this icon offer the best combination of performance and price. All are recommended.

✓ **Recommended** Models with this designation perform well and stand out for reasons we note.

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 (*). Check marks identify CR Best Buys or recommended products in the U.S. Ratings. "NA" in a chart means that information wasn't available from the manufacturer. We include, in the Contact Info list on page 32D, the manufacturer's phone number and Web address in Canada so that you can call or go online to get information on a model you can't find in the stores. (Many products that aren't available in Canadian stores can be bought online.)

We appreciate your support, but we don't take it for granted. Please write to CanadaExtra@cu.consumer.org and tell us what you think. We can't reply to every e-mail message or implement every suggestion, but with your help we'll try to keep growing to serve your needs.

Generators

Seven of the top-scoring generators are available. **Report and Ratings, pages 16-19**

A. PORTABLE

Rec.	Rank	BRAND & MODEL	PRICE	SPECIFICATIONS			SCORE
				Claimed Output (watts)	Weight With Fuel (lb.)	Run Time (hr.) ⁽¹⁾	
✓	1	Honda EU7000isC ⁽²⁾	\$5,000	5,500	292	8-16	79
✓	6	Honda EM6500XKC	\$3,300	5,500	273	8-13	70
✓	8	Briggs & Stratton 30470	\$1,000	7,000	270	8-12	69
✓	11	Honda EU6500iS1C ⁽²⁾	\$4,600	5,500	286	5-11	69

B. SMALL STATIONARY

✓	2	Generac 6237	\$2,250	7,000 ⁽⁶⁾	NA	336 ⁽⁷⁾	91
✓	3	Generac CorePower 5837	\$1,900	6,000 ⁽⁶⁾	NA	296 ⁽⁷⁾	77

C. LARGE STATIONARY

✓	2	Kohler 14RESA	\$3,500	12,000 ⁽⁶⁾	NA	182 ⁽⁷⁾	93
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⁽¹⁾ The average we measured over various loads. ⁽²⁾ Inverter model. ⁽⁶⁾ Claimed output is with natural gas; output with propane is 1,000 to 2,000 watts higher (as tested). ⁽⁷⁾ With 250-gallon liquid-propane tank; runs indefinitely with natural gas. NA=not applicable; stationary unit.

Lightbulbs

Eight of the top-scoring lightbulbs are available. **Report and Ratings, pages 45-48**

		BRAND & MODEL	PRICE	SCORE
Recommended	Rank			

A. GENERAL-PURPOSE 60-WATT EQUIVALENT BULBS

☒	3	Samsung A19 60-Watt Warm White	\$18	92
☒	4	Felt Electric A19/OM/800/LED 60-Watt Warm White	\$19	91
☒	5	Philips A19 11W 60W Soft White 424382	\$15	88
☒	9	Great Value 60W Soft White A19 LED Dimmable (Walmart)	\$12	86

D. FLOOD/REFLECTOR 65- TO 90-WATT EQUIVALENT BULBS

☒	2	Great Value 65W BR30 Soft White LED Dimmable (Walmart)	\$18	94
☒	6	Felt Electric BR30 Dimmable LED	\$20	91

E. FLOOD/REFLECTOR 90- TO 120-WATT PAR38 EQUIVALENT BULBS

☒	1	MaxLite 20Watt PAR38 100W	NA	95
☒	2	Great Value 90W PAR38 LED Soft White Non Dimmable (Walmart)	\$27	95

Canada Extra on the Web

Canada Extra information can be found on ConsumerReports.org, our website, along with the current issue of the magazine and more. The address is ConsumerReports.org. Once there, click on the "Canada Extra" link on the opening screen. There you can see which reports have Canadian information available.

The screenshot shows the ConsumerReports.org website. At the top, there are navigation links for "Sign In", "Subscribe", "Help/About Us", "Consumer Reports", and "Find Ratings". Below this is a search bar and a "Find Ratings" button. The main navigation bar includes categories: "Cars", "Appliances", "Electronics", "Home & Garden", "Babies & Kids", "Money", "Shopping", and "Health". The "Canada Extra" section is highlighted. It features a "Products & Services" list on the left, including Appliances (Blenders, Coffee makers, Dishwashers, Cooktops & wall ovens, Dishwashers, Freezers, Humidifiers, Kitchen ranges, Microwave ovens, Toasters, Range hoods, Refrigerators, Sewing machines, Skincare, Thermomix, Toaster, Dishwashers, Washing machines). In the center, there is a "Canada Consumer Resources" section with a link to "Find Ratings" and a "Canada Extra" link. On the right, there is a "Support" section with a "DONATE TODAY" button. The bottom of the page features a "ShopSmart" banner.

Recalls

2004-2010 General Motors models

Drivers may experience a loss of power steering while driving. If that occurs, a message will be displayed on the dashboard and a chime will inform the driver. If the power steering is lost, the driver will still be able to steer the vehicle, but it will require more of an effort to do so. That may increase the risk of an accident or injury.

Models 145,700 2004-2006 Chevrolet Malibu Maxx, 2004-2007 Saturn Ion, 2004-2009 Chevrolet Malibu, 2005-2009 Pontiac G6, 2008-2009 Saturn Aura, 2009-2010 Chevrolet HHR, and 2010 Chevrolet Cobalt vehicles.

What to do Have the dealer make repairs, as necessary. This recall supersedes earlier recalls. Vehicles that have already been repaired under the previous campaigns do not require reinspection.

2010-2012 Mazda6

Models equipped with the 2.5L engine are prone to attract a type of spider that could weave a web in the evaporative canister vent line. That may cause a restriction in the line and may affect the fuel tank. The stress upon the fuel tank could result in a crack, which could cause a fuel leak and result in a fire.

Models 5,466 vehicles.

What to do Have the dealer inspect the canister vent line. If a web is found, the fuel tank and check valve on the canister line will be replaced. The Powertrain Control Module (PCM) will be reprogrammed with modified software that has a function to avoid excessive negative pressure on the fuel tank.

2012 Chevrolet Sonic

The windshield washer hose may separate from the washer fluid reservoir. That may affect the flow of washer fluid, which might decrease the driver's visibility.

Models 7,161 vehicles.

What to do Have the dealer secure the windshield washer hose.

2012-2013 Chrysler models

The traction isolation valve for the antilock braking system (ABS) may not be of the proper specification. As a result, that may affect the feel of the brake pedal and may increase the risk of injury or accident.

Models 889 2012-2013 Dodge Durango and 2012-2013 Jeep Grand Cherokee vehicles.

What to do Have the dealer reprogram the ABS module.

2014 Honda Odyssey

During the assembly, the front-passenger side airbag connector may have been damaged. That may affect the airbag warning lamp and may deactivate the bag. During a crash, the failure of the airbag to deploy may increase the risk of injury.

Models 1,501 vehicles.

What to do Have the dealer inspect the connector and make repairs, as necessary.

Autos

All of the tested vehicles are available in Canada. Listed by overall score. **Report and Ratings, pages 56-60**

MAKE & MODEL	PRICE RANGE	ACCELERATION (SEC.)				FUEL ECONOMY (LITERS PER 100 KM)		
		0-50 KM/H	0-100 KM/H	80-100 KM/H	500 METERS	CITY DRIVING	HIGHWAY DRIVING	OVERALL
SUBCOMPACT SUVs								
Honda HR-V	\$20,690–\$29,990	4.5	11.1	4.7	20.8	11.6	6.1	8.2
Jeep Renegade	\$19,995–\$31,995	4.0	10.4	4.8	20.3	14.6	7.3	10.0
Chevrolet Trax	\$19,130–\$30,600	4.1	11.4	4.7	20.9	13.4	6.9	9.3

Contact Info

How to reach manufacturers in Canada.

Briggs & Stratton

800-444-7774
briggsandstratton.com

Felt Electric

800-543-3348
feltelectric.com

Generac

888-436-3722
generac.ca

Great Value

Contact local Walmart
walmart.ca

Honda

888-946-6329
honda.ca

Kohler

800-456-4537
ca.kohler.com

MaxLite

800-555-5629
maxlite.com

Philips

800-668-9008
philipslighting.ca

Samsung

905-542-3535
samsung.ca



be transferred to the meat. “USDA has a presence in these plants to do inspections—though it’s against the companies’ wishes,” says Patty Lovera, assistant director of Food & Water Watch. “The economic power of the Big Four gives them a lot of political weight to push back against USDA inspectors’ efforts to enforce existing rules and to fight against any tighter safety standards being enacted.” And, she adds, “the sheer volume of beef that big-company plants crank out means that a quality control mistake at a single plant can lead to packages of contaminated beef ending up in stores and restaurants across 20 or 30 states.”

THE BETTER BURGER STARTS HERE

Cattle can have a healthier (and more humane) upbringing if they graze in pastures for most—if not all—of their lives. “The most sustainable beef-production systems don’t rely on any daily drugs, don’t confine animals, and do allow them to eat a natural diet,” Rangan says. And what’s good for cows is good for people, too. “Our findings show that more sustainable can mean safer meat.” That’s why Consumer Reports recommends that you buy sustainably raised beef whenever possible. Sustainable methods run the gamut from the very basic ‘raised without antibiotics’ to the most sustainable, which is grass-fed organic.

(See “Labels to Look For,” on page 28.) “We suggest that you choose what’s labeled ‘grass-fed organic beef’ whenever you can,” Rangan says. Aside from the animal welfare and environmental benefits, grass-fed cattle also need fewer antibiotics or other drugs to treat disease, and organic standards and many verified grass-fed label programs prohibit antibiotics. Sustainably raised beef does cost more (see “Why Grass-Fed Costs More,” on the facing page), but it’s the safest—and most humane—way for Americans to enjoy our beloved burgers ... cooked to medium, of course.

Funding for this project was provided by The Pew Charitable Trusts. Any views expressed are those of Consumer Reports and its advocacy arm, Consumers Union, and do not necessarily reflect the views of The Pew Charitable Trusts.



WATCH

Our professional tasters and nutrition experts took a close look at meat alternatives designed to taste like beef. See how they put them to the test and watch our video at

[ConsumerReports.org/cro/beefsafety](https://www.ConsumerReports.org/cro/beefsafety)

How to Handle Beef: From Store to Table

Until we have more robust regulations in place, the undue burden falls on consumers to treat raw beef (or any meat) carefully. That means you have to always assume it’s contaminated with bacteria and take appropriate precautions. The best practices include:

Pick it up last at the supermarket. You want it to stay cold as long as possible, so visit the meat case last. Bag it separately from other foods, and put it in a chilled cooler or on ice if you’re traveling more than a short distance home.

Keep it cold at home, too. Bacteria multiply rapidly in what federal health officials call the “Danger Zone”: temperatures between 40° F and 140° F. Use an appliance thermometer to make sure that your refrigerator stays no warmer than 37° F. If you don’t use ground beef within two days, freeze it. Defrost frozen meat in the refrigerator—not out on the counter.

Don’t allow it to touch other foods. Use separate plates and utensils for raw and cooked meats. Always wash your hands with soap and water after handling raw meat, as well as thoroughly sanitize sinks or any other surfaces that came in contact with the meat. Plastic cutting boards should be washed in the dishwasher.

Turn up the heat. The safest temperature for ground beef is 160° F. You can’t tell by the meat’s color whether it has reached that temperature, so use a meat thermometer. If you’re reheating leftover burgers or a casserole with ground beef, get it to 165° F.

Take “rare” out of your vocabulary. Rare is risky, and even medium-rare is, especially for kids, who are more susceptible to food poisoning. Medium may be too inexact when ordering out. To be safe, specify that you want 160° F when ordering a burger. In one study of 385 restaurants in eight states, just 12 percent always used a thermometer to measure burgers’ cooked temperatures. And 12 percent of all burgers were served at an unsafe temperature.

Be very careful if you grind it yourself. It might sound like a safer bet than buying prepackaged meat, but any pathogens on whole cuts would be spread throughout the batch of meat you grind at home. Bacteria also can linger in the equipment you use, increasing the odds of cross-contamination in your kitchen. So wash in hot soapy water or, preferably, in the dishwasher.

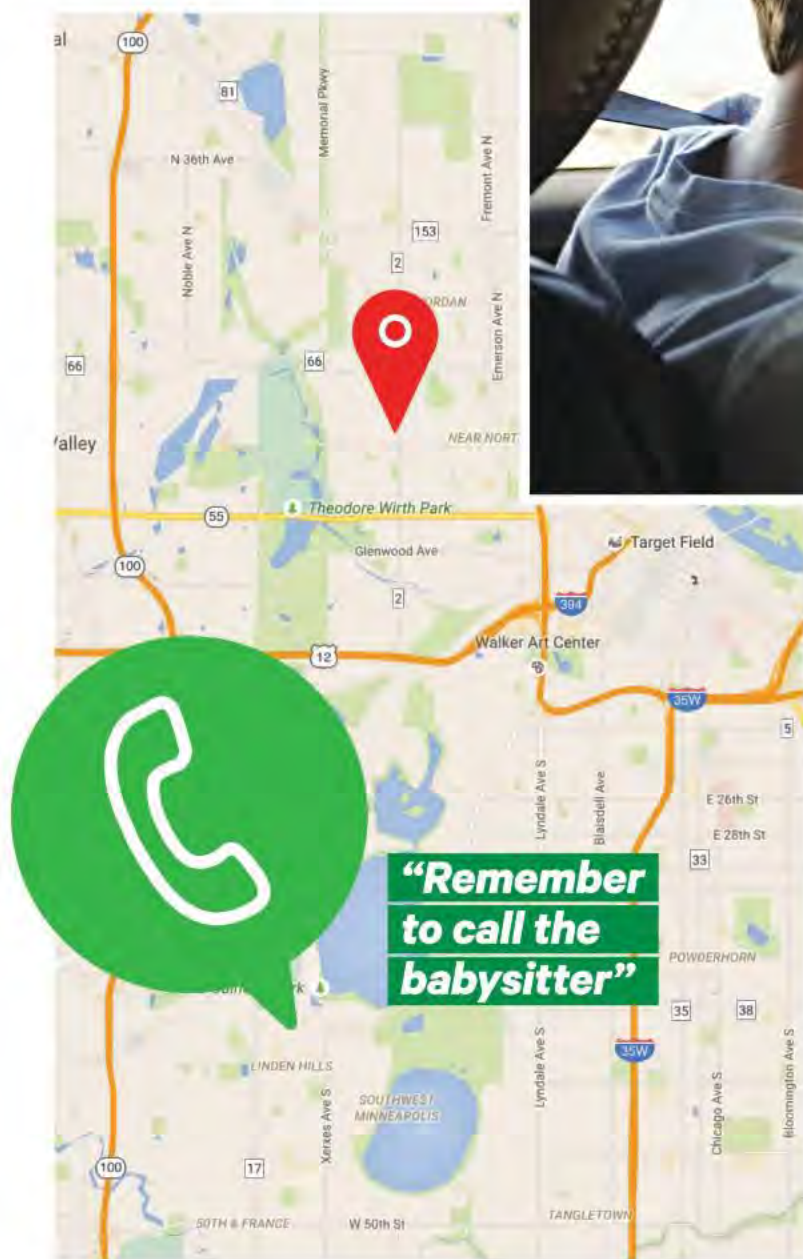
Hidden Helpers in Your Phone

Smartphone functionality has zoomed way beyond driving directions. Now it can help you easily manage a ton of chores.

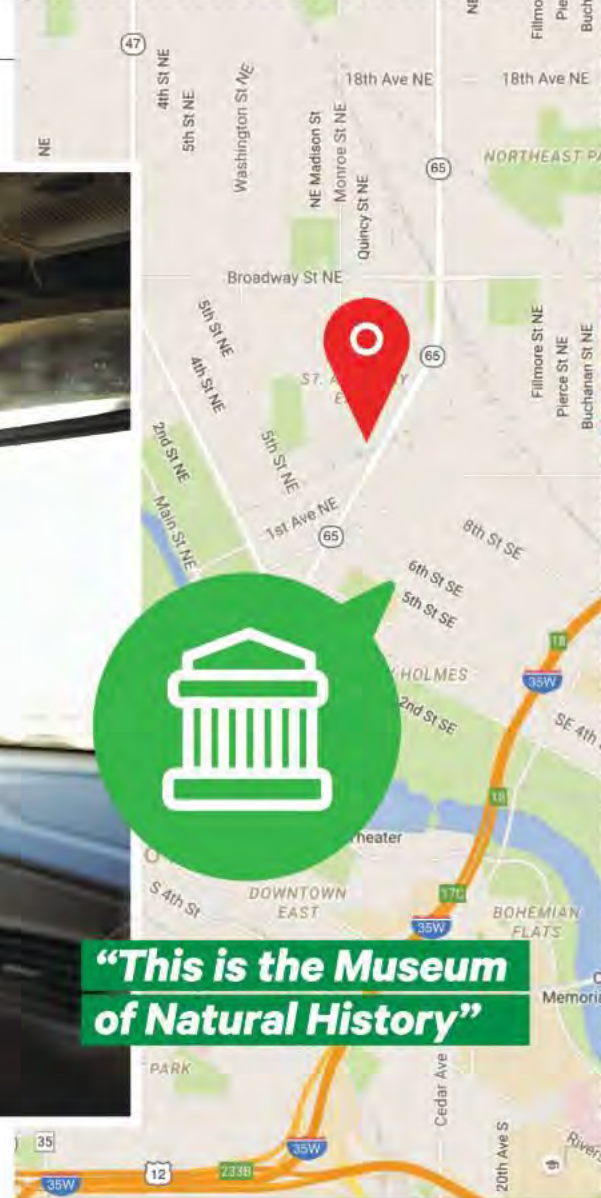
Smartphones have transformed the way we navigate our world. They combine built-in GPS with a cellular data connection so that they know precisely where we are and can instantly download maps, driving (or walking) directions, and traffic information from the Internet.

But your phone can do much more than simply guide you from point A to point B. Google's Android and Apple's iOS can use your location and information from your calendar, to-do list, and other sources to warn you to leave early for an appointment if the traffic looks bad, or remind you to pick up a prescription as you pass a drugstore. They can even organize photos based on where you shot them. It's like having an executive assistant, concierge, and psychic in your pocket.

Navigation apps that run on smartphones, such as Google Maps and Waze, put many in-dash units from car manufacturers to shame with their impressive voice control and real-time info on accidents, public transportation, and speed traps. Many carmakers are surrendering part of their in-car interfaces in new vehicles to ones designed by Apple and Google. Those systems can access the Internet and your contacts, making them much smarter than traditional built-in navigation systems. Drivers of older cars routinely mount a phone onto the dash for similar reasons. Read on to learn about how the road ahead is changing.



MAPS ARE SIMULATED.



8 Ways to Keep Your Life on Track

These great tools are right at your fingertips. Learn how to use them with ease.

GOOGLE NOW

Android, iPhone

What It Is Google Now works in the background, tracking your travels (even when you're not using Maps), your calendar appointments, Google searches, and other sources.

Getting It It's installed on most Android phones, but you have to activate it. Got an iPhone? Download the Google app.

What it can do for you:

1. Keep you on time. If there's an accident on the route to your dental appointment, for example, Google Now will warn you to leave early and give you directions for faster routes. You can also get updates for flights, including terminal and gate numbers, and info on delays.
2. Suggest destinations. New in town? Google Now will call your attention to museums, restaurants, and other attractions nearby.
3. Remind you to do errands. Google Now can prompt you to buy milk once you're at the supermarket—or just driving by—or to defrost a steak once you get home.

REMINDERS

iPhone

What It Is The iPhone Reminders app allows you to schedule tasks that are triggered by location or by time.

Getting It Open the app to create an event, then click the info button at right to set a time or location. Android users can use Google Now instead.

What it can do for you:

1. Remember your errands. Reminders can alert you to pick up the pinot noir as you pass a liquor store. Use a finger swipe to set how close you need to be to the target address to trigger the alert.
2. Provide an alert when you arrive at or leave a location. Sitting down for lunch on a business trip and want to make sure to call the office before you get back on the road? You can set a Reminders alert for that.
3. Create repeating or one-time reminders. A repeating reminder could be to call the baby sitter when you get to work. A one-time reminder could be that it's cardio day at the gym.

PHOTO TAGGING

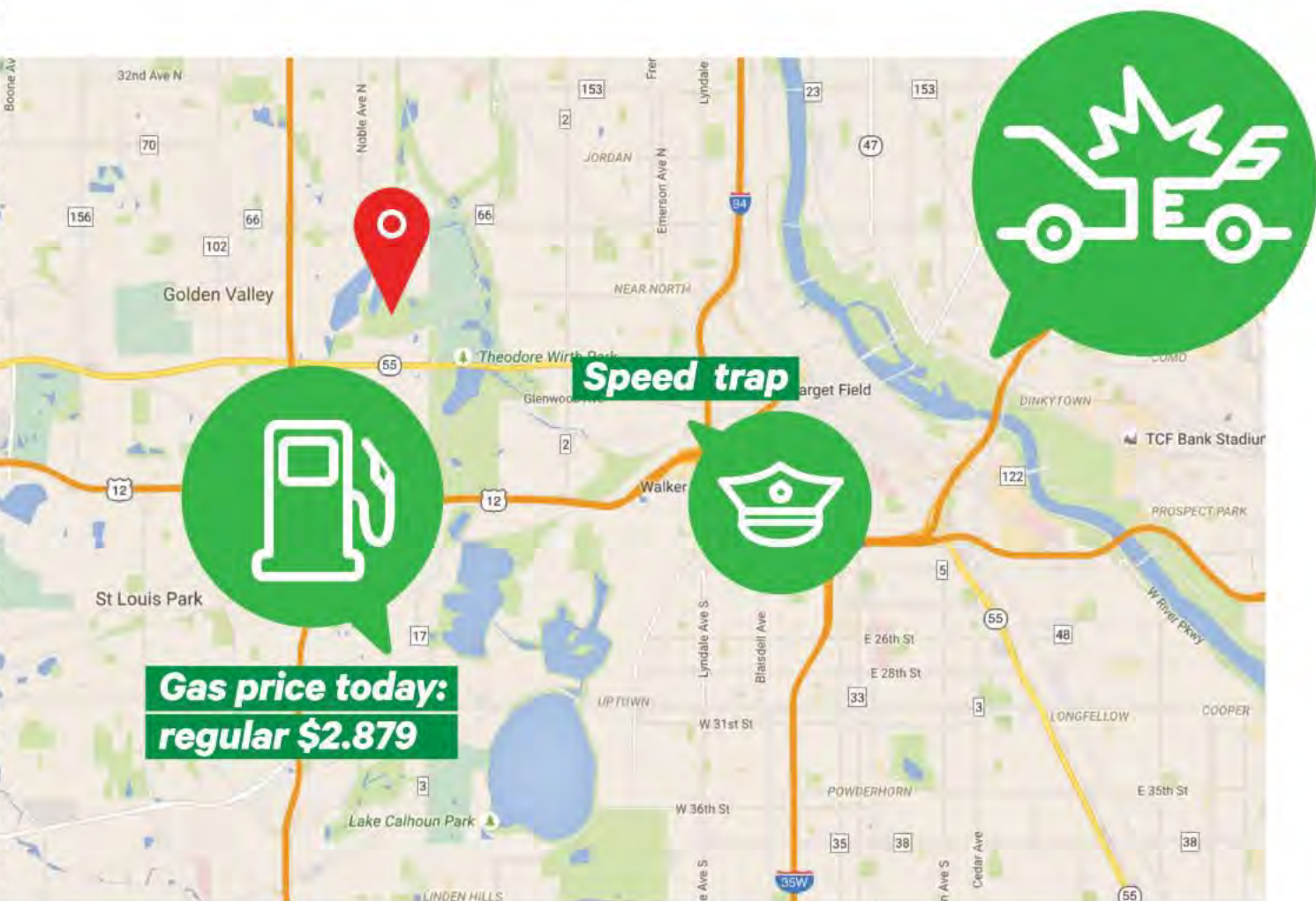
Android, iPhone

What It Is Backing up your smartphone photos to online storage services at Apple or Google can provide peace of mind. But those apps also use geotagging to help you organize albums.

Getting It Apple's version, iPhoto, comes loaded on iPhones. (And iPhone users can download the Google Photos app if they wish.) Android users should update the Photos app to get the latest functionality.

What it can do for you:

1. Search by location. On either platform, you can easily look for photos taken on your vacation at the lake or at your grandparents' summer place in the mountains.
2. Automatically generate scrapbooks. Google Photos can combine location data and other clues to deduce that you were at an event or on a special trip, then create a presentation with maps and a timeline. It will put together video montages and incorporate fade-outs and other transitions, along with a soundtrack, that can be edited. You can also create your own montage.



Apps at Your Service

Real-time info ensures that you'll take the best route and steer clear of trouble



APPLE MAPS iPhone

Apple Maps provides an easy-to-read trip overview showing adequate, though sparse, info on tolls, construction, traffic delays, and road closures. We like it for:

3D views of buildings and landmarks in New York and other big cities, including detailed, photo-realistic "flyover tours."

Easy sharing of maps and directions using messaging, e-mail, and social networks, convenient for meeting family and friends in unfamiliar places.

Mass-transit directions, which were missing from Apple Maps but will be available with iOS 9 this fall. Like Google Maps, the new Apple Maps will let you plan a trip using multiple modes of transportation (bus, car, walking, etc.).



GOOGLE MAPS Android, iPhone

Google Maps is uncluttered yet brimming with details. Street names and points of interest are clearly marked, and you can choose a route that avoids tolls. We like it for:

Continuous traffic and accident updates, along with suggestions for alternate routes.

Directions for pedestrians, cyclists, and mass-transit commuters that are easy to use. (Cycling from Consumer Reports in Yonkers, N.Y., to the Google headquarters in Mountain View, Calif., for example, apparently takes 11 days, 13 hours without sleeping, eating, or bathroom breaks.)

Street-level views in Google Maps, which can help you get to your destination. You can also take 360-degree photo tours.



WAZE Android, iPhone, Windows

If you want to avoid being ticketed by aggressive police officers, Waze could be for you. It has strong core navigation with sharing tools. We like it for:

Updates on speed traps, red-light cameras, and other hazards of the road. Much of the data comes from other "Wazers" in the area, and the app allows you to return the favor.

Gas-price reporting for some service stations near your location.

A speedometer showing average speed in comparison to other Waze drivers along your route. One caveat about the app: You may be tempted to share road reports while driving, but that's dangerous. Pull over first.



HERE Android, iPhone, Windows

This app works from maps stored on the phone, which means you don't have to blow your plan's data allowance on map updates—or risk having no connection when you want directions. We like it for:

Local maps that you can download for an entire country or just for the state where you're driving.

A simple interface that makes it easy to see maps, street names, directions, and traffic delays.

The onboard speedometer, which glows red when you exceed the local speed limits.

Two Windows-only features, one that warns you about traffic jams without bothering you with directions, and another that remembers where you parked.



Coming to a Car Near You: Built-In iOS and Android

For better or worse, drivers use phones for everything from playing music to making calls to navigating. At 65 mph, interacting with a 5-inch screen in your hands can be dangerous. Now manufacturers are working with Apple and Google to install car-friendly versions of mobile operating systems in new cars. Major automakers plan to roll them out with the 2016 models. We tried Apple's CarPlay and Google's Android Auto in an aftermarket dashboard console of a Consumer Reports test car. They were an improvement on automakers' built-in infotainment systems, but you need to use your own phone and its data plan.

Apple CarPlay

This system adapts the iPhone's iOS interface to your car's touch screen with driver-friendly versions of select apps. You can use voice commands to select music, get directions, and read or send text messages—all through Apple's virtual assistant, Siri. You can still tap and swipe your way through the menus, but they're a bit too complex for a road-going operating system. CarPlay's apps include several core functions (Phone, Music, Maps, Messages, Audiobooks, and Podcasts) and some third-party services (Audible, Pandora, Spotify, Stitcher, etc.). But it doesn't control your car's radio directly, so you'll have to switch between Apple's software and the carmaker's controls.

Android Auto

Android Auto uses many navigation functions from your phone, but it looks very different from Apple CarPlay. The home screen shows recent action on the phone and lets you jump to core functions such as Maps, Phone, and Music via a bar on the bottom (although not for the radio). Relevant apps are launched from within each of those functions. Android Auto leans heavily on voice control, and the Talk to Google feature is remarkably intuitive. An example: You're driving in Los Angeles and you ask about the weather in San Diego, where you plan to go next. If you then ask for the hours at the zoo, Talk to Google will provide the information for the San Diego Zoo, not the one in Los Angeles.



WATCH

Wonder how well these systems work? Get an on-the-road demonstration of Android Auto and Apple CarPlay from inside one of our test cars. Go to ConsumerReports.org/video

What's Great in GPS

Standalone GPS devices still make sense for some users. They can spare your smartphone battery power and make it easier to make calls. Here are four "no regrets" choices:

Fully loaded options



The **Garmin Nuvi 3597 LMTHD, \$330**, provides local speed limits, traffic information for secondary and tertiary roads, and advanced lane guidance to help you get in the correct one for an exit. And the magnetic dock for the windshield mount that's included is easy to use.



The **Garmin NuviCam LMTHD, \$400**, is pricey but useful. It alerts you if you're drifting from your lane, facilitates hands-free calls from a phone, and has a dash camcorder that will automatically retain video and still images in the event of a collision.

Budget-friendly options



The **Garmin Nuvi 57LMT, \$170**, points out landmarks, traffic lights, highway exits, and other points of interest, and includes free lifetime map updates and traffic alerts. The onscreen speedometer glows when you exceed local speed limits. It can be paired with a BC 30 wireless backup camera (sold separately) to show obstacles when you drive in reverse.



The **Magellan Smart-GPS 5390, \$170**, includes Bluetooth connectivity for hands-free calling from your phone. Multidestination routing makes it easy to add stops along a route. And the unit shows you with clear visual cues where to change lanes before an exit.



POWER STRUGGLES

Energy efficiency is good for the planet and your wallet. But behind the scenes, industry forces want consumers to foot the bill for lost revenue.

ENERGY EFFICIENCY has come a long way from that evening in February 1977 when President Jimmy Carter put on a cardigan and told Americans to turn down their thermostats. Thanks to more energy-efficient practices and products, ranging from refrigerators to lightbulbs to central air conditioning, the average American spent \$2,500 less on energy in 2014 (adjusted for inflation) than he or she would have if no improvements had been made, according to a June 2015 report by the American Council for an Energy-Efficient Economy.

But every dollar saved by consumers is one less in revenue for power companies. That has prompted industry leaders to warn of a “death spiral,” a scenario in which sinking profits from efficiency will force utilities to raise their rates, causing more consumers to migrate to rooftop solar. Many utilities are using that argument to propose steep rate increases that penalize the public for doing the right thing. “Where’s the incentive to insulate your attic or install a solar water heater if it’s not going to lead to lower energy bills?” says Kateri Callahan, president of the Alliance to Save Energy, an advocacy group in Washington, D.C.

Raising the stakes even more is the fact that the Clean Power Plan, released in August by the Environmental Protection Agency, would require U.S. power plants to cut carbon dioxide emissions 32 percent below their 2005 levels by 2030. The industry claims that this could lead to yet more rate increases, but the EPA analysis says the investments in efficiency could actually lower consumers’ bills.

The Rising Rates for Energy

Currently, utilities can’t just jack up the cost of electricity when it suits their bottom line. State laws require them to make a formal proposal through their public utility commission. Wisconsin’s Madison Gas and Electric, for example, proposed to increase fixed charges (the part of the bill customers pay no matter how much energy they use) from \$10 in 2014 to \$68 by 2017. Kansas City Power & Light requested a fixed-charge increase from \$9 to \$25. “This is clearly the industry’s playbook,” says Rick Gilliam, regulatory policy director for Vote Solar, a nonprofit. “We’ve never seen utilities in so many states making the same proposals based on all the same talking points.” (See our petition on page 43 opposing fixed-charge increases.)



Even when an increase in fixed charges is accompanied by a drop in the rate per kilowatt-hour, it's the energy hogs who end up paying less. For example, an analysis of Kansas City's proposed fixed-charge increase found that only customers who used at least 1,500 kilowatt-hours per month would see a decrease in their monthly bill. Those who used less than the national average of 909 kWh per month would see their bills go up anywhere from 5 to 35 percent.

In Hawaii, where 12 percent of homes have solar, Hawaiian Electric delayed some homeowners from installing solar panels until system upgrades could be made to handle the flow of power back into the grid. The utility also proposed charging new solar customers an extra \$16 per month. And it wants to end its "net metering" program, which credits solar customers for electricity that's fed back into the grid when they're generating more power than they need. Under its plan, new customers would get back roughly 50 percent less per kWh from the utility than current customers receive. That could significantly extend the pay-back period for new solar customers.

Edison Electric Institute, the utility industry's main trade group, points out that utilities have made and continue to make massive investments to build and maintain the nation's power grid, and that all electricity customers should share in the costs. "Rooftop solar customers still rely on the grid and its services around the clock," says executive vice president David Owens.

But fixed-charge increases are "too blunt an instrument for covering those costs," says Samantha Williams, staff attorney and policy advocate with the Natural Resources Defense Council (NRDC). "Instead of falling back on arcane rate designs or blaming solar, utilities should work with regulators

and their local communities to come up with innovative solutions."

Thinking Outside the Grid

Some utilities are doing just that, building customer loyalty by marketing their expertise alongside their product. Green Mountain Power in Vermont is reinventing itself as a full-service energy provider—for example, by leasing high-efficiency heat pumps. Later this year it will also offer the Tesla Powerwall, a home battery that allows for the storage of power generated by a rooftop solar system. "Our philosophy is that you don't resist where the customer wants to go," says the company's president and CEO, Mary Powell. "You figure out how to enter into new relationships with them."

Another approach is the adoption of time-of-use (TOU) rates, which help utilities manage demand by making energy more expensive during periods of peak use. Consumers stand to benefit through behavior modification, such as setting the dishwasher to run at night, when rates are cheapest.

Certain consumer groups, such as the AARP, argue that people who are home during the day, like many retirees, will be stuck with higher daytime rates. To help encourage adoption, more utilities have made their TOU plans opt-in. During a recent Sacramento Municipal Utility District pilot program, customers who opted in reduced their energy use between 9 and 12 percent during peak afternoon hours.

Those measures show what's possible when the power industry sees energy efficiency as an opportunity rather than a threat. "Utilities that resort to piling on costs in ways that deter clean energy investments will restrict their options and alienate their customers," says the NRDC's Williams. "And that will only hasten the death spiral they're so afraid of."

Soak Up the Sun

Considering solar? Critical questions you need to ask.



SOLAR PANELS—also called photovoltaic (PV) cells—can reduce your monthly electric bill by 50 percent. No wonder rooftop solar capacity almost doubled from the beginning of 2013 to the end of 2014, according to the Energy Information Administration. Despite that growth, solar provides only a little more than 1 percent of total electric-generating capacity in the U.S. Going solar isn't a slam dunk for everyone.

Does my house have to be situated in a very sunny spot?

The more sunshine you have, the more power your system can produce. But the

amount you can save on your bills also depends on the price you pay for electricity and the available credits and other incentives from federal, state, and local governments. Most panels are placed facing south, where they get the most exposure. Ideally, your solar panels shouldn't be shaded by chimneys, trees, or anything else on the rooftop. That includes trees that could grow tall enough to shade the rooftop panels.

About how much power can I expect to get?

Most systems can provide 25 to 100 percent of a homeowner's electricity needs. Solar installers will be able to collect

information about the amount of electricity you use, how much you pay for it, and what you'll save if you opt for different-sized systems.

Is it possible to save up power to use at night or during a power outage?

Disconnecting from the grid isn't really practical yet. Though they are fairly pricey right now, you can have batteries installed along with the solar panels that allow you to store power generated during the day for use at night or at a later date. Tesla got a lot of attention when the company announced its Powerwall rechargeable lithium-ion batteries earlier this year. The company says the batteries will start shipping this year and will cost \$3,000 to \$3,500 before installation. Other companies are introducing similar products, including Daimler AG with its Mercedes-Benz energy-storage units that also use lithium-ion batteries.

My area is prone to storms. Can hail and lightning damage solar panels?

Better-quality solar panels have impact-resistant, tempered glass that can take a beating without damage. But that doesn't mean you'll have warranty coverage if a hailstone ruins a panel. Amend your homeowners insurance so that the cost to repair or replace solar equipment is covered for fire, impact, and other damage. And make sure that the cost to repair or replace your system doesn't exceed the current coverage limits on your policy.

Will panels damage my roof?

Properly installed panels should not cause any damage to your roof. In fact, the panels tend to protect the roofing materials they cover by shielding them from precipitation, light, and heat.

That said, a roof's working life can range anywhere from 15 to 30 years, and a PV system's service life can be upward of 25 years. So install the PV system on a roof with at least as long an expected life as that of the solar components. If

you have sufficient land, you can have a ground-mount system installed out of view of the house. (Such systems usually cost a bit more to install because wires need to be buried.)

Aren't these systems crazy expensive?

Buying a system outright will probably save you the most money over time, but it requires a large up-front investment. The typical installation costs about \$15,000 to \$21,000 in the U.S., according to the Solar Energy Industries Association.

If you install a system before Dec. 31, 2016, you're eligible for a federal tax credit equal to 30 percent of the amount you spend. So if you spend \$18,000, you can slice \$5,400 off of the federal taxes you owe. Some states and local governments provide additional incentives. State-by-state information on discounts is available at dsireusa.org. And ask your municipal office whether there are any local perks. If your home is assessed at a higher value based on your installation, you may be able to dodge a property tax increase, for example.

Solar panels are usually warranted to last 20 to 25 years, and the systems often pay for themselves after five to 10 years, so you have the potential for free electricity for the rest of their lifetime.

I can't afford to purchase a system. Is leasing cheaper?

Initially, yes, but you're likely to pay more over the life of a 20-year contract than if you buy. Though solar is available in all 50 states, leasing firms don't operate in all areas. You can often have a system installed free and repay the company through a monthly fee.

Leasing contracts usually include an "escalation schedule" that specifies how much your payments will go up over time. So be aware that your fee might not be fixed over the lifetime of the lease, but that should be clearly spelled out in the contract. Note that the leasing company keeps all of the tax credits and discounts. Make sure your contract spells out who is responsible for maintenance

and for repairs to the system and to your roof. Usually, it's the leasing company, not you, that's responsible for repairs to the solar system because it is the owner.

You can compare leasing and buying deals free at EnergySage. The site, which is paid a fee by the solar companies if you buy or sign up for a leasing deal through it, will obtain quotes on your behalf from several vendors. EnergySage requires them to standardize comparison data so that you get "apples to apples" quotes.

After you decide whether buying or leasing is right for you, solicit quotes from several contractors on your own to be sure you've found the best deal. Get at least three references from your top choices and contact those customers to find out whether they were satisfied with the work that was done. Also ask whether the project came in on budget and on schedule.

What if I want to sell my house before the solar lease is up?

If you need to terminate your lease because you're selling your house, you may be able to transfer the remaining lease to the buyer or buy the PV system from your leasing company and include it in the sale of your property.

What about maintenance?

With few or no moving parts, panels usually need little attention. The one exception is the inverter that changes the direct current from the system to alternating current. The inverter, which can conk out after about 15 years, costs around \$1,000 to \$1,500 to replace. That's usually about 10 percent of the cost of a rooftop solar system.

What should I look for in a PV installer?

The North American Board of Certified Energy Practitioners (nabcep.org) and the Solar Energy Industries Association (seia.org) maintain state-by-state lists of contractors and solar installers. Beyond that, an installer should have general liability and workers' compensation insurance,

along with a contractor's license for the region in which you live. Find out whether the installer will obtain all of the necessary permits. If the installer will use a subcontractor to do the work, verify that the subcontractor is properly certified, insured, and licensed.

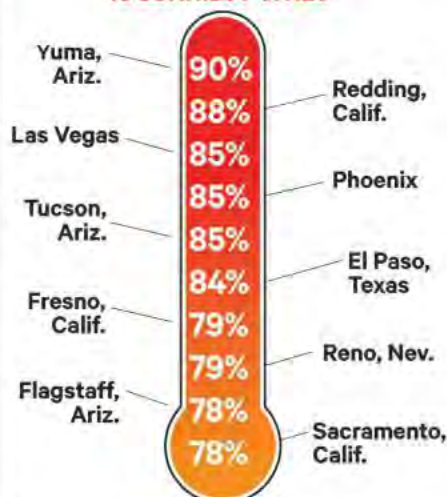
Ideally, a structural engineer as well as a roofer should assess the roof's condition as well as how much weight it can handle. That includes the panels and racking, and the potential weight of any snow that might normally fall on the roof.

Before installing a rooftop solar system, contact the manufacturer of your roofing and ask for written approval of the solar installation to make sure that the roofing warranty will not be voided. You should still do that even if you're installing a new roof. Another thing to consider: The fire classifications for the roof assembly and the solar system should be the same. (For roofer referrals, check the National Roofing Contractors Association's website, at nrca.net.)

Where to Catch the Most Rays

Percentage of time the sun is shining over the course of a year

10 SUNNIEST CITIES



Data from the National Oceanic and Atmospheric Administration, based on many years of observations through 2004. (It has since stopped collecting sunshine data.)

Let It Shine

The Energy Star program faces opposition on multiple fronts

A LITTLE BLUE LABEL with a star in the middle has helped consumers find the most efficient models across more than 70 product categories since 1992. The Energy Star logo—given to models that exceed the federal minimum efficiency standard by at least 10 percent—is recognized by more than 85 percent of Americans, according to the Environmental Protection Agency, which oversees the voluntary program. But the attention isn't always for the right reasons.

Star Wars

In recent months, Energy Star has entered the crosshairs of congressional leaders who want to roll back important features of the program. Exhibit A: the bill dubiously named the Energy Star Program Integrity Act, sponsored by Rep. Robert Latta, R-Ohio, and Rep. Peter Welch, D-Vt. Referred to by some on Capitol Hill as the "Whirlpool Bill" because of that manufacturer's strong backing of it,

the bill would undercut Energy Star by taking away consumers' right to sue when a product is mislabeled with the Energy Star logo, thereby misrepresenting the promised energy savings.

The bill is unlikely to be voted into law on its own. But it could definitely be added as an amendment to the Energy Policy Modernization Act of 2015, a comprehensive energy bill that has been debated in the U.S. Senate Committee on Energy & Natural Resources.

In fact, a second anti-Energy Star measure has already been tucked into that legislation. Originally part of the Energy Efficiency Improvement Act of 2015, the measure was sponsored by Sen. Jeanne Shaheen, D-N.H., and Sen. Rob Portman, R-Ohio. It would repeal the independent third-party qualification requirement that Consumer Reports, along with other advocacy groups, called for after it emerged that many manufacturer-certified models weren't meeting the Energy Star specification. (As part of a 2010 federal

investigation—during the time that manufacturers were self-certifying—undercover agents with the Government Accountability Office managed to get Energy Star qualification for a gas-powered alarm clock and a "room air cleaner" that was nothing more than a space heater with a feather duster and fly strips attached.)

"Something had to be done to put more checks into the system," says Anne Bailey, Energy Star's labeling branch chief. "Instead of devoting more tax dollars and staffing up, we used the market to maintain the integrity of whole system." Starting in 2011, the EPA forced manufacturers to get their products certified by inde-



pendent labs. Since then, Consumer Reports hasn't observed any products with questionable claims. The new legislation would spare manufacturers that responsibility (and potential added cost) but would also

reopen the door to false energy claims.

The fact that a program with clear consumer benefit faces constant opposition highlights the larger concern of energy efficiency in the U.S. "Energy Star is more reliable than ever," says Shannon Baker-Branstetter, policy counsel for Consumers Union, the advocacy arm of Consumer Reports. "We'd hate to see this hard-earned trust eroded by bills that could chip away at its enforcement and integrity, and set a bad precedent that moves the program in the wrong direction."

Give Your House an Energy Checkup

PUTTING YOUR HOME through a comprehensive energy assessment is one of the best ways to lower bills. Also known as an energy audit, the process involves a trained professional using infrared cameras, blower doors, and other high-tech equipment to pinpoint every source of energy loss in your home. But nationwide, only about 4 percent of American households have undergone an

audit, according to the Energy Information Administration. What gives? Jennifer Easler, an attorney with the Iowa Office of Consumer Advocate, blames the low participation rate on the fact that power companies, under order from state regulators, are often responsible for promoting the energy-audit programs. "You can't expect a business to aggressively persuade consumers not to buy the

very product it's trying to sell," she says. Easler says she would rather see energy audits administered by an independent third party.

But even if homeowner participation shoots up, there will still be the matter of paying for the often costly improvements that are recommended by the auditor. The New York State Energy Research and Development Authority has devised an innovative financing

program called "on-bill recovery." It allows homeowners to take out a loan for their energy-efficiency upgrades, which they pay back over time through an added charge on their utility bills. The loans are designed so that projected annual energy savings equal or exceed the total monthly charges per year. If your utility doesn't yet offer this financing option, encourage it to do so.

Constructive Criticisms

Even as we call on Congress to end its legislative attacks, Consumer Reports continues to suggest ways for the EPA to strengthen Energy Star. For example, it's not always clear to consumers that Energy Star models of the same product are allowed to use significantly different amounts of energy. That's because the requirements can change depending on product type. There are more than two dozen separate refrigerator specifications, for example—one for top-freezers, one for bottom-freezers, one for side-by-sides, and so on. But you wouldn't know that discrepancy unless you also checked the yellow EnergyGuide label, which lists actual energy consumption and operating cost (see the comparison below). We think

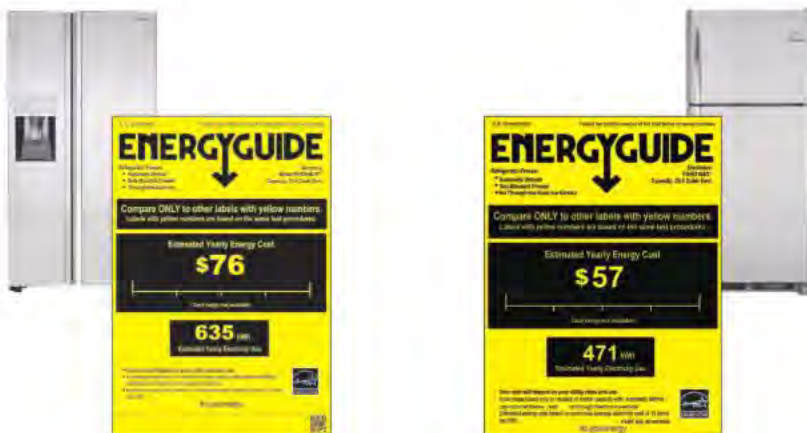
basing Energy Star on volume, regardless of type, would provide a more apples-to-apples comparison for consumers. Indeed, that's how we measure and rate energy consumption in our labs.

We are also urging the EPA to end the 5 percent credit that's currently given to smart grid-enabled appliances. For Energy Star qualified products, which are at least 10 percent more efficient than standard ones, the smart-grid credit essentially gets them halfway there. The problem is, only 2 percent of U.S. households have access to the technology and utility-company dynamic rate pricing that would enable them to benefit from a smart appliance. So consumers could end up with an Energy Star appliance that's only half as efficient as the label implies.

Same Label, Different Costs

Not all Energy Star models deliver the same savings

These two Energy Star-bearing refrigerators from our recent tests have similar capacities, so you might expect them to cost about the same to operate. But the chart below tells a different story. Over the life of the refrigerators—say, 10 to 15 years—the total difference in operating cost could be around \$250, assuming the 2014 national average electricity cost of 12 cents per kilowatt-hour.



Samsung
RH22H9010SR

Frigidaire
Gallery FGH12164QF

Yes	ENERGY STAR	Yes
\$2,350	PRICE	\$1,100
21.5 cubic feet	CLAIMED CAPACITY	20.5 cubic feet
635	ANNUAL ENERGY CONSUMPTION	471
kilowatt-hours		kilowatt-hours
\$76	ANNUAL ENERGY COST	\$57



ACT

Send a letter to your legislator protesting the Energy Star-weakening bills. For sample wording, go to ConsumersUnion.org/EnergyStar

Make your voice heard by signing our petition below protesting fixed-charge increases. It's also available at ConsumersUnion.org/ratehikes

Tweet @NARUC using the hashtag [#nixthefix](https://twitter.com/nixthefix)

Don't take away my ability to control my electric bill by using less energy!

- Act before your utility company tries to raise the fixed charge you pay each month.
- Sign and mail this petition. We'll deliver it to the National Association of Regulatory Utility Commissioners.

To: **National Association of Regulatory Utility Commissioners**

From: _____

Address: _____

E-mail (optional): _____

Mail to:

Consumers Union
1101 17th Street NW, Suite 500
Washington, DC 20036



How to Tame the Energy Hogs in Your Home

Ever wonder where all of your energy dollars go? Knowing where your home's biggest energy sucks are can help you focus your efficiency efforts. Tens of millions of homes have underinsulated attics, leaky ductwork, and other energy problems. Even many newer, more efficient homes have outdated appliances and lighting. Here's a breakdown of energy use and costs in the average residence, along with steps you can take to bring your costs in check. There will be some regional variation—for example, cooling costs, and potential savings, will be much higher in warmer climates.

43% HEATING

- If you have a forced-air system, having your ductwork sealed by a pro can save you hundreds each year because 25 to 40 percent of conditioned air (hot and cold) is lost to leaks.
- Plug drafty windows and doors with caulk or weather stripping.
- Adequately insulate the attic. The typical residence needs 11 inches of fiberglass or rock wool or 8 inches of cellulose insulation.

16% WATER HEATING

- If your water heater is among the 41 million units in the U.S. that are more than 10 years old, consider an upgrade. This fall Energy Star is working with utilities and retailers that offer rebates to consumers who make the switch. Go to energystar.gov/waterheaters.
- Wash your clothes in cold water. Our top-rated detergents deliver superb cool-water cleaning in our tests.
- Install low-flow faucets and showerheads throughout the home. They'll save water as well as energy.

9% APPLIANCES

- Consider trading in an older refrigerator. A current Energy Star model uses 50 percent less energy than a refrigerator from 2001. Of course, you should retire the old model rather than keeping it running in the basement or garage.
- Older washing machines are also worth trading in, especially after a tougher new federal standard that took effect in March 2015. If your old unit is more than 10 years old, it's costing you about \$180 more per year than a new one.
- Run the dishwasher only when it has a full load, and use the "rinse hold" feature sparingly because it uses 3 to 7 gallons of hot water each time.

7% COOLING

- If your home has central air that's more than a decade old, a new system could be up to 40 percent more efficient. Work with a reputable contractor who will size the system correctly; you might be able to downsize if you've made other efficiency upgrades, such as new attic insulation.
- Install a programmable thermostat, which can automatically adjust the temperature in your home for maximum savings and comfort (in summer and winter).
- Don't replace windows just to save energy. But if your windows are failing, choose new ones with a low-E coating that reflects heat yet lets light in.

15% OTHER

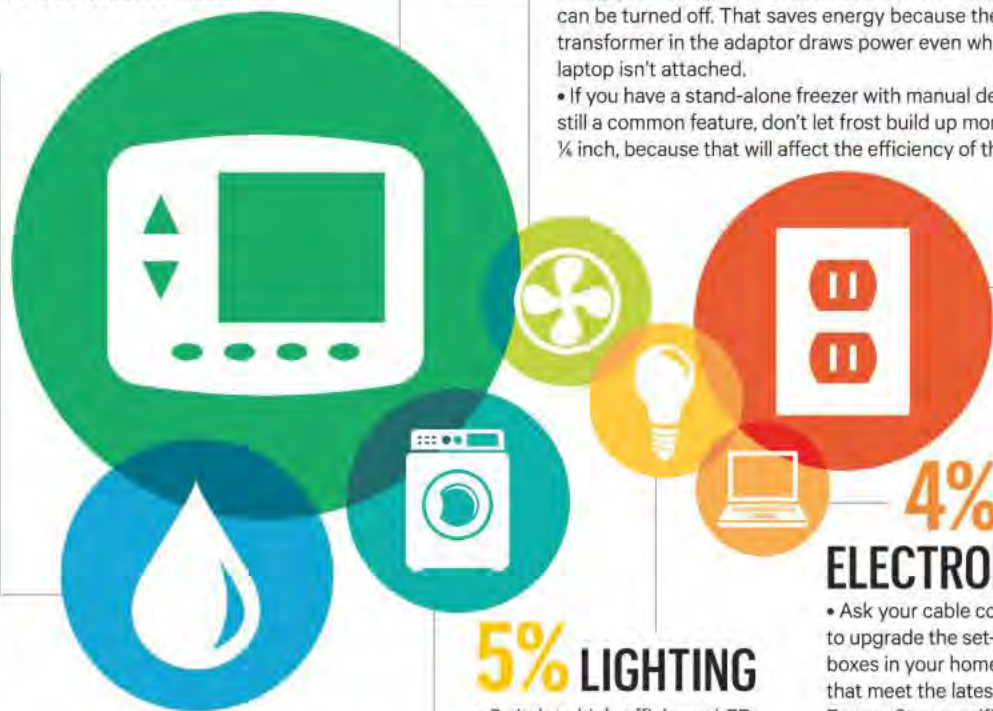
- Plug your laptop's AC adaptor into a power strip that can be turned off. That saves energy because the transformer in the adaptor draws power even when the laptop isn't attached.
- If you have a stand-alone freezer with manual defrost, still a common feature, don't let frost build up more than $\frac{1}{4}$ inch, because that will affect the efficiency of the unit.

5% LIGHTING

- Switch to high-efficiency LEDs, which use up to 80 percent less energy than traditional incandescent bulbs. Our lighting guide, on page 45, will lead you to the right bulb.
- Place dimmable fixtures on dimmer switches. They'll enable you to save even more energy by maintaining lower light levels.
- For outdoor fixtures, save energy with a motion sensor or a photocell that turns the lights on at dusk and off at dawn.

4% ELECTRONICS

- Ask your cable company to upgrade the set-top boxes in your home to ones that meet the latest 4.1 Energy Star specification, making them 35 percent more efficient on average.
- Unplug computers, stereos, and video game consoles. They draw power even when they're off.
- Trade in that decade-old flat-screen TV. Based on our tests, it costs about \$66 per year to run, compared with \$25 or so for a new high-efficiency model.



A woman with long brown hair, wearing a green long-sleeved shirt and dark pants, is shown from the waist up, looking upwards with her head tilted back. She is positioned at the bottom of the frame. The background is a solid blue color. Numerous white incandescent lightbulbs are floating in the air around her. One lightbulb in the center, slightly above the woman's head, is glowing brightly, while the others are unlit. The title 'The Best and the Brightest' is written in large, bold, yellow sans-serif font across the middle of the image. Below the title, the subtitle 'Lightbulb shopping made simple' is written in a smaller, white sans-serif font.

The Best and the Brightest

Lightbulb shopping made simple

STANDING IN A STORE'S lightbulb aisle, facing rows of LED, CFL, and halogen bulbs, with terms such as lumens, color rendering, and Kelvin temperature, is enough to make you long for the days of good old incandescents. With no sales associate in sight, you're reduced to hoping you get lucky and another shopper who happens to be an electrical engineer or a rocket scientist will amble by. But usually it's just you and a bunch of bulbs.

Once you crack the code, though, it's not so intimidating and you'll be able to focus on what really matters: how much you're willing to spend and how bright a bulb you need. (To shed light on the cryptic terms, see "The Language of Light," on page 47.)

LEDs get most of the attention these days—as well as all of the top spots in our Ratings. Manufacturers continue to invest in LED development, and those lightbulbs have become sophisticated electronic devices. But they're expensive. For the price, though, you can expect a bulb that lasts 23 years or longer.

CFLs have improved, too. The best of them are quick to fully brighten, and they provide bright light. They're also less impaired by frequently turning them on and off than earlier versions were. CFLs are a lot cheaper than LEDs and can last seven to 10 years. Yet even though CFLs are much better than they were a decade ago, the best aren't as good as the top-rated LEDs. (See "Battle of the Bulbs," on page 46.)

There is a third choice: halogen bulbs. A type of incandescent, they instantly brighten, they're dimmable, and some cost less than \$2. But they use a lot more energy than LEDs and CFLs. Some have a color filter that improves the light's color, but it also reduces light output. And they usually last only about a year or two—so you'll be back in the lightbulb aisle a whole lot sooner.

Battle of the Bulbs

The pros and cons of two energy-saving bulbs

LED

Feit Electric



CFL

Great Value

\$7	PRICE	\$1.25
9.5	WATTS USED	14
23	CLAIMED LIFE IN YEARS⁽¹⁾	9
Equivalent to a 60-watt bulb	BRIGHTNESS	Equivalent to a 60-watt bulb
None	TIME TO WARM UP	26 seconds, longer outside when cold
Impressive	LIGHT DISTRIBUTION	Excellent
None	EFFECTS OF FREQUENT ON/OFF	Shortens life
Yes	DIMMABLE	No
No	CONTAINS MERCURY	Yes
Very good	COLOR RENDERING	So-so
\$172	SAVINGS⁽²⁾	\$65
1 year	PAYBACK TIME	22 days

Feit Electric 60 Watt Replacement 9.5W LED vs. Great Value 14W 60W Soft White CFL (Walmart).

⁽¹⁾ When used 3 hours per day. ⁽²⁾ Based on electricity savings, using the national average rate, and bulb savings when compared with a 60-watt incandescent.



If you can live without instant brightness, also consider these other well-performing CFLs from our tests: Feit Electric EcoBulb Plus 60W, \$2.50, a CR Best Buy, and the even brighter Feit Electric EcoBulb Plus 100W, \$2.30.

HOW AN LED WORKS

Electricity passes through semiconductor material, sparking up light-emitting diodes, while a heat sink absorbs the heat produced.



25,000

The number of hours a typical LED is claimed to provide useful light. Incandescents lasted about 1,000 hours.

Shape-Shifters

There's more than one way to light up a room

Though they don't look the same, all of these LEDs are for use in lamps and replace a 60- or 75-watt incandescent. Manufacturers are introducing various shapes to improve efficiency and light distribution, help manage heat, and lower costs. The Feit and Philips did well in our tests; the Nanoleaf did not. The others are being tested.



FEIT ELECTRIC, \$7
Fins help prevent heat build-up



PHILIPS SLIMSTYLE, \$7
Flat bulb doesn't need a heavy heat sink and weighs less



CREE 4FLOW, \$8
Openings in bulb keep it cooler



GE LED BRIGHT STIK, \$10 FOR 3
Slim design aims for lower cost



NANOLEAF ONE, \$35
Uncovered yellow diodes aim to provide more light

The Language of Light

Energy-saving bulbs come wrapped in lingo. Here's what the Lighting Facts label on a package tells you.

Light Appearance

Differences in light color are easy to see. Warm yellow light, similar to an incandescent, has a color temperature around 2700K. (The K is for Kelvin, a temperature scale that measures light color.) Most Energy Star qualified bulbs are in the 2700K to 3000K range. Bulbs 3500K to 4100K cast a whiter light, and those 5000K to 6500K give off a bluer-white light.

Lighting Facts Per Bulb	
Brightness	750 lumens
Estimated Yearly Energy Cost	\$1.57 Based on 3 hrs/day, 11¢/kWh Cost depends on rates and use
Life	22.8 years Based on 3 hrs/day
Light Appearance	Warm ————— Cool 2700 K
Energy Used	13 watts

Energy Used

Watts tell you how much energy the bulb uses. So a 10-watt LED that provides the same amount of light as a 60-watt incandescent saves you energy and money.

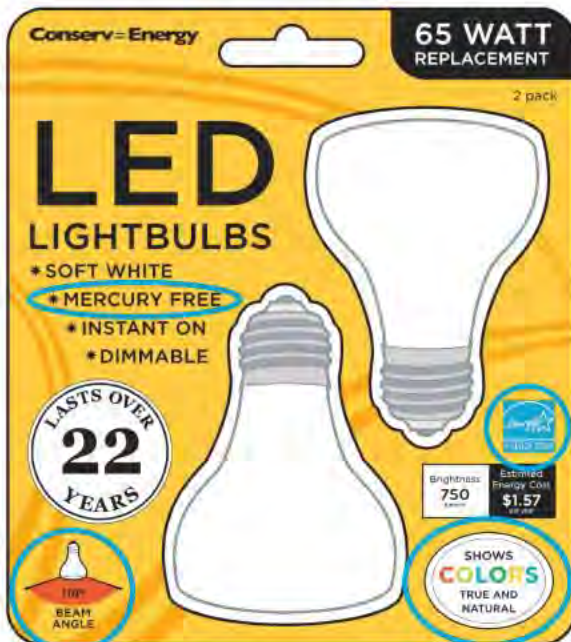
Lumens

The more lumens, the brighter the bulb (think luminous), but many of us still think in terms of watts. For bulbs used in lamps and ceiling fixtures, known as A-type, 800 lumens provide light as bright as a 60-watt incandescent; an 1,100-lumen bulb replaces a 75-watt one; and 1,600 lumens are as bright as a 100-watt bulb.

Life

Unlike other bulbs, LEDs typically don't burn out. Instead, the light fades over time and is considered useful until it's decreased by 30 percent. It's that useful life, in years, that you'll see on the label.

On some packages you might see these terms.



Omnidirectional

LEDs cast light only in a specific direction, unless advanced engineering was used to design the bulbs, enabling them to shine in all directions. Such omnidirectional A-type bulbs are ideal for lamps.

CRI

Ever look at yourself in light that makes your skin tone look weird? A bulb's CRI, or color rendering index, tells you how accurately colors appear under the bulb's light. It ranges from 0 to 100. Halogen, a type of incandescent bulb, is often around the perfect 100. Most LEDs and CFLs we've tested are in the 80s, with a few in the low 90s.

Energy Star

Bulbs carrying the Energy Star label are independently certified to ensure that they meet high standards. Warranties must be longer than the industry norm—at least three years for LEDs and two for CFLs—and the Star may help you earn rebates from your utility, so check out energystar.gov/rebate-finder.

Mercury-Free

That's true for all LEDs. CFLs do contain mercury. Though the amount is small and has decreased substantially, CFLs should be recycled to keep mercury from being released into the environment when bulbs break in the trash or a landfill. If a CFL breaks at home, follow the cleanup tips from the Environmental Protection Agency at www2.epa.gov/cfl/cleaning-broken-cfl.

Notice

Lighting Science, an LED manufacturer, has added a warning to its packages that says, "Exposure to certain electric lights may cause biological effects, some potentially disruptive." That's scary, vague, and a way to sell LEDs with less blue light. Studies have shown that exposure to any light at night is associated with an increased risk of sleep problems, and eyes are especially sensitive to blue light, which LEDs emit more of. Bulbs with a light color around 2700 kelvins are a better choice.

83%

That's how much less the top-rated LED (60-watt replacement) costs today compared with the top-rated LED just four years ago.

Shop Right

DIVIDE AND CONQUER. PARs and BRs, the bulbs used in recessed lighting fixtures or floodlights, have a number such as 30 or 64 in their description. Divide by 8 to learn the bulb's diameter in inches. You'll need that number when picking bulbs for your fixtures.

CONSIDER THE DIMMER. Most LEDs are dimmable, but some flicker and make noise when lowered. Improve compatibility by using a dimmer recommended by the LED manufacturer, usually listed on its website.

BE A MATCHMAKER. Don't leave home without your old bulb. It's a sure way to know that the LED fits your fixture, because some are bigger or heavier than other bulb types.

USE AS INTENDED. If an LED is used in an enclosed fixture but wasn't designed for it, the bulb can overheat and begin to dim, change light color, or fail earlier than expected. We note in the Ratings which LEDs manufacturers say can be used in fully enclosed fixtures. Many tested LEDs and CFLs can work outdoors but must be shielded from water, so check the package.

SEPARATE TYPES. Don't use both CFLs and LEDs in the same fixture if a lamp takes multiple bulbs and has a dimmer. That can disrupt interaction between bulbs and dimmer, causing flickering and flashing.



A1
Feit Electric



B1
EcoSmart



C1
Sylvania



D1
Sylvania



E1
MaxLite

Ratings: LEDs Shine in Our Tests

Of the 68 lightbulbs tested, the highest scored 97; the lowest, 24. Below are high-scoring bulbs in order of performance in each category. All made our recommended list, including the CR Best Buys, which combine impressive performance and value. All are dimmable, except for the Great Value PAR38 (E2). Of the 17 CFLs tested, only one made our top picks, the Feit Electric Ecobulb Plus 60W.

☒ CR Best Buy ☒ Recommended

● Excellent ● Very Good ○ Good ◐ Fair ● Poor

Recommended	Rank	BRAND & MODEL	PRICE	SCORE	TYPE	Light Color	Claimed Life (yr.)	TEST RESULTS			
								Brightness	Efficiency	Light Distribution	Works With Fully Enclosed Fixtures

A. GENERAL-PURPOSE 60-WATT EQUIVALENT BULBS

☒	1	Feit Electric 60 Watt Replacement 9.5W LED	\$7	94	LED	Warm Yellow	23	●	●	●	●
☒	2	Sylvania 12-Watt 60W A19 Soft White LED	\$20	92	LED	Warm Yellow	23	●	●	●	
☒	3	Samsung A19 60-Watt Warm White	\$14	92	LED	Warm Yellow	23	●	●	●	
☒	4	Feit Electric A19/OM/800/LED	\$8	91	LED	White	23	●	●	●	●
☒	5	Philips A19 11W 60W Soft White 424382	\$12	88	LED	Warm Yellow	23	●	●	●	
☒	6	Philips SlimStyle 60W A19 Soft White LED	\$7	87	LED	Warm Yellow	23	●	●	●	
☒	7	EcoSmart 12-Watt (60W) A19 Bright White (Home Depot)	\$20	86	LED	White	23	●	●	●	
☒	8	3M LED 60W	\$19	86	LED	White	25	●	●	●	
☒	9	Great Value (Walmart) 60W Soft White A19 LED Dimmable	\$9	86	LED	Warm Yellow	23	●	●	●	●

B. GENERAL-PURPOSE 75-WATT EQUIVALENT BULBS

☒	1	EcoSmart 14-Watt (75W) A19 Soft White (Home Depot)	\$35	97	LED	Warm Yellow	23	●	●	●	●
☒	2	Sylvania 14W A19 75W LED Dimmable	\$32	92	LED	Warm Yellow	23	●	●	●	
☒	3	Philips 15-Watt (75W) A21 Soft White Dimmable LED 432161	\$20	90	LED	Warm Yellow	23	●	●	●	

C. GENERAL-PURPOSE 100-WATT EQUIVALENT BULBS

☒	1	Sylvania Ultra-LED 100W LED20A21/DIM/O/827	\$42	89	LED	Warm Yellow	23	●	●	●	
☒	2	Cree 100W Soft White A21 Dimmable LED*	\$20	78	LED	Warm Yellow	23	●	●	●	

D. FLOOD/REFLECTOR 65- TO 90-WATT EQUIVALENT BULBS

☒	1	Sylvania 12-Watt (65W) BR30 Soft White Dimmable LED	\$25	96	LED	Warm Yellow to White	23	●	●	NA	
☒	2	Great Value (Walmart) 65W BR30 Soft White LED Dimmable	\$11	94	LED	Warm Yellow	23	●	●	NA	●
☒	3	Satco 12.8W R30 S9025 LED	\$29	94	LED	Warm Yellow	23	●	●	NA	
☒	4	Feit Electric 65 Watt Replacement BR30 Flood LED	\$10	92	LED	Warm Yellow	23	●	●	NA	●
☒	5	Philips SlimStyle BR30	\$14	92	LED	Warm Yellow	23	●	●	NA	
☒	6	Feit Electric BR30 Dimmable LED	\$9	91	LED	Warm Yellow	23	●	●	NA	●
☒	7	Philips 65W BR30 Soft White Dim-Tone LED 426445	\$20	90	LED	Warm Yellow to Yellow White	23	●	●	NA	

E. FLOOD/REFLECTOR 90- TO 120-WATT PAR38 EQUIVALENT BULBS

☒	1	MaxLite 20Watt PAR38 100W	\$45	95	LED	White	23	●	●	NA	
☒	2	Great Value (Walmart) 90W PAR38 LED Soft White Non Dimmable	\$22	95	LED	White	23	●	●	NA	●

*Has a plastic coating to contain debris if bulb breaks.

Road REPORT

NEW CAR PREVIEW 2016

More than 40 new or redesigned vehicles will reach dealerships during the coming months. Consumer Reports will help you know which ones to wait for.



Cars Worth Waiting For

The new or redesigned vehicles that discerning consumers should know about

ALL THE GLITZ AND SHOWMANSHIP of a new-car introduction doesn't do you any good when you need a cool-headed assessment to decide whether to replace your current car.

What follows is Consumer Reports' take on the upcoming 2016 models—separating the substance from the filler. From small SUVs to luxury cars and fuel-sipping hybrids, every category has

game-changing models on the way. We've identified the more than 40 key vehicles that are all-new entrants—or at least significantly redesigned—and go on sale starting this fall.

Many of them will be worth the wait and should be on your must-test-drive list. Stay tuned for Consumer Reports' thorough testing and evaluation of those vehicles as soon as they hit dealerships.



▲ Honda Civic Fall 2015

Car shoppers hated how Honda cheapened its current Civic, and the automaker is rushing a replacement six months ahead of schedule. An all-new platform will have a 3-inch longer wheelbase for more cabin room.

The base engine will be a 2.0-liter four-cylinder, with the uplevel engine a 1.5-liter turbocharged four-cylinder. Buyers can choose from a six-speed manual or a continuously variable automatic transmission. A hybrid will not be offered at launch.

Honda claims that the cabin is quieter and more refined.

Look for the sedan this fall, followed by a coupe and a five-door hatchback. A Type R performance model hits showrooms in 2016.



◀ Tesla Model X Fall 2015

Tesla's all-electric seven-passenger SUV will start assembly later this year. It will mark the follow-up to Tesla's extraordinary Model S sedan, which was the highest-scoring car in our tests. There will be 70-, 85-, and 90-kWh battery packs available. The 85-kWh should deliver about 200 miles of range. The Model X will have front and rear electric motors, giving it all-wheel drive. Tesla CEO Elon Musk has claimed it will be the fastest SUV ever. The Model X has roof-hinged "falcon-wing" second-row doors for easy access to the back two rows of seats.



◀ BMW X1 Fall 2015

The second-generation X1 crossover moves from the rear-drive 3 Series sedan platform to a front-drive layout shared with the Mini Cooper hatchback. This packaging brings more cargo and cabin room, particularly for rear-seat passengers.

Only one powertrain will be available at launch: a 2.0-liter, 228-hp four-cylinder turbo, mated to an eight-speed automatic. All-wheel-drive models will arrive first, with front-drive versions joining by the end of the year.

Available safety systems include lane-departure and forward-collision warnings. Base models get a 6.5-inch control display screen, and an 8.8-inch screen is optional.



▲ Chevrolet Malibu Fall 2015

On the heels of its Impala, Chevrolet might have another winner with the Malibu. This midsize sedan has adult-scale rear-seat leg and head room. For the driver, outward visibility and control layout are improved.

Chevy claims that the handling feels sharper and the ride is more refined. Base models get a 1.5-liter turbo four-cylinder, and the strong 2.0-liter four-cylinder remains from the current model. A full-hybrid, using a 1.5-kWh lithium-ion battery and an electric motor mated to a 1.8-liter engine, is claimed to get 47 mpg.



▲ Lexus RX Fall 2015

Despite its radical styling, the RX follows a familiar redesign formula: Keep the good stuff, but make the popular crossover roomier, more powerful, and thrifter with gas.

The RX will retain its 3.5-liter V6, which should make close to 300 hp, but it adds an eight-speed automatic for better fuel economy. A hybrid version will also be offered.

The cabin features an optional 12.3-inch screen, accessed via a fussy touchpad on the center console. An optional head-up display provides key information. Rear-seat passengers get more leg and knee room.



▲ Toyota Prius Spring 2016

How do you improve on excellence? For Toyota, it's about eking out even better mileage without straying from what has made the Prius so efficient. Toyota was gunning for 60 mpg, but sources say it will be closer to 55.

The successor to CR's fuel-economy champ will remain a five-door hatchback but ride on an all-new platform. Power still comes from a small gas engine and electric motor driving the front wheels, mated to a continuously variable transmission. A longer-range—but pricier—lithium-ion battery pack may be optional over the standard nickel battery.

▶ Cadillac CT6 Fall 2015

The new CT6 is tasked with filling the flagship-shaped void in Cadillac's lineup. It's 6 inches longer than its CTS sibling but is shorter than models such as the BMW 7 Series and Mercedes-Benz S-Class.

The top engine is a new 3.0-liter twin-turbo V6; a 2.0-liter turbo four-cylinder and a 3.6-liter V6 are also available. Both V6s come with all-wheel drive; the 2.0-liter is rear-drive only.

We tried out the updated Cue infotainment system and found that it reacts and scrolls much faster than the current version. Along with a 10.2-inch touch screen, Cue incorporates hard keys and a touchpad that recognizes handwriting.



Coming Soon to a Dealer Near You

More than 40 new vehicles are scheduled to arrive in the next year. Here is when they'll be available.

Chevrolet Volt



FALL 2015 DEBUT

- **Audi TT**
- **BMW 7 Series**
- **BMW X1**
- **Cadillac CT6**
- **Chevrolet Camaro**
- **Chevrolet Malibu**
- **Chevrolet Spark**
- **Chevrolet Volt**
The Volt goes mainstream, with more conventional controls and three-across rear seating. Look for an all-electric range of 50 miles from the 18.2-kWh battery and a total electric-gas range of 400.
- **Honda Civic**
- **Hyundai Tucson**
- **Jaguar XF**
- **Kia Optima**
- **Lexus RX**
- **Lincoln MKX**
- **Mercedes-Benz GLC**
- **Mercedes-Benz Metris**
- **Mini Clubman**

- **Nissan Titan**
The full-sized Titan initially arrives with a 310-hp, 5.0-liter Cummins diesel engine, giving it the ability to tow 12,000 pounds. Gasoline V8 and V6 engines will be added later.
- **Scion iA**
- **Scion iM**
- **Smart ForTwo**
- **Tesla Model X**
- **Toyota Tacoma**
The updated Tacoma features a new 3.5-liter Atkinson-cycle V6, sending power through either a six-speed manual or a new six-speed automatic. A four-cylinder is also available. In the past, we've knocked the Tacoma for its clumsy handling, bouncy ride, and uncomfortable driving position. Toyota says the new model will have improved handling but will keep its serious off-road chops.

WINTER 2015 DEBUT

- **Chevrolet Cruze**
- **Chevrolet Bolt**
- **Honda Ridgeline**
Riding on the same platform as the latest Honda Pilot and Acura MDX, look for Honda's family-focused pickup to sport a more traditional trucky look.

SPRING 2016 DEBUT

- **Alfa Romeo Giulia**
- **Audi A4**



Audi Q7

- **Audi Q7**
Through the use of aluminum and high-strength steel, the new Audi Q7 is more than 700 pounds lighter while retaining almost the same dimensions. A 250-hp, 2.0-liter turbo four-cylinder will be added to the lineup.
- **Cadillac XT5**
- **Chrysler Town & Country**
- **Jaguar XE**
- **Toyota Prius**

- **Buick Cascada**
This convertible gets a new 1.6-liter turbo four-cylinder, a well-insulated fabric top that can be operated at speeds up to 31 mph, and rear seats that can fit two adults or fold flat for cargo.

- **Hyundai Elantra**
The new Elantra is likely to grow in length—for a roomier and quieter interior—and gain a more comfortable ride and new high-tech gadgets.

- **Kia Sportage**
If it follows in the footsteps of its Hyundai Tucson corporate sibling, the new Sportage SUV will get a better ride, sharper handling, and a more upscale interior.

- **Mazda CX-9**
This seven-passenger SUV is likely to shed its thirsty V6 for a turbocharged four-cylinder engine, add in connectivity features, and improve crash protection.

SUMMER 2016 DEBUT

- **Honda Odyssey**
The minivan heavyweight showdown starts with an all-new Odyssey. Expect the 3.5-liter V6 and a choice of a six- or nine-speed automatic from the Pilot SUV.

Honda Ridgeline



Best and Worst of 2015

We have scrutinized this year's offerings. Now we present our verdict on which new models are great choices—and which should go back to the drawing board.

AT THE 327-ACRE CONSUMER REPORTS TEST TRACK, we subject every vehicle we purchase to a battery of more than 50 rigorous instrumented tests and other evaluations. Our expert assessment then continues for thousands of miles on the open road, where staff members will drive for months to ensure that our experiences match those of the consumer.

By the time we've finished living with our cars, we have an excellent sense of which will stand up to years of screeched tires, scorched brakes, and spilled juice boxes. Some vehicles prove popular among the staff even after we're done testing, and some languish. Among this past year's new releases, here are the vehicles that earned our praise, and our scorn:

BEST CARS



▲ Volkswagen Golf

From the moment the Golf's doors close with that reassuring *thunk*, this German hatchback exudes a quality feel that you don't find in your typical econobox. The new 1.8-liter turbo engine delivers effortless power and 28 mpg. Despite its compact size, the Golf provides the ride, handling, and quietness of a more expensive car. Topping the well-trimmed interior is an intuitive infotainment system. The North American Car of the Year jury—of which Consumer Reports is a member—named the Golf its 2015 winner.



▲ Volkswagen GTI

With its 2.0-liter, 210-hp turbo engine, the GTI is deliriously fun to drive. Using the Golf's basic bones, the GTI adds 40 more snarling horsepower, 18-inch wheels, and a suspension that carves corners without pummeling you like competitors such as the Subaru WRX. The interior is very well finished, with above-class materials and comfortable, supportive seats. Starting at \$24,785, this "hot hatch" is something of a bargain. Like the Golf, we eagerly await the GTI's reliability data from our annual survey.

▼ Ford F-150

Even though Ford's new full-sized pickup finished third to Chevrolet and Ram in our Ratings, this truck's redesign is a major evolution. The F-150 shed 700 pounds of body weight by using aluminum instead of steel, and the stunning new 2.7-liter, V6 turbo engine yields 17 mpg overall while still delivering 325 hp and 375 pound-feet of torque. This is an encouraging sign of where trucks can go.



▲ Mercedes-Benz C-Class

The three-pointed star has given a serious challenge to the BMW 3 Series as the perennial champion of the compact luxury sedan segment. The Mercedes' opulent interior styling and rich materials deliver a more luxurious feel than the BMW. Yet the C300 is just as engaging to drive as its Bavarian rival, with a gratifying balance of cushy ride and agile handling.

ROAD REPORT

► Porsche Macan

The Macan feels like a taller, broader Porsche 911; it has all of the practicality of a compact SUV but retains that sports-car performance. With acceleration, handling, and braking that puts most sports sedans to shame, the Macan is easily the most thrilling SUV we've tested—while still delivering a measure of utility, civility, and luxury. Pricing starts at \$50,000, but typically equipped, a Macan lands in the mid-\$60,000s.



▲ Kia Sorento

This “tweener”—meaning that it bridges small crossovers such as the Honda CR-V and midsize ones such as the Toyota Highlander—has a comfortable ride, a quiet cabin, an excellent infotainment system, and solid handling. Straddling segments that way allows the Sorento to blend city-friendly size with family-friendly accommodations, storage, and functionality—while still having room for seven. You can stop thinking of Kia as a “budget” brand.

► Subaru Legacy

Most family sedans are bland pieces of machinery. But the Legacy injects some personality into a great all-around sedan, with roominess, functionality, and a reasonable price. It effectively blends a comfortable ride, responsive handling, all-wheel drive, a roomy and quiet interior, great visibility, intuitive controls, and commendable fuel economy.



◀ Subaru Outback

This high-riding wagon version of the Legacy is our choice for a capable, winter-ready vehicle that can carry the kids and all of their gear. Its extra ground clearance helps when the snowplow misses its mark.

WORST CARS OF 2015



Chrysler 200

The previous edition was at the bottom of our midsize-sedan ranking. And now the redesigned version finished dead last in the category. For all of the effort Chrysler put into this car, the 200 suffers from a raspy four-cylinder engine, unrehearsed transmission, klutzy handling, and a cramped rear seat that only a submariner could appreciate. There are many better choices.



Kia Sedona

Kia makes a super SUV but a mediocre minivan. The Sedona has the vibe of a posh lounge, but the luxury lifestyle vanishes as soon as you pull away from the curb. The stiff, pounding ride is accompanied by a raucous chorus of squeaks and rattles. The response to steering inputs is vague, even by minivan standards, and the fixed second-row seats limit cabin flexibility.



Land Rover Discovery Sport

Shoppers covet this eccentric English SUV brand for vanity reasons. Though the Disco belongs to a family that includes the stately Range Rover, its engine seems flat-footed and the transmission often feels in the wrong gear. Handling is lumbering, and the wheels ride as though made of concrete. The infotainment system seems dated.



Lexus NX 200t/300h

The Lexus brand promises luxury trappings, a supple ride, and a soothing cabin. But the NX's proletarian Toyota RAV4 underpinnings show through—with a firm, jostling ride. Its handling is no match for its German rivals. Some interior bits feel cheap, and the infotainment system's touchpad is challenging to manipulate while driving. Lexus can do better.

► **Jeep Renegade and Chevrolet Trax** See page 56 for our Road Test reviews of these unimpressive crossovers.

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Should You Buy a Tiny

Marketed to millennials, the new pint-sized crossovers are appealing to first-time new-car buyers. But are they worth the money?



Jeep Renegade

Honda HR-V

BUYING A FIRST NEW car is a big deal. Shoppers quickly realize that \$20,000 doesn't go very far when buying new—and they start wondering how low their expectations need to go. For those millennials not overwhelmed with student-loan debt and able to afford new wheels, several automakers have recently rolled out an affordable new breed of vehicle: subcompact SUVs.

We did full road tests of the Honda HR-V, Jeep Renegade, and Chevrolet Trax, and conducted a first drive of a Mazda CX-3.

Built on the same platforms as tiny hatchbacks like the Honda Fit and Chevrolet Sonic, these stylish “cute utes” (as they're affectionately called in the industry) are priced starting about \$20,000. But that quickly escalates by several thousand dollars once popular optional features or all-wheel drive are factored into the sticker price.

So what do you get for your money?

When done well, a tiny SUV delivers room for your stuff, good fuel economy, and a driving position that's higher than most sedans.

These mini mites make sense for someone living in dense urban environs, where a few inches of vehicle length mean the difference between a parking spot and a parking ticket.

These vehicles could also work well for older drivers because they're easy to get into, they have upright seats, and they can swallow several golf bags.

With their curb appeal and unique colors, these vehicles may seem attractive in the showroom or during a quick test drive near the dealership.

But as we found in our testing, after a few thousand miles in the real world, their cramped quarters, underpowered engines, noisy cabins, and nervous rides become tedious.

Why? Because they're all based on crude underpinnings. The HR-V, Renegade, and Trax are also sold in low-cost overseas markets. Their bare-bones suspension setups hurt ride comfort, and manufacturers often spare noise-isolating technology to hit a low sticker price.

SUV?



Chevrolet Trax

Driving in these cute utes quickly becomes a loud, jarring experience, typical of the small-car genre.

As for the value-for-money equation, some subcompact SUVs can cost about the same as a moderately equipped compact SUV once they're equipped with features most buyers want, such as an automatic transmission, all-wheel drive, and a rear-view camera.

Only the equipment level of the \$22,045 Honda HR-V LX had a price-value equation that made sense to us. But for the \$26,000 or so you'll spend equipping a Renegade or a Trax, you could move up in size, power, and refinement to our top-rated Subaru Forester or Toyota RAV4 with almost the same level of bells and whistles.

How much more would that mean in terms of a monthly payment? Forgo a couple of Starbucks lattes per week and you just stepped up to a much better class of vehicle.

This is a case where shoppers should consider all of their options to ensure they will be happy over the long run and won't quickly outgrow their cute sport utes.

FIRST DRIVE

Mazda CX-3

MAZDA HAS MADE A HABIT of approaching vehicle development with a little more verve than everyone else. Unlike its competitors, the brand seems to possess a smidgen more style, panache, and driving responsiveness.

With the CX-3 subcompact crossover, Mazda has once again worked from a familiar playbook.

The all-new CX-3 wasn't on sale early enough for our class comparison, so we rented a prototype from Mazda. Our initial impressions were pleasing, especially for such a basic vehicle.

Power delivery from the CX-3's 146-hp, 2.0-liter four-cylinder engine is linear and polished. The Environmental Protection Agency estimates that the CX-3 will get 29 mpg overall. The ride is tight and firm, but not overly stiff. Quick steering response and minimal body roll during cornering give it more precision during spirited driving, making it fun to drive.

The cabin makes great use of its limited space; it doesn't feel cramped. The rear seats are mounted slightly higher than the front, so occupants don't feel claustrophobic. Mazda's touch-screen and control-knob infotainment interface take some getting used to, but in the CX-3 the controls are consolidated, leaving a clean, minimalist dash layout.

The top trim's suedelike interior accents and padded panels on the doors and console give the CX-3 a cut-above feel. Unusual for this vehicle class, the CX-3 offers blind-spot monitoring, lane-departure warning, autonomous emergency braking, and a heads-up display that shows your speed on the windshield.

In short, you're getting a ton of features for about \$26,000—the cost of a loaded GT trim model. The \$24,000 midlevel Touring trim would be comparable to our other tested models. That's more than the Honda HR-V, but the Honda lacks the Mazda's flair.

So far, the CX-3 feels like the most finished, polished product in this class—one that's desirable and a great value. Stay tuned for our full test results.





Honda HR-V

Practical. Functional. Affordable. Honda makes simplicity a virtue.

66

WHEN HONDA FIRST ARRIVED

in America, it made a splash with its marketing campaign, "We make it simple." The public saw basic, reliable transportation that was a good value for the money and stretched a gallon of gas. Honda has since grown considerably, and its cars have grown too, becoming more complicated and expensive. But the HR-V subcompact sport utility is a return to Honda's roots.

For those on the "new vs. used" fence, the HR-V contains all the right stuff for practical and affordable transportation. Simple as that.

It provides all-wheel drive for inclement weather, and the promise of great fuel economy. A versatile interior with generous cargo space can carry a young family and its gear.

In a class that feels half-baked or built to hit a low price, the HR-V appears to have been developed with considerably more forethought. It's based on the Honda Fit, a practical, fuel-efficient hatchback that delivers more utility and thrift than its peers.

By the numbers, the HR-V produces mixed results. Its 1.8-liter four-cylinder engine and continuously variable transmission (CVT) returned 29 mpg overall in our tests, the best of any nonhybrid SUV and better than many compact sedans. And that's with the added weight of the all-wheel-drive system.

But the actual driving experience is another matter. The HR-V feels underpowered, an impression exacerbated by the nature of the CVT, which keeps engine revs high as it struggles to deliver power. It took a ponderous 10.5 seconds for our AWD version to reach 60 mph.

Handling is responsive and inspires confidence when pushed to its limits in our avoidance maneuver test. But its vague steering feedback makes it devoid of any actual driving enjoyment. The ride is stiff and jumpy over ruts

and potholes, and jittery on a smooth highway.

For urban drivers who focus on practicality, parking and maneuverability are a snap. The HR-V feels as if you're driving a tall car, not a brawny SUV. But the uncomfortable ride and loud cabin make even the shortest drives a fatiguing affair. And keep a chiropractor on call: The front seats lack lumbar support. If you have a long commute, the HR-V is not your ride.

Like most subcompact crossovers, the HR-V is not intended to go off-road, except for the occasional gravel or well-groomed dirt trail.

One of its neatest magic tricks is the impressive amount of stuff it can swallow—a whole Costco run's worth. The HR-V's low floor and flexible rear seats offer several ways to tailor your cargo space. Fold the seats down for a surprisingly capacious cargo area. Flip up the rear-seat cushion and you can park two bikes there—standing up. Two adults can comfortably sit in back on long trips without any hip, knee, or back pain.

The controls in our LX prove that you can have simplicity without giving up connectivity. Bluetooth phone and audio streaming are standard, and the 5-inch screen clearly displays the image from the standard backup camera.

If you're tempted to move up to the EX or EX-L trim levels—which add \$2,000 to \$4,000 to the tab—be warned that you'll be saddled with a frustrating audio system. Its lack of knobs and buttons, plus unintuitive onscreen logic make even the simplest adjustments—like changing the volume—a challenge. It's actually better to get the less expensive LX model.

Let's be clear: The HR-V is not ideal if you require refinement and civility. But at \$22,045 for an LX with all-wheel drive, it's competitively priced, offers a ton of practicality, and has wallet-friendly fuel economy. It would make an ideal first car or just a handy urban runabout.



TESTED VEHICLE

HIGHS	Fuel economy, roomy interior, storage, secure handling
LOWS	Ride, noise, acceleration, front-seat comfort, rear-door handles
POWERTRAIN	141-hp, 1.8-liter 4-cyl.; continuously variable transmission; all-wheel drive
FUEL	29 mpg
PRICE	\$19,995-\$26,720



FORM OVER FUNCTION The rear-door handles are awkward to use.



SMART PACKAGING The second-row seats can be reconfigured to hold plenty of cargo.

Jeep Renegade

When style wins out over substance, is it still really a Jeep?



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JUDGED ON APPEARANCE and presence alone, there's plenty to like about the Renegade. Cute as a button and sporting the proud Jeep brand, what's not to like? Throw in a respectable amount of rear cargo space, a newfangled nine-speed automatic transmission, and a ton of upscale options—including crash-avoidance technology—and it seems like an attractive package.

Alas, it doesn't take long for the Jeep's charms to wear thin. Sharing its underpinnings with the Fiat 500X, its handling is cumbersome, the transmission woeful, the ride choppy, and the front seats uncomfortable.

At idle, the 184-hp, four-cylinder Tigershark engine vibrates nervously. Things don't get better

when you hit the gas; this Jeep takes almost 10 seconds to accelerate to 60 mph.

What's more, that aforementioned nine-speed automatic transmission? It doesn't have its gear-juggling act together. It's neither smooth nor responsive, and feels almost reluctant to downshift when you prod the gas pedal, leaving the car feeling lethargic—not something you'll appreciate when passing slower vehicles.

You would think that a vehicle wearing the Jeep badge would have the agility of a gecko, but the Renegade leans and bobs on winding roads, and its ride is stiff, abrupt, and jostling. Its one dynamic plus is excellent braking performance, especially on wet pavement, although the touchy pedal made it feel grabby in slow-and-go traffic.

The interior materials have some appeal, but the front seats are wide, flat, and stiffly padded, a shortcoming that's most apparent on long trips. The engine's coarse tone and the intrusion of wind noise and road rumble make for plenty of din inside the cabin.

Many competitors are going for the cool "fastback" sloped roof—which robs you of cargo space—but the Renegade's squared-off back

TESTED VEHICLE	
HIGHS	Styling, upscale features
LOWS	Transmission, ride, visibility, front-seat comfort, grabby brakes, idle vibration, price
POWERTRAIN	184-hp, 2.4-liter 4-cyl.; nine-speed transmission; all-wheel drive
FUEL	24 mpg
PRICE	\$18,990-\$26,990

end provides good capacity for bulky items.

Properly equipped, the Renegade is true to the Jeep off-road DNA. Its Trailhawk version (about \$30K all told) can tackle some wild country. Underbody cladding, more ground clearance, gearing that allows for crawling over tough terrain, and traction tweaks make it surprisingly capable for a car-based vehicle.

And there's a love/hate branding quirk: The word "Jeep" and a pictograph of its headlights and seven-slot grille adorn almost every surface, from the rearview mirror to the trunk mat.

The Renegade has potential but needs a better powertrain, agile handling, cushier seats—and maybe a \$3,000 price cut. For our full review, go to ConsumerReports.org.

Chevrolet Trax

The poster child for instant obsolescence



55

CHEVY'S ATTEMPT to create a cute sport ute is an exercise in mediocrity—one that suffers from poor performance and cheap interior materials at a price that should buy a lot more car.

The Trax is meant to attract the young and young at heart. Originally developed for low-priced overseas markets, it hasn't made the leap to U.S. buyers, which makes this plodding crossover a disposable appliance.

Standing tall, the Trax is easy to get in and out. But once squished inside its unfriendly confines, the driver is wedged between a too-close left footrest and an intrusive center console. You may even rub elbows with a front passenger. The seats may as well be carved from

wood—a stiff and poorly padded cushion with overly firm side bolsters.

Given the Trax's small exterior silhouette, rear-seat accommodations are surprisingly roomy, with adequate leg and head room for two adults.

Blue stitching and patterned fabric did little to dress up the gloomy interior of our \$25,560 LT edition. The cabin materials are the stuff of cost-cutting memorandums. The design of the instrument cluster is as dated as a 1980s calculator watch. And the Trax actually stank, with an off-putting chemical odor that lingered for several months. So much for that new-car smell.

The touch-screen infotainment system lacks any helpful buttons or knobs, is slow to react, and has microscopic onscreen fonts.

Chevrolet customers deserve better than the Trax's strained 1.4-liter turbocharged four-cylinder engine. This gruff power plant delivers glacial acceleration for freeway on-ramps or passing. The reluctant automatic transmission harshly punctuates shifts with engine noise. Simply put, the Trax is tiresome to drive.

Although neither sporty nor nimble, it is

TESTED VEHICLE	
HIGHS	Easy to park, fuel economy
LOWS	Acceleration, ride, engine noise, rear visibility, front seats, touch-screen radio
POWERTRAIN	138-hp, 1.4-liter turbo-charged 4-cyl.; 6-speed transmission; all-wheel drive
FUEL	25 mpg
PRICE	\$20,995-\$27,405

secure and maneuverable—evidenced by the high speeds in our accident avoidance test. But the Trax converts even smooth asphalt into a percussion that insistently communicates that you should have bought a different car.

Fuel economy is respectable at 25 mpg overall. For the sacrifices that the Trax demands, however, it's fair to expect better fuel efficiency.

Advanced electronic safety gear is unavailable, and the options list is sparse. That said, the Trax offers a built-in Wi-Fi hot spot.

Ultimately, the Trax provides a disappointing experience that exudes cheapness. Larger, more refined, and better-driving SUVs are available for only a few hundred dollars more. For our full review, go to ConsumerReports.org.

ROAD TESTS

Ratings: SUVs to Take You Anywhere

Scores in context: Recommended models did well in the overall road-test score and have average or better predicted reliability. They also performed adequately in government or insurance-industry crash tests, if tested.

☒ Recommended

Better ← → Worse

Rec.	Rank	MAKE & MODEL	PRICE As Tested	SCORE Road Test	RELIABILITY Predicted	TEST RESULTS									
						Overall MPG	Acceleration, 0-60 MPH, Sec.	Dry Braking, 60-0 MPH, Ft.	Avoidance Maneuver Speed, MPH	Routine Handling	Ride/Noise	Driving Position	Seat Comfort, Front/Rear	Controls	Cargo Volume, Cu. Ft.
☒	1	Subaru XV Crosstrek Premium	\$24,215	74	●	26	9.7	130	53.0	●	○/○	●	●/●	●	23.0
☒	2	Subaru XV Crosstrek Hybrid	\$27,132	74	●	28	10.1	131	53.0	●	○/○	●	●/●	●	23.0
	3	Nissan Juke SV	\$24,840	66	○	24	7.9	139	53.5	●	●/○	○	●/○	●	1+1
	4	Honda HR-V LX	\$22,045	66	New	29	10.5	132	55.0	●	●/●	●	●/●	●	32.0
	5	Mitsubishi Outlander Sport SE	\$24,520	65	●	23	9.6	137	52.0	●	○/○	●	●/●	●	25.5
	6	Jeep Renegade Latitude	\$27,525	56	New	24	9.9	130	51.5	○	●/○	○	○/○	●	30.5
	7	Jeep Patriot Latitude*	\$24,440	56	○	21	10.3	141	51.5	●	○/○	○	○/●	●	29.5
	8	Chevrolet Trax LT	\$25,560	55	New	25	10.8	130	54.0	○	●/○	○	○/○	○	26.0
	9	Jeep Compass Latitude*	\$24,985	52	●	22	10.3	145	48.0	●	○/○	○	○/○	●	26.5

SMALL SUVs

☒	1	Subaru Forester 2.5i Premium	\$26,814	85	●	26	8.7	127	52.0	●	○/○	●	●/●	●	35.5
☒	2	Toyota RAV4 XLE	\$26,802	75	●	24	9.0	135	51.5	●	○/○	●	●/●	●	37.0
	3	Ford Escape SE (1.6T)	\$28,040	75	●	22	9.9	133	52.5	●	●/●	●	○/●	●	35.0
☒	4	Mazda CX-5 Touring (2.5L)	\$28,090	74	●	25	8.0	133	52.5	●	○/○	●	●/●	●	33.0
☒	5	Honda CR-V EX	\$27,500	73	●	24	9.0	134	51.5	●	○/○	●	●/●	○	36.0

*Powertrain has changed since last test.

Why certain models are not recommended. The Honda HR-V is too new for us to have reliability data. The Chevrolet Trax; Jeep Compass, Patriot, and Renegade; and Mitsubishi Outlander Sport scored too low to recommend. The Ford Escape and Nissan Juke received a score of Poor in the IIHS small overlap front crash test.

Tesla Breaks Our Rating System

THE ALL-WHEEL-DRIVE TESLA

Model S P85D sedan performed better in our tests than any other car ever has.

It's brutally quick, with instant acceleration. The car's thrust is forceful and immediate. Its near-instant g-forces can otherwise be achieved only by leaping off a building—literally.

That this electric car accelerates from 0 to 60 mph in 3.5 seconds without an engine's roar makes it frighteningly eerie in its silent velocity. It's so explosively quick that Tesla has created an "insane" driving mode.

The P85D also has better braking and handling than our top-scoring standard Model S. And yet it's more energy-efficient, getting the equivalent of 87 mpg.

Despite its sharper focus on performance, the P85D also maintains its practicality and luxury.

In rating it, however, we faced a quandary: The Tesla initially scored 103 in a system that by definition doesn't go past 100. The car set a new benchmark, so we had to make changes to our scoring to account for it. Those changes didn't affect our scores of other cars.

To be clear, the Tesla's 100 score doesn't make the P85D a perfect car—even at \$127,820. It has imperfections. The interior materials aren't as opulent as other six-figure automobiles, and its ride is firmer and louder than our base Model S.

What's more, a lengthy road trip in an electric car with a 200-

Tesla Model S P85D



plus mile range can be a logistical hurdle if a quick-charging station isn't along your route.

It's also important to note that our Rating doesn't include the Tesla's reliability. The Model S has average reliability, according to our owner-survey responses.

That said, the Tesla Model S P85D is an automotive milestone. It's a remarkable car that paves a new, unorthodox course, and it's a powerful statement of American startup ingenuity.



WATCH

To view our free, comprehensive test report, performance data, and videos of our P85D, go to ConsumerReports.org/tesla

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A Beer in Every Bird Feeder

Thirsty hummingbirds get a surprise; same address, different discounts; and other oddities that readers spotted.

Wear Your Veggies

The "1 Carrot" earrings in this ad, sent in by Quentin L. Brann of Winston-Salem, N.C., look a little hard to digest.

1 Carrot Studs
starting at \$895⁰⁰

PERSONAL
Two diamond studs seeking cute, romantic lobes. Promise to always make you feel gorgeous. Will always be on time and never talk back. Will share winter fires and summer sunsets. Want long-term commitment?

Studs starting at \$79⁹⁵

1 Carrot Studs
starting at \$895⁰⁰

Camel
PAWN-SHOP FINE-JEWELRY
412 N. Liberty Street • 723-1057

Drink in the View

The typo in this ad, sent in by Ralph Houser of Tucson, Ariz., touts a hummingbird feeder that won't just lure the birds into your yard—it'll also get them tipsy.

Mini High Perch Hummingbird Feeder

Our Mini High Perch™ Hummingbird Feeder features a unique, raised perch that allows hummingbirds to comfortably rest, providing you with beer, longer views of the birds. Dishwasher safe! \$14.99

providing
you with beer,

CHOMPER
puppy
BIG DOG FUN FOR THE LIL' ONES
twice the fun!

chew toy

Not a chew toy.

To Chew or Not to Chew?

That was the question this package left with Bob Steele of Staten Island, N.Y., who was unsure of what his grandson's dog, Fredo, should do.

Pumped-Up Price

A gym sent two deals to the same address, but Bob Semple's initiation discount was twice that of Margie Wade's. Wade sent us the postcards, wondering whether he "needs the services twice as much as do I."

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HURRY! OFF

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and \$50 OFF INIT
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