ROAD-TESTED: Nissan Sentra, Toyota Highlander Hybrid, Audi Q7 PLUS: Ford Bronco Preview AIR FRYERS, MULTI-COOKERS, TOASTER OVENS: GREAT NEW WAYS TO USE THEM

REVIEWS & RATINGS

Blood Pressure Monitors

Washers & Dryers Smartwatches

Wireless Chargers Electric <u>Toothbrushes</u>

Consumer Reports[®]

OCTOBER 2020

SPECIAL INVESTIGATION

COVID-19 'CURES' TO AVOID

PRODUCE WITHOUT PESTICIDES

Our **EXCLUSIVE RATINGS GUIDE** will help you pick the safest foods

Build & Buy solves the car-buying puzzle

Save money, access our prescreened network of dealers, and see CR recommendations along the way! The deal you want is out there—in fact, car buyers save an average of \$3,189* off MSRP when they use the Build & Buy Car Buying Service®.





SEARCH for the car you want and see what others paid



COMPARE real pricing from participating dealers



LOCATE the dealership from our prescreened network of over 15,000



SAVE and drive home your car and your savings!

See how much YOU can save at **cr.org/buildandbuy**



*Between 1/1/19 and 12/31/19, the average savings off MSRP experienced by consumers who connected with a TrueCar Certified Dealer through the Build & Buy Car Buying Service and who were identified as buying a new vehicle from that Certified Dealer was \$3,189. Your actual savings may vary based on multiple factors, including the vehicle you select, region, dealer, and applicable vehicle-specific manufacturer incentives, which are subject to change. The MSRP is determined by the manufacturer and may not reflect the price at which vehicles are generally sold in the dealer's trade area, as many vehicles are sold below MSRP. Each dealer sets its own pricing.

Contents





24 Stop Eating Pesticides

Our experts analyzed five years of USDA data, revealing the pesticide levels present on produce sold across the U.S. Use our new guide to help you choose the fruits and vegetables with the least risk from these potentially harmful chemicals. RATINGS

\uparrow

34 Supplement Schemes & COVID-19 Come-Ons

Our investigation shows how easy it is for ads touting dubious cures to reach you and how hard it is for regulators to clamp down on the people behind those ads.



44 Countertop Holiday Helpers

Whip up festive feasts without standing over a hot oven all day. Our experts use top-rated small kitchen appliances to do most of the work, from slow-cooking your stuffing to roasting turkey legs in the toaster oven. RATINGS

PRODUCTS RATED IN THIS ISSUE



P. 10



WASHING MACHINES P. 11



LAUNDRY DETERGENTS P. 14



BLOOD PRESSURE MONITORS P. 16



AUDI Q7 P. 63

Contents



DEPARTMENTS & COLUMNS

10 What We're Testing in Our Labs ...

Dryers, car batteries, wood stains, CO detectors, and more.

12 Ask Our Experts

How to prevent dryer fires, the health benefits of standing desks, and what it means when a doctor prescribes an "off-label" drug.

13 CR Insights

The fastest wireless chargers for your smartphone, how to remove tough mattress stains, and why your smart speaker may be snooping on you. RATINGS

PRODUCT UPDATE

18 A Better Brush?

About 82 percent of adults use manual toothbrushes, but there may be benefits to going electric. Find out which powered models ace our tests. RATINGS



IN EVERY ISSUE

6 From the President: Safety Is Priority No. 1

As we continue to rigorously test products and services, our goal is to help you stay safe and healthy while we prepare for a post-pandemic world.

7 Building a Better World, Together

We're working toward better food packaging labels, safer roads, and accountability for businesses and schools.

8 Your Feedback

Readers' comments about our recent content.

17 Recalls

66 Index

67 Selling It

ROAD REPORT

55 Ahead of the Curve

Auto ratings, news, and advice.

56 Making Back Seats Safer

Modern safety advances have mainly focused on the driver's seat–sometimes leaving the back seats less protected.

NATING:

62 Track Intelligence

Originally launched in 1966, the Ford Bronco is back. RATINGS

63 Road Test

We test the Audi Q7, Cadillac CT5, Nissan Sentra, and Toyota Highlander Hybrid. RATINGS

ABOUT CONSUMER REPORTS

Consumer Reports is an independent, nonprofit organization founded in 1936 that works side by side with consumers to create a safe, fair, and transparent marketplace. To achieve our mission, we test thousands of products and services in our labs each year and survey hundreds of thousands of consumers about their experiences with products and services. We pay for all the products we rate. We don't accept paid advertising. In addition to our rigorous

research, investigative journalism, and consumer advocacy, we work with other organizations, including media, consumer groups, research and testing consortiums, and philanthropic partners. We also license our content and data, as well as work with business partners to offer shopping and other consumer services, and may receive fees from these programs. We maintain a strict separation between our commercial operations and our testing and editorial operations. Our testing and editorial teams decide which products to test and review; our external business partners or other third parties do not dictate or control these decisions. Lastly, these partnerships and programs do not constitute CR's endorsement of any products or services. For more information, go to CR.org/about. How TO REACH US Write to us at Consumer Reports, 101 Truman Ave., Yonkers, NY 10703, Attn.: Member Support. Or call 800-333-0663. TO SEND A LETTER TO THE EDITOR Go to CR.org/lettertoeditor. FOR NEWS TIPS & STORY IDEAS Go to CR.org/tips. For Selling It send items to SellingIt@cro.consumer.org. See page 67 for more details. ACCOUNT INFORMATION Go to CR.org/magazine or call 800-333-0663. See page 5 for more details. RATINGS Overall Scores are based on a scale of 0 to 100. We rate products using these symbols:

Spoor Spair ● Good
Very Good Sexcellent

A Smart Way to Give

Reduce your income taxes by making donations to CR through your Individual Retirement Account (IRA).

IRA giving is a great tool if:

You are 72 and taking a distribution



You are $70\frac{1}{2}$ or older and want to use your IRA to make a contribution

Visit CR.org/IRA

or call us at 877-275-3425 to learn more about tax-advantaged ways to give.

Consumer Reports is registered as a 501(c)(3) non-profit organization. Contributions to Consumer Reports are tax-deductible to the extent permitted by law. Our U.S. tax identification number is 13-1776434.

CRMOAASN



Member Support You can call us about your membership or donations at 800-333-0663.

Or go to CR.org/magazine to • Renew or pay for your current magazine • Give a gift • Change your address • Report a delivery problem • Cancel your magazine

Or write to us: Consumer Reports Member Support P.O. Box 2109, Harlan, IA 51593-0298 Please include or copy address label from issue. (Allow four to six weeks for processing.)

Price In U.S., \$6.99 per issue, special issues \$7.99. In Canada, \$7.99 CAN per issue, special issues \$8.99 CAN (Goods and Services Tax included, GST #127047702). All other countries add \$10 per year to the U.S. price for shipping and handling.

Back Issues Single copies of previous 24 issues, \$7.95 each; previous two Buying Guides, \$14.49 each (includes shipping and handling). Please send payment to Consumer Reports, Attn.: Member Services, 101 Truman Ave., Yonkers, NY 10703. Other ways to get Consumer Reports on the go: Apple News+, Google Play, Kindle, Nook, Readly, and Zinio.

Permissions Reproduction of Consumer Reports in whole or in part is forbidden without prior written permission (and is never permitted for advertising purposes). For questions about noncommercial, educational/academic uses of our content, please submit requests to CRreprints.com.

Mailing Lists We exchange or rent our print postal mailing list so that it can be provided to other publications, companies and nonprofit organizations that offer products or services through direct mail. If you wish to have your name deleted from our list, please send your address label with a request for deletion from outside use to Consumer Reports, P.O. Box 2109, Harlan, IA 51539-0298. We do not exchange or rent email addresses. You can review our complete privacy policy regarding Consumer Reports information products, services, and programs at CR.org/privacy.

Consumer Reports (ISSN 0010-7174) is published monthly, except twice in December, by Consumer Reports, Inc., 101 Truman Ave., Yonkers, NY 10703. Periodicals postage paid at Yonkers, N.Y., and at other mailing offices; Canadian part at Torket's, terr, and at other maning onces, canadian postage, at Mississauga, Ontario (Canadian publications registration number 2665247, agreement number 40015148). Title Consumer Reports is a federally registered trademark in the U.S. Patent and Trademark Office. Contents of this issue copyright @ 2020 by Consumer Reports, Inc. All rights reserved under international and Pan-American copyright conventions.

CR's No Commercial Use Policy To view the policy, go to CR.org/nocommercialuse.

Contributions Consumer Reports is an independent 501(c)3 nonprofit organization that works side by side with consumers to create a fairer, safer, and healthier world. Contributions are tax-deductible in accordance with the law. Donations of commonly traded securities or real estate will be accepted and immediately converted to cash. For addi-tional information, email donorservices@cr.consumer.org. To donate, please send your tax-deductible contribution to Consumer Reports, Attn.: Donor Services, 101 Truman Ave., Yonkers, NY 10703 or go to CR.org/donate.

Charitable Gift Annuity Establishing a Consumer Reports Charitable Gift Annuity is an ideal way to accomplish your personal financial goals while supporting the mission of Consumer Reports. For additional information, pleas contact us at 877-275-3425 or legacy@consumer.org.

Consumer Reports' Staff operates under contract between Consumer Reports and The NewsGuild of New York Local 31003, CWA.

Members Send address changes to Consumer Reports, P.O. Box 2109, Harlan, IA 51593-0298. If the post office alerts us that your magazines are undeliverable, we have no further obligation to fulfill your magazines unless we have a corrected address within two years.

POSTMASTER Send all UAA to CFS (see DMM 507.1.5.2).

NON-POSTAL AND MILITARY FACILITIES Send address corrections to Consumer Reports, P.O. Box 2109, Harlan, IA 51593-0298.

CANADA POST If copies are undeliverable, return to Consumer Reports, P.O. Box 481, STN MAIN, Markham, ON L3P OC4.



Consumer Reports is a member of Consumers International, a federation of more than 220 Consumer organizations from more than 220 consumer organizations from more than 15 countries working to protect and empower consumers throughout the world. For informa-tion, go to consumers consumers tion, go to consumersinternational.org.

Please Remember CR in Your Will For information about how to make a bequest to Consumer Reports, please contact us at 877-275-3425 or legacy@consumer.org.





'SAFETY FIRST' IS an expression we've all heard– usually without giving it a second thought. But now, like millions of Americans, the heartbreaking COVID-19 pandemic has forced me to think harder about, and appreciate more deeply, what it truly means to prioritize safety. These days, when I'm caring for my elderly parents, connecting with my nieces and nephews, deciding

when and how to get groceries, or developing protocols for CR staff to stay healthy, safety really does come first, informing every choice I make–it simply has to.

The unfortunate reality right now is that, for the foreseeable future, safety needs to be our priority in our homes, our work, and our schools, and in our civic engagement. I am hopeful, however, that when the coronavirus threat subsides, we will retain a healthy awareness of our safety—and bring that increased awareness to bear in a positive way on the marketplace and society.

At Consumer Reports, we are constantly working to ensure that products and services are as safe as possible. This month you'll read about pesticides and the potential dangers they present in our food ("Stop Eating Pesticides," on page 24). And throughout the year, we are looking closely at the water we drink. With America's Water Crisis, a partnership with the Guardian US, we are highlighting the safety, access, and affordability of water across the country. To see our coverage, go to **CR.org/water1020**.

I look forward to the promise of safer days ahead—and hope you and your family stay safe as we work through this challenging moment together.

Marta Tellado

Marta L. Tellado, President and CEO Follow me on Twitter @MLTellado

The Consumer Reports 2020 Annual Meeting will be held online on the evening of Oct. 21, 2020. If you are a paid member of CR, please go to **CR.org/annualmeeting** for registration information, and please watch your email for an electronic ballot to vote on the current CR Board of Directors slate. If you haven't provided your email address, you can do so by calling us at 800-333-0663 or by going to **CR.org/myaccount**.



President and CEO Marta L. Tellado

Senior Vice President, Chief Operating Officer Leonora Wiener Vice President, Chief Content Officer Gwendolyn Bounds

Editor in Chief Diane Salvatore Executive Editor Kevin Doyle

Features Editor Natalie van der Meer

Design Director Matthew Lenning Associate Design Director Mike Smith Art Directors Ewelina Mrowiec, Nathan Sinclair Photo Editors Lacey Browne, Emilie Harjes, Karen Shinbaum

Senior Director, Content Development Glenn Derene Deputy Directors, Content Development Christopher Kirkpatrick, Ellen Kunes Associate Directors, Content Development Scott Billings, Althea Chang Senior Director, Content Impact & Corporate Outreach Jen Shecter Special Projects Joel Keehn, Director; Margot Gilman, Associate Director; Lisa L. Gill, Rachel Rabkin Peachman, Deputies; Ryan Felton, Donna Rosato, Writers Editorial Director, Digital Erle Norton Senior Director, Lab Operations Lilian Kayizzi

CARS: *Editors/Writers*: Keith Barry, Jeff S. Bartlett, Jonathan Linkov, Mike Monticello, Benjamin Preston *Auto Test Center*: Jake Fisher, Jennifer Stockburger, Directors *Product Testing*: Michael Bloch, Steve Elek, Kelly Funkhouser, John Ibbotson, Chris Jones, Anita Lam, Gene Petersen, Ryan Pszczolkowski, Mike Quincy, Gabriel Shenhar, Shawn Sinclair, Emily A. Thomas, Joe Veselak

HEALTH & FOOD: Editors/Writers: Trisha Calvo, Lauren F. Friedman, Kevin Loria, Catherine Roberts, Diane Umansky Policy Lead: Brian Ronholm

HOME & APPLIANCE: Eric Hagerman, Content Lead *Editors/Writers*: Daisy Chan, Mary Farrell, Paul Hope, Kimberly Janeway, Sara Morrow, Haniya Rae, Perry Santanachote, Daniel Wrocławski *Product Testing*: John Galeotafiore, Emilio Gonzalez, James Nanni, Testing Leads; Peter Anzalone, John Banta, Susan Booth, Tara Casaregola, Lawrence Ciufo, Enrique de Paz, Bernard Deitrick, Cindy Fisher, Rich Handel, Misha Kollontai, Ginny Lui, Joan Muratore, Joseph Pacella, Christopher Regan, Frank Spinelli, Dave Trezza, Michael Visconti

MONEY: Editors/Writers: Octavio Blanco, Tobie Stanger, Penelope Wang Policy Lead: Anna Laitin

TECH: Jerry Beilinson, Content Lead *Editors/Writers*: Nicholas De Leon, Bree Fowler, Thomas Germain, Christopher Raymond, Allen St. John, Kaveh Waddell, James K. Willcox *Product Testing*: Richard Fisco, Testing Lead; Elias Arias, Antonette Asedillo, Claudio Ciacci, Charles Davidman, Cody Feng, Henry Parra, Richard Sulin, Maurice Wynn *Policy Lead*: Justin Brookman

Chief Scientific Officer James H. Dickerson Food Safety James E. Rogers, Director; Tunde Akinleye, Amy Keating, Ellen Klosz, Sana Mujahid, Charlotte Vallaeys Product Safety Don Huber, Director

Content Operations Robert Kanell, Director

Premedia William Breglio, Associate Director; Eugene Chin, William Hunt, Anthony Terzo

Production Nancy Crowfoot, Associate Director; Eric Norlander, Manager; Letitia Hughes, Terri Kazin, Aileen McCluskey Copy Editing Leslie Monthan, Copy Chief; Noreen Browne, Alison France,

Copy Editing Leslie Monthan, Copy Chief; Noreen Browne, Alison France, Wendy Greenfield

Fact Checking & Research David Schipper, Associate Director; Tracy Anderman, Sarah Goralski, Christine Gordon, Karen Jacob, Jamison Pfeifer

Photography John Powers, John Walsh Imaging Francisco Collado, Mark Linder

Chief Research Officer Kristen Purcell

Consumer Engagement Testing Charu Ahuja, Director; Samuel Chapman, Linda Greene, Dana Keester

Statistics & Data Science Michael Saccucci, Director; Kristen Dorrell, Dina Haner, Keith Newsom-Stewart

Survey Research Karen Jaffe, Simon Slater, Associate Directors; Dave Gopoian, Kendra Johnson, Debra Kalensky, Martin Lachter, Jane Manweiler, John McCowen, Adam Troy, Tian Wang, Tess Yanisch

Consumer Insight Monica Liriano, Associate Director; Selina Tedesco, Frank Yang Member Support Sue Melfi, Director; Donna Murianka Marketing Dawn Nelson, Senior Director; Patricia McSorley, Newsstand Procurement Operations Steven Schiavone, Associate Director Administration Decarris Bryant, Dawn Yancy Elleby

VICE PRESIDENTS: Financial Planning & Analysis JoAnne Boyd; Chief Digital Officer Jason Fox; Advocacy David Friedman; Chief Intelligence Officer Esther Han; General Counsel Michael Hubner; Research, Testing & Insights Liam McCormack; Business Strategy & Planning Betsy Parker; Chief Human Resources Officer Rafael Pérez; Chief Marketing Officer Lauren Stanich; Chief Social Impact Officer Shar Taylor; SVP, Chief Financial Officer Eric Wayne

Making Labels Mean More

WHAT'S AT STAKE

Labels on food packaging can tell you a lot about a product, from what ingredients are inside to how it was produced to how healthy it is. Unfortunately, some labels are heavy on marketing hype–and woefully light on information you can trust when shopping for groceries.

Case in point: One Health Certified, or OHC, a marketing label for meat and poultry that's part of a program administered through the Department of Agriculture. This label purports to demonstrate a producer's commitment to responsible, sustainable, and transparent animal care practices.

HOW CR HAS YOUR BACK

But using our food label ratings system, CR found that the One Health Certified label is essentially meaningless– and should be ignored by consumers. The OHC standards largely reflect normal industry practices and do not require companies to make any significant improvements to animal welfare, drug use practices, or environmental impact.

For example, the OHC label prominently says, "Responsible Animal Care." But to meet the OHC animal welfare standards, producers can use guidelines that closely track the norm in poultry production—which isn't, in fact, very sensitive to animal welfare. And while the standards place some restrictions on the use of antibiotics, it allows meat from animals treated with antibiotics to be sold with the label.

WHAT YOU CAN DO

Learn more about CR's food label ratings, and research the products you buy, at CR.org/foodlabels.

Saving Lives on the Road

WHAT'S AT STAKE

U.S. auto crashes account for at least 36,000 deaths and 2.5 million injuries per year.

To help reduce this terrible toll, CR has pressed automakers to install proven safety features, such as blind spot warning and automatic emergency braking (AEB), as standard equipment on all new cars and trucks. Right now, they often must be purchased as part of expensive add-on packages, along with additions such as a sunroof and high-end stereo. A recent CR analysis found that U.S. road deaths would be cut in half if existing safety technologies were installed on all new vehicles.

HOW CR HAS YOUR BACK

CR's advocates worked closely with members of Congress on the Moving Forward Act, which requires, among other measures, that every new car come standard with proven safety features such as AEB. The House passed the bill

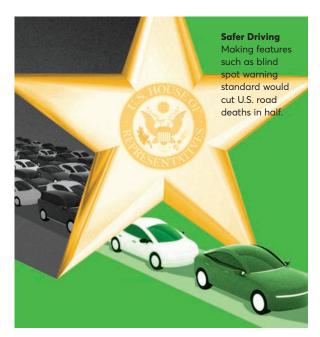


CR asked the

Environmental Protection Agency to require automakers to test vehicles on the same fuel consumers buy at gas stations. Without the rule, automakers could use a

loophole that effectively weakens emissions standards by 20 percent and could cost consumers \$30 billion over 15 years.

CR has long urged lawmakers to close the "digital divide" by making broadband accessible to more Americans. A bill to do that was recently passed by the House, and in June Sen. Ron Wyden, D-Ore., introduced a similar bill in the Senate to provide lowcost service to low-income families and those laid off because of COVID-19.



in July. William Wallace, CR's manager of safety policy, calls it the "strongest auto safety bill in decades" passed by a chamber of Congress. Now CR is urging the Senate to pass it. WHAT YOU CAN DO

Read more of CR's auto safety coverage at **CR.org/autosafety**.

Saying No to Immunity

WHAT'S AT STAKE

Business groups have been asking Congress for immunity from liability lawsuits related to the COVID-19 pandemic, saying such protections are crucial for restarting the U.S. economy. Then, in May, a group of higher education institutions asked Congress for a similar shield, freeing them from liability in the event that students, faculty members, or other workers catch COVID-19 on campus.

HOW CR HAS YOUR BACK

CR has opposed all such efforts to create new legal immunity even for entities that disregard the safety of the people they employ and serve. We've argued that such immunity would eliminate accountability for businesses and schools engaging in careless actions that are proven to be making people sick.

What's more, says CR senior policy counsel George Slover, existing state laws already create fair and effective incentives to protect employees, customers, and students-by holding businesses and schools accountable for carelessness while conditioning liability on proof that carelessness caused the illness. "Immunity undercuts those incentives and puts both our health and our economy at higher risk," he says.

WHAT YOU CAN DO

Read more of CR's COVID-19 coverage at CR.org/covid19.

Your Feedback



Our August article **"When Your Insurer Drops Your Drug"** looked into why insurers have stopped covering many prescription drugs, leaving some people unable to pay for meds, and what to do if it has happened to you. To add your voice, go to **CR.org/drug1020**.

AS A PHYSICIAN, I have often spent 45 minutes on hold with PBMs [pharmacy benefit managers] over drug appeals while patients are waiting for me. In my experience, no PBM allows after-hours calls, and the time spent on this is a major part of why doctors spend less than 50 percent of their day actually interacting with patients. The appeals process is time-consuming and aggravating for all. -Jim Maher, Marshall, MI



Go to CR.org/lettertoeditor to share your comments for publication. INSURANCE COMPANIES should have a fiduciary responsibility to get the best prices for their insureds. If auto insurers colluded with repair shops in this way, it would be fraud. But for drugs, it's just a way of doing a very profitable business. –James Hall, Wilbraham, MA

MY WIFE AND I both have had drugs dropped two months after signing up for Medicare Part D. We are stuck paying for insurance that no longer covers the drugs we need. In my wife's case, the drug she needs (an injectable) now costs \$60,000 per year, which we cannot afford. In my case, a heart medicine my doctor prescribed now costs \$1,600 per injection for 12 injections per year. We and our doctors have been through the steps indicated in the article (except hiring a lawyer and going to court) with no success. Lawyers are very expensive, with no guarantee of success. *—Phil Lense, Pinetop, AZ*

I STRONGLY ENDORSE your tips to enlist your pharmacist. I have a fairly high deductible Medicare Part D plan. One of my drugs on the plan had a \$90 copay at an independent pharmacy. I found that I could get the refill for \$30 using GoodRx at a big-box pharmacy, so I switched to the big box. When I had a new prescription, I happened to ask the pharmacist at the independent pharmacy whether he could do GoodRx. He said he couldn't, but that he could often get close to that pricing. Turns out that in some cases, he has beat GoodRx prices. *–Jim Smith, Raleigh, NC*

ONE WAY to get drugs affordably without using insurance is to use a Canadian pharmacy. Our Medicare insurance agent recommended one to me for a diabetic drug that costs me \$279 every three months. Using a Plan D pharmacy, the same drug would cost \$485. When I asked the Canadian pharmacist why the drug was so much less expensive, he said, "In the U.S., it's a business. In Canada, it's healthcare." Enough said! -Nick Langer, Tacoma, WA

EDITOR'S NOTE In July, President Trump signed an executive order that, once implemented by the Food and Drug Administration, would permit individuals to import some prescription medications from Canada. But until then, it remains illegal, per the FDA, to mail-order drugs from a country outside the U.S., or to buy them abroad and bring them home. (Currently, the only exception is for certain drugs-such as some cancer treatments-that are unavailable here.) But U.S. consumers-who now pay almost four times more for prescription drugs than people in similar countries-do sometimes buy drugs outside the U.S., in order to save money.



YOUR AUGUST 2020 article on toilet bidet seats ("Love at First Flush") was a good

introduction to these very useful appliances. Due to the design of the seats, users will need to consider how to keep parts of the bidet under and in the rear of the seat clean. My technique includes sliding the bidet seat out of the clips used to hold it on the toilet. flipping it over, and using old toothbrushes and a soft liquid soap to clean the nooks and crannies on the bottom of the bidet seat. Failure to clean here regularly will result in unpleasant odors. Keeping the seat clean is a very important part of making sure it keeps you clean. -Diane Schweitzer, Saint John, IN

EDITOR'S NOTE You're right: A bidet seat or attachment can't clean itself! We recommend you do a deep clean once a month. Using a toothbrush is fine, or you can wipe your bidet seat and lid with a soft, damp cloth and neutral kitchen dish soap. *Generally, you want to stay* away from harsh chemicals like bleach and abrasive powders, which can cause rubber O-rings

GET THE ANNUAL **BUYING GUIDE** AS A DIGITAL EDITION

Print and All Access members can now choose to get CR's annual buying guide as a downloadable, digital edition instead of a printed book. You'll be among the first to access ratings to more than 2,000 products, as well as our expert shopping advice. Simply go to CR.org/guide and sign in to tell us whether you prefer to receive your annual buying guide digitally.

and gaskets to weaken and fail. Also note that scrubbing too hard could scratch a bidet. For more cleaning tips, go to CR.org/bidet1020.

I'VE BEEN USING bidet seats for more than 10 years. For many folks who have rectal and/or bowel movement problems, this product is a must. Having a 2-minute pressured warm water spray not only cleanses but also provides a massage effect that increases the blood circulation in the area. -Craig Chang, Oxford, CT



DRIVING TOWARD SUSTAINABILITY

I WAS GLAD to see in "The Right Time to Buy Is Now" (August 2020) that ideas such as buying a used car instead of a new one or making the car you currently own last longer were featured. Consumption in general is destroying our planet's health. If there is to be an end to our growing list of ecological catastrophes, it will require a dramatic shift in all of our patterns. How about if every product gets a score for sustainability in materials, toxicity, packaging, shipping, and end-of-use disposal? That would allow conscious consumers to make better decisions as they relate to the biggest issue of our era. -Daniel Kirkpatrick, Bellingham, WA

EDITOR'S NOTE Supporting conscientious consumers is what CR is all about. We work hard to provide useful information to help you make more sustainable choices whenever we can. In this issue, for example, we include tips for



SAFEGUARDING AGAINST SLIPS

I've heard that nonwood flooring, such as the laminate flooring mentioned in "Do-lt-Yourself Home Repairs" (August 2020), is slippery and risky. Do you test for how slippery floors are? -Bev Beer, Princeton, NJ

EDITOR'S NOTE We do assess

flooring for slip resistance, but we have not seen evidence that one category of flooring (e.g., laminate flooring compared with natural woods) is more slippery than another. Remember that in addition to the type of flooring you choose, any finishes applied or even the cleaning products you use on it can make a surface more slippery. If you're worried about slippage, look for a flooring with texture and avoid a high-gloss coating. If your concern about slipping is for an aging household member, go to CR.org/falls1020 for helpful fall-prevention tips.

reviving old decking (page 10) and discuss the benefits of replacing harmful pesticides with more sustainable pestmanagement methods (page 24). And we'll continue to highlight products and services that do not harm public health or the environment in their production, use, or disposal.



DRYER DILIGENCE

REGARDING YOUR ADVICE to "spruce up your washer/ dryer" in "Do-It-Yourself Home Repairs" (August 2020): Why is it that dryers have lint filters, but we still end up needing to clean lint out of the duct that sends the moisture and air to the outside? -James M. Quist, Orinda, CA

EDITOR'S NOTE Your dryer's lint filter is designed to help capture the lint in the air *leaving the drum before exiting* the dryer, but it isn't a perfect catchall. Lint can still build up elsewhere, such as the duct and the vents that the duct connects to. For advice from CR's lead dryer tester on how best to rid those areas of lint-and why your *life may even depend on it-turn* to Ask Our Experts, on page 12 of this issue.

YOU RECOMMEND vacuuming refrigerator condenser coils periodically to reduce the stress on the compressor. However, there is another solution that is more effective than vacuuming for my fridge: compressed air. I use this technique, and my refrigerator has been running problemfree for nine years now! -Tony Den Boef, Nanoose Bay, British Columbia

What We're Testing in Our Labs ...

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

Smartwatches

WE TESTED: 25 models WE TEST FOR: Ease of pairing and general use, readability, step count accuracy, and more. Battery life is how long a watch lasts per charge as claimed by the manufacturer.

ABOUT THE SCORES: Median: 73 Range: 58-86

Solid Wood Stains

we tested: 10 products we test FOR: Appearance after one, two, and three years of enduring our accelerated weathering. We also note if it resists cracking, color change, dirt, and more.

ABOUT THE SCORES: Median: 68 Range: 12-80 Excellent Performance but Short Battery Life (18 hr.) Apple Watch Series 5 (40mm) Aluminum Case GPS \$395



Supports Spotify Offline but Middling Battery Life (48 hr.) Samsung Galaxy Watch Active2 (40mm) \$245



A Bargain With Long-Lasting Battery Life (120 hr.) Fitbit Versa 2 \$200



Best Overall Olympic Elite Advanced Stain + Sealant in One Solid \$45



Money-Saving Stain Behr Deckplus Solid Color Waterproofing Wood Stain (Home Depot) \$33



Holds Up Well Over Time Cabot Solid Color Acrylic Stain \$45



Ask Our Experts

I'd love to give my beat-up deck a facelift but I'm on a budget. Any ideas?



PULLING UP YOUR deck boards and flipping them over is a costeffective way to revive an old deck—you'll get less-weathered boards free! But this strategy will work only if the boards are still solid and fairly straight (not warped or curled), and don't have much pitting (small holes in the surface). Test them for soft spots and check for cracks and rot. Once you flip the boards, you'll also need to stain them right away, says Enrique de Paz, CR's wood stain expert, because the sun can break down the gluelike lignins that keep the wood fibers together. For a fast application, swap your paintbrush for a foam roller with a handle extension so that you can stand while staining.

For the latest ratings of these and other product categories, readers with a Digital or All-Access membership can go to CR.org.

Affordable Washing Machines

WE TESTED: 94 models **WE TEST FOR:** Washing performance using the machine's most aggressive normal cycle, a model's wear and tear on clothes, water efficiency, noise, and more.

ABOUT THE SCORES:

For all rated washers: Median: 69. Range: 32-86

Electric Dryer Deals

WE TESTED: 74 models WE TEST FOR: How well a model dries a variety of laundry, from 3-lb. loads of delicates to 12-lb. loads of mostly cottons; and how easy and quiet a model is to use.

ABOUT THE SCORES: For all rated dryers: Median: 76. Range: 41-92

Carbon Monoxide Detectors

WE TESTED: 9 models we test for: Response to high and low CO levels. Interconnected models sound all alarms when one detects a problem; standalone models don't.

ABOUT THE SCORES: Median: 80 Range: 70-93

Car Batteries

WE TESTED: 79 models **WE TEST FOR:** Battery life (how it endures repeated chargeand-discharge cycles); how long it provides power if the charging system fails; CCA performance, and more.*

ABOUT THE SCORES: Median: 79 Range: 47-99

Excellent Price for Group 35 EverStart MAXX-35N (North) \$90

Excellent Wash Performance

Quiet & Reliable Brand

Best Interconnected Model

SCO501CN: CO and smoke

First Alert OneLink

detection (battery)

LG DLE7100W

LG WM3500CW

front-loader

\$810

86

OVERALL

SCORE

\$720

89

\$70

93

OVERALL

SCORE

OVERALL SCORE



Quick Cycle Time GE GTW465ASNWW agitator top-loader \$660



Excellent Drying for Less

Samsung DV40J3000EW

0

\$650

75

OVERALL

SCORE



Drop-Down Hamper Door Whirlpool WED5000DW \$670 0

OVERALL

75

SCORE

Best Stand-Alone Model First Alert CO615; CO detection only (plug-in) \$30



Nice Price for Interconnected Kidde KN-COSM-IBA: CO and smoke detection (hardwired) \$40



Tops for Group 48 Interstate MTX-48/H6 \$185



First Place for Group 51R Duracell 51R \$105



Note: We rate different products according to different testing protocols. As a result, Overall Scores of one product category aren't comparable with another. *Different cars require different group-size batteries.

Ask Our Experts



How worried should I be about dryer fires?

Every year, firefighters across the country respond to nearly 14,000 home fires caused by clothes dryers, according to the National Fire Protection Association. In fact, dryer fires are responsible for an annual average of seven nonfirefighter deaths and 344 injuries, as well as \$233 million in property damage. And 27 percent of home dryer fires are caused mainly by an accumulation of lint, which is why cleaning your dryer regularly is crucial.

"To prevent fires, clean the dryer's lint screen after every load," says Richard Handel, the test engineer who oversees CR's dryer testing. But don't stop there-lint also accumulates in your dryer's vent (generally found at the back of your dryer) and the duct that connects the dryer to the outside vent. If your dryer takes longer to dry

LEARN

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

than it used to, it can be a clue that a vent may be obstructed by lint. Certain dryers have indicators to alert you to a blocked vent, such as LG's FlowSense and Samsung's Vent Sensor, but our testing found that they don't always detect partial blockages well.

To clean your dryer's vent and duct, unplug the dryer and turn off the gas valve, if applicable. "Then slide the dryer away from the wall," Handel says. "If you have a gas dryer, take care not to overstretch the gas line." Disconnect the duct from the dryer, and vacuum both thoroughly. Also clean behind and underneath the dryer-lint builds up there, too. In winter, check to make sure snow isn't blocking the outdoor vent.

Is it really healthier to stand at my desk all day rather than sitting?

Ergonomics experts now say that switching back and forth between sitting and standing is your best option. "The main benefit of a standing desk is the ability to move," says

Dana Keester, CR's in-house ergonomics expert. Aim for 10 minutes of standing and moving every half-hour.

To facilitate standing, you don't need to invest hundreds in a standing desk: A swingarm adapter, which clamps to the back of an existing desk or table with either a shelf for your laptop or a mount for your monitor, can be had for around \$100. Just make sure it can lift high enough so that your screen is at eye level. Or use your laptop on a kitchen counter for short periods-even if that means your laptop screen isn't at eye level. "It's okay to stand at your breakfast bar or kitchen island for just 15 minutes as a way to change positions," says Todd Baker, the lead ergonomics consultant for the Musculoskeletal Injury Prevention Program at Cornell University in Ithaca, N.Y.

My doctor gave me a prescription for what he called an 'off-label' use—is that safe?

Legally, a doctor can prescribe a drug for a condition that the drug was not specifically approved by the Food and Drug Administration to treat. For example, Neurontin (generic name: gabapentin) is approved to treat epileptic seizures but

is used off-label to treat nerve pain related to diabetes. In fact, going off-label is common. Between 12 and 38 percent of all prescriptions written in doctor's offices are for offlabel uses, according to a 2019 **Congressional Research Service** report-though it's illegal for a drug company to advertise offlabel use. Only about a quarter of off-label prescribing is supported by strong scientific research, which is why the practice can be controversial.

Why would your doctor do this? A drug is sometimes thought to be useful in treating conditions beyond what it was approved for. Getting FDA approval requires clinical trials to prove treatment for a specific condition. That can take years and often costs about \$20 million per trial, so companies might not always seek approvals for additional conditions.

An off-label prescription may make sense for you when no other available treatment works or when you're in a group that wasn't studied-for example, if a drug was approved for a specific age range only. Always ask your doctor whether a drug she's prescribing is approved for your condition, and look it up yourself at DailyMed (dailymed.nlm.nih.gov), a government-funded database.



Product recommendations and practical advice



IN THE KNOW

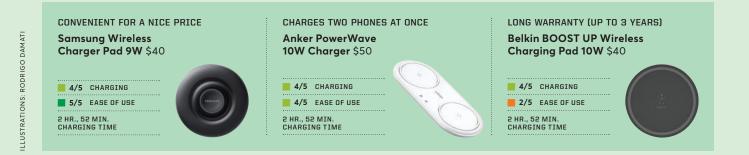
THE EASE OF WIRELESS CHARGERS

DESIGNED SO THAT your smartphone simply rests on a pad or stand, wireless chargers allow users to forgo the usual fumble of plugging in a charging cable. But is that convenience worth buying yet another tech accessory? To find out, we tested six wireless chargers. All are Qi-compatible (Qi is pronounced "chee")–a nearuniversal wireless charging standard that works with many smartphones–and support Samsung's Fast Charge technology, meaning if you have a recent high-end Samsung phone, they should provide even quicker charging.

Our lab technicians evaluated how easy the chargers were to

use. They also measured how long it took for each device to fully charge both an iPhone 11 Pro Max and a Samsung Galaxy S10 (both compatible with wireless charging), then averaged those times. Though there were some differences in charging speeds, all the products powered up the phones in a reasonable amount of time and didn't short out when sprayed with a small amount of water. (Good to know if your charger lives on a kitchen counter.) The fastest model by far is the Samsung 15W stand above. The benefit of a stand, rather than a flat pad, is that it's easier to see notifications on your phone while you charge it. And it features an LED light that makes it easy to see whether your phone is fully charged.

But for a family, a multidevice charger, such as the Anker below, may be best. In our tests, it charged two phones at once in the same amount of time as just a single phone.



CRInsights



THESE DAYS, your bedroom may be doubling as an office or a quiet hideaway to stream your favorite show–but balancing your laptop in bed makes it all the more likely you'll drop food bits, drip a little coffee, or spill some wine.

"Generally, you can treat mattresses similarly to spottreating carpets," says Mary Begovic Johnson, principal scientist of Tide & Downy at P&G Fabric Care. Johnson says that you have to attack the stain immediately and be prepared to treat and repeat multiple times until the stain is gone.

To handle a fresh spill, remove the bedding for

washing, then gently blot the stain with a clean cloth to soak up any excess liquid on the mattress. Next, dab liquid detergent directly onto the mattress stain. For optimal stain removal, use a top-rated detergent from our tests: The Tide and Persil detergents at right both earn Excellent ratings for pretreating stains.

You can also use a stain remover spray directly on your mattress, such as OxiClean MaxForce Spray–which rates Excellent in our tests for tackling salad dressing stains, as well as body oil and dirt– or OxiClean Laundry Stain Remover Spray, which works particularly well on coffee stains compared with other stain remover sprays we tested. If you spill red wine-one of the toughest stains to get outexperts advise a homemade remedy: Blot the stain with a cloth dampened with cold water. Then mix one part dish soap and two parts hydrogen peroxide, and pour it onto a damp cloth that you can use to blot the stain again. (Repeat until the stain fades away.)

Dealing with old dry stains? Try an upholstery cleaner, an enzyme-based pet-odor remover, or a simple solution of 1 teaspoon mild dish detergent and 1 cup warm water.



Tide Plus Ultra Stain Release \$0.28 per load





✔ Persil
 ProClean Stain
 Fighter
 \$0.21 per load



All-Access and Digital members can access our full detergent ratings at CR.org/stains1020.

CR Time Traveler TOILETRIES

1920 Listerine mouthwash, originally used as an antiseptic for surgeries, uses the word "halitosis"-to describe bad breath-for the first time.

> 1939 We rate more than 100 brands of soap and find that one of the cheapest, a Colossal soap bar for 3 cents, is also one of the highest quality. Despite marketing hype, there's no need to splurge on pricey soaps, CR experts say.





1949 We test 93 brands of toothpastes and powders-and reveal that some are harmful. Twelve brands contain particles hard enough to scratch glass!

1959 One of the first – electric toothbrushes to hit the U.S. market is called the Broxodent. It is claimed to brush "up and down 120 times a second."

EXCELLENT



1975 After founding Tom's of Maine in 1970, Tom Chappell and his wife bring "the first natural toothpaste" to the U.S. market.

(\$

CR BEST BUY

RECOMMENDED

ISTERIN

10

REPAIR OR REPLACE?

FINDING A RELIABLE TOASTER OVEN

A TOASTER OVEN earns its spot on the counter for being able to do a lot more than turn out toast. It can broil burgers, roast asparagus, or bake cookies (turn to "Countertop Holiday Helpers," on page 44, for even more delicious ideas). Plus, our survey suggests this kitchen staple may last longer than you'd expect: Ninety-two percent of the 27,239 toaster ovens

that CR members purchased between 2011 and 2019 were still being used in 2019, and only 5 percent were replaced due to reliability problems.

But reliability differs widely among brandsin fact, only three receive an Excellent (9-10) rating for predicted reliability, which estimates the likelihood that newly purchased toaster ovens from a

given brand will develop problems or break within the first four years. And two brands, DeLonghi and Farberware, earn such low reliability ratings that we can't recommend them at this time.*

A tip from our members: In addition to reliability, look for a model that our tests show is easy to clean. Difficult cleaning was respondents' biggest complaint about their toaster ovens.



1984 We test the Italian Folding Razor for campers; it folds into the size of a matchbook. The design is "ingenious" we say, but the shave quality is subpar.



1993 A can of Barbasol shaving cream is a prominent plot point in Steven Spielberg's "Jurassic Park" (though in the Michael Crichton novel it's a Gillette can).

2010 CR staffers test 10 electric toothbrushes. Before and after brushing, a dentist uses dye to reveal plaque; the priciest ones remove the most.



2016 Shaving clubs offer a new way to buy razors for less. We test razors from three clubs and judge how close the shave is. Gillette is the favorite.

among the top-rated for excellent cleaning performance.

2020 In our most

toothbrushes, a

Sonicare model is

Phillips Sonicare Protective Clean 6100 \$110



For our full ratings of electric toothbrushes, turn to "A Better Brush," on page 18.

CRInsights

CR MONEY SAVER

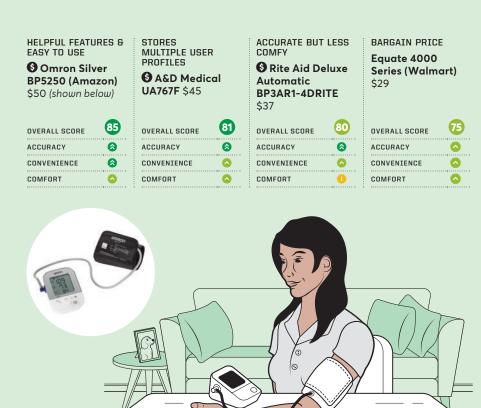
BEST BLOOD PRESSURE MONITORS FOR \$50 OR LESS

ROUGHLY ONE OF every three U.S. adults reports having high blood pressure, according to a recent study from the Centers for Disease Control and Prevention. Some research, however, suggests that the true number of Americans with hypertension could be closer to 45 percent, and only a quarter have it controlled. (A level of 130/80 is considered stage 1 hypertension.)

Hypertension affects different racial and ethnic groups unequally in the U.S. Among adults. 40 percent of Blacks, 37 percent of American Indian and Alaska Natives, and 33 percent of Native Hawaiians and Pacific Islanders report having hypertension, compared with 29 percent of whites, 28 percent of Hispanics, and about 24 percent of Asians, the CDC's study says. Some research, however, found that Asians had greater odds of having hypertension than whites. And another study found that Hispanic and Black people with hypertension are less likely than non-Hispanic whites to have it under control. The reasons may include a lack of quality insurance coverage.

A good plan for those with high blood pressure includes regular exercise, a healthy diet. and (for some) medications. Research suggests that self-monitoring may be beneficial, too. In some cases, a home blood pressure monitor, which can range from \$20 to \$100, may help diagnose hypertension-because levels recorded at the doctor may differ from those in everyday life.

But will a cheaper drugstore model work well? Our home monitor tests, which evaluate accuracy, comfort, and ease of use, found budget models that get the job done, says CR testing lead Susan Booth. The models below even outperform some \$90 and \$100 models we tested.





PRIVACY UPDATE

YOUR SNOOPING SMART SPEAKER

DO YOU EVER worry that the microphone in your smart speaker is listening to a conversation in your home when it's not supposed to? You're right to be concerned, according to a recently released study. Using dialogue from popular TV shows, researchers at Northeastern University have discovered that smart speakers are often fooled into recording you when they hear words that sound similar to a speaker's "wake words"those designed to summon a smart speaker's digital assistant, such as "Hey, Alexa," to engage Amazon's Alexa.

Researchers noted when the devices started recording and for how long, as well as what dialogue triggered the device. For example, the Google Home Mini mistook the phrase "okay to go" for its wake words, "Hey, Google." And the Apple HomePod heard "Hey, Missy" as "Hey, Siri." Researchers also noted that a high frequency of false activations occurred during episodes of "Narcos" with Spanish dialogue. On average, the speakers had one erroneous activation every 4 hours. However, the study also found that smart speakers tend to catch their mistakes quickly and shut off the mic, usually within seconds.

"Digital assistants are an imperfect technology," says Justin Brookman, director of privacy and technology policy at CR. "When we bring these devices into our houses, this is the risk we take. There's no telling how they're using it to better understand us."

To learn more about how you can better protect your privacy in a connected world, go to CR.org/privacy1020.



RECALLS

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



HONDA VEHICLES

Honda has announced two software-related recalls. The first recall involves the software that controls the backup camera display on 499,342 vehicles, including 2019-2020 Odyssey minivans, 2019-2020 Passport SUVs, and 2019-2021 Pilot SUVs. The display may be delayed or fail to show when the vehicle is put in Reverse, increasing the risk of a crash. Consequently, these vehicles fail to comply with federal safety standards.

The other recall, of 607,784 vehicles, is to address concerns with the instrument panel software. Incorrect software can mean that the panel will fail to display key information, such as engine oil pressure, speedometer, and gear selector position, until the vehicle is turned off and restarted. The vehicles and model years are the same for this recall as the backup camera recall, with the addition of the 2018 Odyssey. What to do: Look for a mailed notification to owners in late September 2020. Honda dealerships will update the

appropriate software at no charge. Owners may contact Honda customer service at 888-234-2138.

BOY SCOUTS OF AMERICA PINS

Boy Scouts of America is recalling about 78,000 Cub Scout activity pins because the pin's face and shaft contain levels of lead that exceed the federal lead content ban. Lead is toxic if ingested by young children and can cause adverse health issues. The pins were sold at Boy Scouts of America retail stores and authorized distributors nationwide and online at scoutshop.org from April 2016 through January 2020 for about \$1.

What to do: Take the pin away from kids and return it to any Boy Scouts of America retail store or contact Boy Scouts of America's National Distribution Center for a full refund, including shipping, or for a merchandise credit. Go to scoutshop.org for details.

A STEP FORWARD FOR INFANT SAFETY

After a Consumer Reports investigation prompted the recall of millions of infant inclined sleepers and helped lead to a proposed ban of the products by the Consumer Product Safety Commission, CR has reached another milestone for safe infant sleep. CR found evidence that another type of baby product known as in-bed sleepers (meant for bed-sharing with a caregiver) was linked to at least 12 infant deaths. In the wake of CR's efforts, staff for the CPSC sent a letter to juvenile product industry representatives emphasizing their serious safety concerns with the products. CR welcomes this move and continues to urge parents to stop using any products that don't meet federal safety requirements related to infant sleep, including in-bed sleepers. The products, which are largely unregulated, feature padding that can block a baby's ability to breathe and soft sidewalls that don't prevent parents from rolling onto the sleeper and the baby. And by their nature they encourage bed-sharing, a practice that itself increases the risk of infant death. For more details on our investigation, go to CR.org/safebaby1020.

HONDA ROVs

Honda is recalling about 25,000 ROVs because they can move or roll when in the Park position, posing crash and injury hazards. The ROVs were sold at authorized Honda Powersports dealers nationwide from November 2018 through March 2020 for \$15,000 to \$24,000. What to do: Stop using the ROV and contact an authorized Honda Powersports dealer to make an appointment for a free inspection and repair. Call Honda at 866-784-1870 or go to powersports.honda.com for details

COSTWAY STROLLERS

Costway is recalling about 16,000 double baby strollers because they violate the Federal Standard for Carriages and Strollers. A child's torso can pass through the opening between the tray and the seat bottom, and his or her head can become entrapped, posing strangulation hazards. There's also a large opening between the seat and the crotch restraint, posing a fall hazard. The strollers were sold online at costway.com and Amazon from May 2016 through December 2019 for about \$100.

What to do: Stop using the stroller and contact Costway at 844-242-1885 for details on how to receive a full refund, including taxes and shipping.

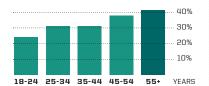
OCTOBER IS THE BEST TIME TO BUY ...

LEAF BLOWERS

SMOKE DETECTORS

CHAINSAWS

For more info, go to CR.org/ buy1020. People who tend to run the water while brushing their teeth, by age*



Turning off the tap can save 8 gallons a day, or nearly 3,000 gallons a year, if you brush twice daily for 2 minutes.*

PRODUCT UPDATE

THE LATEST RATINGS FROM OUR LABS

A Better Brush?

We reveal whether an electric model will leave your teeth cleaner.

by Sally Wadyka



17241 000

D0520

81 OVERALL SCORE F THERE'S ONE thing dentists all agree on, it's that brushing your teeth for 2 minutes, twice a day, is the most effective step you can take for oral health. This habit helps get rid of the

bacteria that cause plaque, the sticky, germy film that adheres to teeth. When plaque builds up it can cause tooth decay as well as gum disease. And left untreated, severe gum disease has been linked to other illnesses, such as diabetes and heart problems. New research even suggests it may play a role in serious COVID-19 infections.

Ever since the advent of the electric toothbrush in the 1960s, there's been a debate over whether powered or manual brushes do a better job of cleaning teeth. Despite a glut of advertisements for electric or powered devices, manual brushes are still by far the most used, by 82 percent of adults. But the older and wealthier a consumer is, the more likely he or she is to adopt a powered brush. According to Mintel, a market research firm, almost half of people 55 and older with annual incomes of \$75,000 or more prefer powered to manual.

The most basic powered models, which run on replaceable batteries, can be had for less than \$10. Those with rechargeable batteries (for which a single charge lasts anywhere from a few days to several weeks) start as low as \$20. But you can spend more than \$250 for high-end "smart" powered toothbrushes that sync with an app on your phone and offer recommendations on improving your brushing technique.

Which should you choose? Dental experts point out that each has its



A dental hygienist measured the plaque levels of our volunteers before and after brushing. pros and cons, and that personal preferences and your health conditions will factor into your choice. (We rated eight electric toothbrushes. You can see the differences among popular models on pages 22 and 23.)

Does Electric Have an Edge?

"You can brush very effectively with a manual toothbrush," notes Matt Messina, D.D.S., a consumer adviser with the American Dental Association (ADA). "If you get good checkups and your dentist is confident you're doing a thorough job, you don't need to change from a manual brush."

But some studies suggest that electric devices may lead to healthier outcomes. One of the more comprehensive analyses-a 2014 review by the Cochrane Collaboration, which assesses scientific evidencegave powered brushes a slight edge at clearing away plaque. Researchers looked at 56 clinical trials of teeth brushing by more than 5,000 adults and children. They found that those who used a powered brush showed an 11 percent reduction in plaque after one to three months of use, and a 21 percent reduction after three months or more compared with manual brush users.

They also found that powered brush users had a 6 percent reduction in gingivitis (an early gum disease that can be marked by bad breath and red, swollen gums that may bleed easily) at one to three months, and an 11 percent reduction after three or more months.

In addition, the researchers found that oscillating powered brushes (which have small round heads that rotate quickly in one direction and then the other) were slightly better at reducing plaque than sonic powered brushes (which have oval heads that move or vibrate rapidly from side to side). But study authors say more research is needed to confirm that finding.

A study published in 2019 in the

Journal of Clinical Periodontology also found that powered brushes were more effective for gum health. Here, researchers at University Medicine Greifswald in Germany, who followed 2,819 adults over 11 years, determined that using a powered toothbrush reduced the progression of periodontal disease. (More advanced than gingivitis, it can cause loose teeth and expose roots.) Plus, electric toothbrush users had healthier gums overall and retained 19 percent more teeth over the study than those using manual brushes.

Can Electrics Hurt Your Teeth?

The power that allows electrics to do such a thorough job on plaque may be a potential problem. A 2017 study published in the journal PLOS One found that powered brushes were more likely than manual to abrade dentin, the tissue below the tooth's enamel, which can become exposed when enamel wears away or gums recede. Abrasions to dentin increase tooth sensitivity and can hike cavity risks.

For the study, researchers took dentin samples from people's teeth and then used a machine that simulated the effects of eight and a half years of brushing. They found that sonic toothbrushes caused the most abrasion to dentin, followed by oscillating, and that manual brushes–especially those that have rippled instead of flat bristles– caused the least.

Another simulated brushing study, this one published in 2013 in the journal Clinical Oral Investigations, had somewhat different results. It found that manual and powered brushes had similar effects on intact enamel, but that on worn enamel, manual teeth brushing abraded dentin more.

But there's an important caveat: In the second study, the manual brushing simulation used much more force than the powered brush simulation. And experts say that brushing too forcefully with any kind of brush can increase



the likelihood of gum recession and damaged tooth enamel.

In fact, a gentle touch—whether using a manual or an electric—is the safest bet. "It doesn't take much force to brush away bacteria and food particles," says Vera W. L. Tang, D.D.S., a clinical assistant professor, vice chair, and predoctoral director in the department of periodontology and implant dentistry at the New York University College of Dentistry.

That light touch may be key with powered brushes. "When you brush with a powered toothbrush," Tang says, "you don't really have to do anything, because the rotating or vibrating head does the work for you."

How a Brush Is Built

Powered and manual toothbrushes come in a variety of head sizes and bristle configurations, with bristles that are clustered, angled, or rippled in various ways. "Some studies have shown that tapered or angled bristles are slightly more effective at reducing plaque than flat brushes," Tang says.

Whether you opt for a manual or powered toothbrush, choose one with soft bristles. "Bristles that are too hard are more likely to cause damage to gums and enamel," Tang says.

When in doubt, Messina suggests checking to see whether a brush has earned the ADA Seal of Acceptance. "That indicates that it's been independently tested," he says, "and that it safely and effectively removes plaque and reduces gingivitis."

If you're thinking about a powered brush, one feature to consider is a 2-minute timer. According to the ADA, most people brush for an average of only about 45 seconds, so it may encourage you to brush longer. (Certain manual toothbrushes also have this feature or light up after 2 minutes of use.) Some powered models have quadrant timers that buzz every 30 seconds to remind you to move on to another area of your mouth.

A powered brush with a pressure sensor may help people who tend to brush too aggressively. "Some models sense if you're pushing too hard and respond by stopping the bristles from moving until you lighten your touch," Tang says.

Powered devices may also yield better results for certain people, experts say. For instance, older adults, especially those with arthritis, might not have the dexterity to maneuver a manual brush effectively. "Powered brushes not only do much of the work for you, but the larger handles are easier to hold," she points out.

Youngsters may benefit from them for the same reasons. Plus, some powered brushes made specifically for kids play music or connect to timer apps to encourage longer brushing, although whether or not that actually inspires children to brush for the recommended 2 minutes hasn't been studied.

(The ADA and the American Academy of Pediatric Dentistry say that parents should supervise brushing until their children are about 7 or 8, and that kids who can routinely tie their own shoes can brush their own teeth with a manual or a powered toothbrush.)

Powered brushes can also be a boon for those with braces. "It's much easier to get around all the brackets and wires than with a manual brush," Messina says. Some electrics even have heads designed to clean thoroughly around and between braces.

It's All in the Wrist

Whether you choose a basic brush or one with all the bells and whistles, the way you brush is important. "The correct technique can be used with a powered or manual toothbrush," says Paulo Camargo, D.D.S., chair of periodontics at the UCLA School of Dentistry. "People who do a good job can do a good job with either."

Here's how to get the most out of

brushing your teeth:

Angle your brush. "The biggest mistake most people make is holding their brush at 90 degrees, which cleans the teeth but not the gums," Camargo says. "Bacteria grow in the space between the teeth and gums, and in order to disrupt it, you need to use the bristles at a 45-degree angle and get them below the gumline."

Brush two teeth at a time. Work your way methodically around your mouth, focusing your attention on two teeth at a time, Tang suggests. "If you're using a powered brush, just set it on those two teeth and let it do its thing, then move on to the next two," she says.

Be thorough. "Regardless of what type of brush you use, you still have to make sure the bristles touch every surface of every tooth," Messina says. Clean the front and back of teeth, and top and bottom, including the sharp edges. Get the brush behind back teeth, too. For good measure, go over the surface of your tongue to reduce bacteria there and help prevent bad breath. Use the right touch. "There's a fine line between doing a good job and overdoing it," Camargo says. If you're concerned that you're brushing too hard, try this trick: Instead of grasping the brush in your fist, hold it with just your fingertips. "It doesn't allow you to put as much pressure on your gums," Tang says. And know the signs of overly aggressive brushing: tooth sensitivity, bleeding or irritated gums, receding gums, and splayed toothbrush bristles. Replace regularly. You'll need to break out a new toothbrush-or a new brush head for a powered toothbrushevery three to four months. If the bristles are frayed or splaying, it's time for a new one. "Splayed bristles can no longer effectively get under the gum line," Camargo says.

Also consider this: Plastic toothbrushes create a lot of trash that doesn't break down easily. With powered models, you're tossing a little



Brushing Tips for Older Adults

GOOD DENTAL

habits are always important, but at-home oral hygiene is crucial later in life because older adults may be especially prone to cavities, gum recession, and tooth sensitivity.

One reason is that some meds often taken by seniors can cause dry mouth. "Saliva is nature's cavity-fighter, because it washes bacteria and plaque away from your teeth," says Alice Boghosian, D.D.S., a spokesperson for the American Dental Association (ADA) and a clinical instructor at the University of Illinois at Chicago College of Dentistry. "Without it, plaque sticks to teeth, increasing your risk of cavities." To ensure that you're brushing right:

GO FOR 2X2. Like younger adults and children, brush twice a day for 2 minutes at a time. Whether you choose a manual or powered device, opt for a soft brush. Some research suggests that heads with rippled or tapered bristles may clean more effectively but with less force.

BRUSH WELL. Clean every surface, between teeth, and under any bridges you have. "Gums recede with age, so there's more room for food to get trapped between teeth," Boghosian says. Interdental brushes, floss picks, and floss holders may help you navigate more easily.

BUT BE GENTLE. "The nerves of the teeth tend to recede with age, so you don't get the warning signs of sensitivity when you press too hard," says Vera W. L. Tang, D.D.S., of the New York University College of Dentistry. A powered brush with a pressure sensor that alerts you when you're brushing too hard may help reduce tooth sensitivity or keep it from worsening.

GET A GRIP. We may become less dextrous with age, so use a brush that's comfortable to hold, Tang says. Many powered brushes have larger, easier-to-grip handles. But some have very strong vibrations, which may cause some users to drop the brush easily. If holding a toothbrush is a challenge, wrap the handle in a dish towel and secure it with rubber bands, or slip a bicycle handlebar arip or other foam tube over it.

less plastic because it's only the brush head that's replaced regularly. But some manufacturers now offer manual toothbrushes with replaceable heads. And some companies make manual brushes from sustainable bamboo, compostable bioplastic, or cellulose (plastic generated from wood), though these aren't necessarily ADA-approved.

And last, if you're wondering whether diligent brushing can replace professional cleaning, the answer is no. "You can't get between the teeth and under the gumlines as effectively," or see the back of the mouth as well as the pros can, Messina says. "But everything you do at home makes things better."

How We Tested

CR tested eight powered toothbrushes using a panel of 20 people between ages 18 and 65, all in good dental health and users of electric toothbrushes. We gave each product an Overall Score based on five measures: cleaning performance, ease of use, battery performance, perceived noise, and extra features.

To evaluate cleaning performance, we had the volunteers skip brushing and using other dental products (except for toothpicks) for 8 hours. Then a dental hygienist evaluated their plaque levels based on the commonly used TMQH Plaque Index. The volunteers had a TMQH score of more than 1.5 on a scale of 1 to 5, with 5 signifying the most plaque buildup. Each volunteer was given a device and asked to brush for 2 minutes. The hygienist measured plaque levels again, and the before-and-after differences gave each product its cleaning performance score.

To evaluate battery performance, testers measured how long it took the six rechargeable models to charge fully and the batteries on all eight models to run down. For ease of use, testers asked volunteers about tasks like attaching the brush head and recharging, and how comfortable a brush was to use. For noise, testers asked volunteers for their perception of loudness during device use, and the extra features score was based on whether a product had a timer, a pressure sensor, multiple speeds, a charge level indicator, and smartphone app capability.

Note that powered brushes may have multiple brushing modes to choose from (such as "sensitive" or "deep clean"), and some products can accept brush heads of more than one shape and level of softness. Our ratings of powered brushes are based on the combination of brush head and brushing mode that scored highest.



Electric Toothbrushes

More manufacturers are moving into the powered brush market, but Oral-B and Philips Sonicare remain untouchable in terms of performance, according to our testers. That said,

ORAL-B GENIUS X 10000

\$220



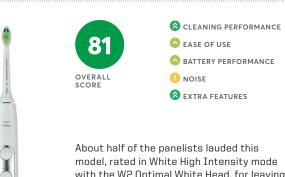
PHILIPS SONICARE PROTECTIVE CLEAN 6100

\$110

1.1.

·

110

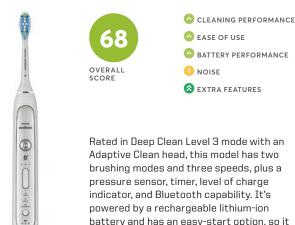


with the W2 Optimal White Head, for leaving their teeth with a clean feeling. It has three brushing speeds, three brushing modes (Clean, White, and Gum Care), and a pressure sensor, timer, and charge level indicator. Like the other rated Philips devices, its easy-start option allows it to gently increase speed during use.

ORAL-B PRO 3000 \$90



PHILIPS SONICARE FLEXCARE PLATINUM CONNECTED HX9192/0 seno



 \odot

POOR -

powered by a rechargeable lithium-ion battery and has an easy-start option, so it can gently increase in speed. Some testers were critical of the head and the device's inability to reach the back of the mouth.

 (\land)

- EXCELLENT

RECOMMENDED

panelists thought that Oral-B brushes produced less vibration and were more comfortable to use. But Philips' batteries tended to last longer and charge faster. The least expensive

of these models scored very high on battery performance and not significantly lower on cleaning performance than the midrange Oral-B and Philips Sonicare models.

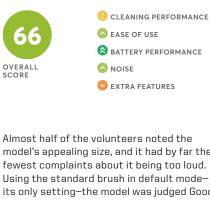


PHILIPS SONICARE DIAMONDCLEAN HX9903/01 \$200

CLEANING PERFORMANCE A EASE OF USE BATTERY PERFORMANCE OVERALL SCORE EXTRA FEATURES

> Although the cleaning performance was excellent, almost three-fourths of the panelists criticized its "unappealing vibration." The model, tested in Deep Clean Mode with the W2 Optimal White brush head, has five brushing modes, a timer, and a level of charge indicator. Like the other rated Philips models, it can increase gently in speed during use. It's powered by a rechargeable lithium-ion battery.

COLGATE 360 ADVANCED WHITENING \$9



model's appealing size, and it had by far the its only setting-the model was judged Good on cleaning performance, not significantly lower than some of the pricier rated models. It has replaceable AAA batteries and an extra feature: a timer.

ARM & HAMMER SPINBRUSH PRO + EXTRA WHITE <u>\$9</u>



With a standard brush and just one cleaning mode, this device's cleaning performance was judged Good, not significantly lower than some of the pricier models. It scored lowest of all the rated models on noise, ease of use, and extra features (there are none). This brush is powered by replaceable AA batteries.

Stop Eating

Use **CR'S EXCLUSIVE RATINGS** to get the health benefits from fruits and veg



Oranges



24 CR.ORG OCTOBER 2020

Pesticides

etables while minimizing your risk from toxic chemicals. by Catherine Roberts





SINKING YOUR TEETH into a crisp apple or chomping on a stalk of celery is something you should be able to do without thinking. After all, the best nutritional science shows that eating a variety of fruits and vegetables—and plenty of them—is a crucial component of good health. But produce sometimes comes with potentially harmful pesticide levels.

That's according to a new Consumer Reports analysis of five years of data from the Department of Agriculture collected from tests on fruits and vegetables to detect about 450 different pesticides. In some cases, those levels exceed what CR's experts consider safe.

The solution isn't to eat less produce. More than 80 percent of Americans already fall short of the recommended amounts: at least 2½ cups of vegetables and 2 cups of fruits per day for most adults. Instead, you can minimize the risk by choosing fruits and vegetables grown with fewer and safer pesticides.

One way is to choose organic produce. "CR recommends buying organic when possible, to reduce your pesticide exposure and protect the environment and farmworkers," says Charlotte Vallaeys, the senior policy analyst at CR who led our new pesticides study. Organic standards permit some pesticides, but they can be used only after nonchemical methods, such as crop rotation, have failed. Even then, farmers can't use pesticides that could be harmful to people or the environment. "Still, we realize organic can cost more, and that means it isn't always an option," Vallaeys says. And in many low-income communities, access to fruits and vegetables in general–let alone organic–may be limited.

To help consumers identify which produce pose the biggest risk from pesticides, CR experts developed ratings for 35 fruits and vegetables. They were organic and nonorganic, grown in the U.S. and imported. We also rated some frozen, canned, and dried items, for a total of 49 products.

The good news: Almost half of the nonorganic fruits and vegetables pose little risk. But about 20 percent, such as fresh green beans, peaches, and potatoes, received our worst scores; those are the ones it's most important to try to buy organic. (See "How Much Does Organic Really Cost?" on page 32 for tips on saving money on organic.) Even some organic products, such as fresh spinach, had worrisome pesticide residue. "For the lowest-scoring items, eating a half of a serving or less per day poses long-term health risks to a young child," Vallaeys says.

Pesticides and Your Health

"Pesticides are chemicals that are specifically designed to kill living organisms," says Devon Payne-Sturges, Dr.P.H., an associate professor at the University of Maryland School of Public Health. Some of the clearest evidence of harm comes from people who work with pesticides or live in agricultural areas. The Environmental Protection Agency says agricultural pesticide exposure is tied to asthma, bronchitis, non-Hodgkin's lymphoma, Parkinson's disease, and prostate and lung cancers.

Industry groups say that such residue on food doesn't pose a risk. "A farmer's first consumer is his or her own family, so food safety is always their top priority," says Teresa Thorne, executive director of the Alliance for Food and Farming. And CropLife America, a pesticide industry group, noted that half or more of items tested by the USDA show no pesticide residue.

But many experts remain concerned. Payne-Sturges notes that pesticides can damage the brain and nervous system. And even low levels have been linked to cancer, reproductive issues, and other health problems, she says.

Plenty of research bears this out. A 2019 study in JAMA Internal Medicine found that people with the highest levels of exposure to pyrethroid pesticides were almost three times more likely to die from cardiovascular disease during the 14-year study than those with less exposure. In a 2010 study in the journal Pediatrics, children with a greater exposure to organophosphate pesticides were more likely to be diagnosed with ADHD. And a 2016 analysis in Scientific Reports found a link between pesticides and an increased risk of Alzheimer's disease.

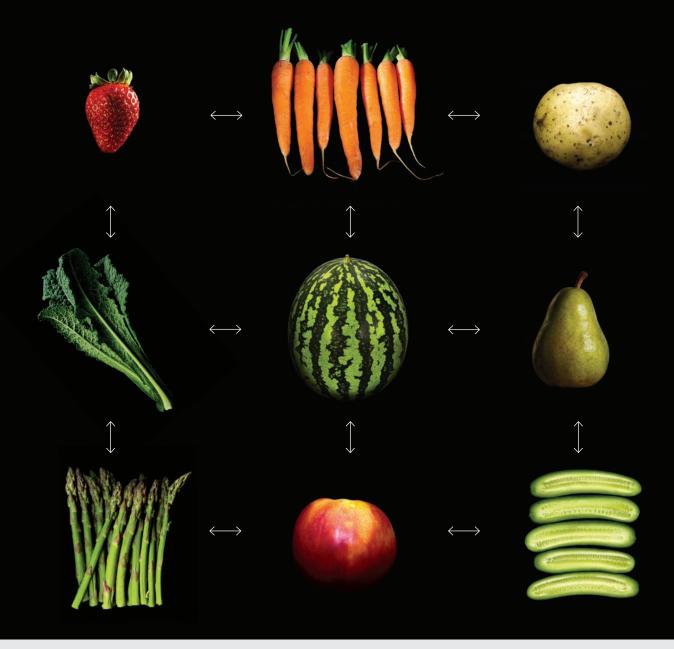
Other evidence suggests that pesticides disrupt the endocrine system, which is made up of hormones, the glands that produce them, and the receptors in the body that respond to them. Experts think this may contribute to some cancers and other health problems. And because this system is delicate, even small amounts of endocrine disruptors could have outsized effects, says Michael Hansen, Ph.D., CR's senior scientist.

Yet the overall health impact of pesticides may be even greater because there are still many unanswered questions about the effects of long-term, low-dose exposure.

What Research Can't Tell Us

Scientists studying pesticides are limited in the kind of research they can conduct. Giving a group of people a pesticideladen diet and another a pesticide-free one would provide clearer answers—but would also be unethical. So scientists turn to other types of studies. [CONT. ON PAGE 31]

Which Produce Should You Pick?



Τ

O CREATE CR'S ratings, we analyzed five years of datafrom 2014 to 2018,

the latest available-from the USDA's Pesticide Data Program, which tests fruits and vegetables for pesticides, about 24,000 samples in all. Then we calculated a rating based on four factors: the number of pesticides detected on each item, the frequency with which pesticides were found on samples, the average amount of residue of each pesticide found on the items, and the toxicity of the pesticides.

The ratings reflect the number of servings of a

particular fruit or vegetable a person can eat per day over a lifetime before the pesticides pose potential harm. We based our risk analysis on the levels that could harm a 35-pound child, about the size of a 4-year-old. The serving sizes represent a child's portion, about two-thirds of an adult serving. While adults may have more servings, the relative risk remains the same; that is, an item rated Poor carries a higher risk than one rated Fair or better. The risk comes from chronic exposure. Choosing produce with the best ratings most of the time can reduce the chance of future harm.

For more information, go to **CR.org/pesticideratings1020**.

Your Guide to the Produce Aisle

Produce items are listed according to their U.S.-grown, nonorganic rating, except for bananas, which are only imported. Canned and frozen versions are listed below the fresh versions, even if they have a different rating. When deciding on the fruits and vegetables to buy, CR recommends those rated Excellent, Very Good, or Good.

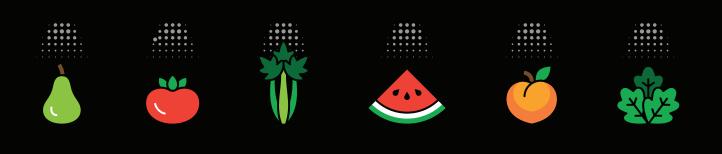
Broccoli fresh · 2/3 CUP, CHOPPEDImage: Constraint of the second sec	VEGETABLES • SERVING SIZE (APPROXIMATE)	NONORGA	NIC IMPORTED	ORGANIC	IMPORTED
Carrots fresh + 1/3 CUP, CHOPPEDImage: Construction of the sh + 3 TBSP, CHOPPEDImage: Construction of the sh + 1/3 CUP (KERNELS)Onions fresh + 1/3 CUP (KERNELS)Image: Construction of the sh + 1/3 CUP, CHOPPEDImage: Construction of the sh + 1/3 CUPPeas sweet, frozen or canned + 1/3 CUPImage: Construction of the sh + 3 TBSP, CHOPPEDImage: Construction of the sh + 3 TBSP, CHOPPEDScallions (green onions) fresh + 3 TBSP, CHOPPEDImage: Construction of the sh + 3 TBSP, CHOPPEDImage: Construction of the sh + 3 TBSP, CHOPPEDAsparagus fresh + 3 MEDIUM SPEARSImage: Construction of the sh + 1/2 CUP, SLICEDImage: Construction of the sh + 1/2 CUP, SLICEDPeas snap, fresh + 1/2 CUP, CUBEDImage: Construction of the sh + 1/2 CUP, CUBEDImage: Construction of the sh + 1/2 CUP, CUBEDTomatoes fresh + 1/2 CUP, CHOPPEDImage: Construction of the sh + 1/2 CUP, SLICEDImage: Construction of the sh + 1/2 CUP, SLICEDLettuce fresh + 1 CUP, SHREDDEDImage: Construction of the sh + 1/2 CUP, SLICEDImage: Construction of the sh + 1/2 CUP, SLICEDCummer squash fresh + 1/2 CUP, SLICEDImage: Construction of the sh + 1/2 CUP, SLICEDImage: Construction of the sh + 1/2 CUP, SLICEDSummer squash fresh + 1/2 CUP, SLICEDImage: Construction of the sh + 2/3 CUP, CHOPPEDImage: Construction of the sh + 1/2 CUP, SLICEDCelery fresh + 2/3 CUP, CHOPPEDImage: Construction of the sh + 3 CUPS, CHOPPEDImage: Construction of the sh + 3 CUPS, CHOPPEDKale fresh + 3 CUPS, CHOPPEDImage: Construction of the sh + 3 CUPS, CHOPPEDImage: Construction of the sh + 3 CUPS, CHOPPED	Broccoli fresh • 2/3 CUP, CHOPPED				
Cilantro fresh · 3 TBSP., CHOPPED Image: Construct of the state	Cabbage fresh • 2/3 CUP, CHOPPED				
Corn fresh · 1/3 CUP (KERNELS)Image: Constant of the second o	Carrots fresh • 1/3 CUP, CHOPPED				
Onions fresh + 1/3 CUP, CHOPPEDImage: Character of the state of the sta	Cilantro fresh • 3 TBSP., CHOPPED				
Peas sweet, frozen or canned · 1/3 CUPImage: second se	Corn fresh • 1/3 CUP (KERNELS)				
Scallions (green onions) fresh · 3 TBSP., CHOPPEDImage: Character onions of the sector of	Onions fresh • 1/3 CUP, CHOPPED				
Asparagus fresh · 3 MEDIUM SPEARSImage: Cucumbers fresh · 1/2 CUP, SLICEDImage: Cucumbers fresh · 1/2 CUP, SLICEDImage: Cucumbers fresh · 1/2 CUP, 1/2-INCH PIECESImage: Cucumbers fresh · 1/2 CUP, 1/2-INCH PIECESImage: Cucumbers fresh · 1/2 CUP, CUBEDImage: Cucumbers fresh · 1/2 CUP, SLICEDImage: Cucumbers fres	Peas sweet, frozen or canned • 1/3 CUP				
Cucumbers fresh · 1/2 CUP, SLICEDImage: Cucumbers fresh · 1/2 CUP, SLICEDImage: Cucumbers fresh · 1/2 CUP, SLICESPeas snap, fresh · 1/2 CUP, 1/2-INCH PIECESImage: Cucumbers fresh · 1/2 CUP, CUBEDImage: Cucumbers fresh · 1/2 CUP, CUBEDSweet potatoes fresh · 1/2 CUP, CHOPPEDImage: Cucumbers fresh · 1/2 CUP, CHOPPEDImage: Cucumbers fresh · 1/2 CUP, CHOPPEDTomatoes canned · 1/3 CUP, DICEDImage: Cucumbers fresh · 1/2 CUP, SLICEDImage: Cucumbers fresh · 1/2 CUP, SLICEDLettuce fresh · 1 CUP, SHREDDEDImage: Cucumbers fresh · 1/2 CUP, SLICEDImage: Cucumbers fresh · 1/2 CUP, SLICEDCelery fresh · 2/3 CUP, CHOPPEDImage: Cucumbers fresh · 3 CUPS, CHOPPED	Scallions (green onions) fresh • 3 TBSP., CHOPPED				
Peas snap, fresh · 1/2 CUP, 1/2-INCH PIECESImage: Comparison of the state of the sta	Asparagus fresh • 3 MEDIUM SPEARS				
Sweet potatoes fresh · 1/2 CUP, CUBEDImage: Cup Cube Cup Cube Cup Cube Cup Cube Cup	Cucumbers fresh • 1/2 CUP, SLICED				
Tomatoes fresh · 1/2 CUP, CHOPPEDImage: Comparison of the state of the	Peas snap, fresh • 1/2 CUP, 1/2-INCH PIECES				
Tomatoes canned · 1/3 CUP, DICEDImage: Constraint of the sector of the sect	Sweet potatoes fresh • 1/2 CUP, CUBED				
Lettuce fresh · 1 CUP, SHREDDEDImage: Comparison of the shift of the sh	Tomatoes fresh • 1/2 CUP, CHOPPED				
Summer squash fresh · 1/2 CUP, SLICED Image: Color of the state	Tomatoes canned • 1/3 CUP, DICED				
Celery fresh · 2/3 CUP, CHOPPED Image: Chopped in the second se	Lettuce fresh • 1 CUP, SHREDDED				
Kale fresh · 3 CUPS, CHOPPED	Summer squash fresh • 1/2 CUP, SLICED				
	Celery fresh • 2/3 CUP, CHOPPED				
Green beans fresh · 2/3 CUP, 1/2-INCH PIECES	Kale fresh • 3 CUPS, CHOPPED				
	Green beans fresh • 2/3 CUP, 1/2-INCH PIECES				
Green beans canned • 2/3 CUP	Green beans canned • 2/3 CUP				
Green beans, frozen • 1/2 CUP, 1-INCH PIECES	Green beans, frozen • 1/2 CUP, 1-INCH PIECES				
Potatoes fresh • 1/2 CUP, DICED	Potatoes fresh • 1/2 CUP, DICED				
Spinach fresh · 2 CUPS	Spinach fresh • 2 CUPS				
Spinach frozen • 1/3 CUP	Spinach frozen • 1/3 CUP				

	EXCELLENT	VERY GOOD	GOOD	FAIR	POOR
SERVINGS PER DAY	MORE THAN 10	MORE THAN 3, TO 10	MORE THAN 1, TO 3	MORE THAN 1/2, TO 1	1/2 OR LESS

Data not available

WN IMPORTED Imported Imported	U.SGROWN	

The 6 Most Concerning Pesticides on Produce



IX PESTICIDES PLAY an oversized role in undermining the safety of the fruits and

vegetables Americans regularly consume. These pesticides contribute the most risk in the lowest-rated fruits and vegetables in CR's study. In some cases, a pesticide appeared in almost all of the samples of a particular fruit or vegetable. In other cases, a pesticide was detected in only a small percentage, but at worrisome levels. And that's a problem, because it's impossible for a consumer to know if the specific fruit or vegetable they choose in a store is one that's contaminated or not. If growers replaced these pesticides with more sustainable pestmanagement methods, many fruits and vegetables would be much safer. That's why CR urges growers to stop using these chemicals and the **Environmental Protection** Agency to ban them.

ACEPHATE

This pesticide can break down into a chemical called methamidophos, a compound banned as a pesticide in the U.S. since 2009 because it's a neurotoxin, meaning it damages the brain and nervous system. Acephate use is probably the reason methamidophos is still found on produce. It contributed the largest share of the risk for fresh green beans and was found in troubling amounts in about 10 percent of the samples. It's also responsible for a majority of the risk in nonorganic and U.S.grown frozen or canned green beans, summer squash, celery, and imported mangoes and watermelon.

CHLORPROPHAM

Used to keep potatoes from sprouting, this pesticide is banned in the European Union because it may interfere with hormones in the body, especially thyroid hormones. It was found in concerning amounts on nearly every sample of nonorganic U.S.grown potatoes and 96 percent of imported ones. It was even found on every sample of organic U.S.-grown potatoes, though at much lower levels. While the pesticide isn't allowed on organic produce, it may end up on organic potatoes when processing plants or storage bins aren't thoroughly cleaned between batches.

CHLORPYRIFOS

The EPA was on the brink of banning this neurotoxin in 2016 but reversed course in 2017 after intense lobbying from the pesticide industry, saying more research was needed. It contributes significantly to the risk in nonorganic peaches. Seventeen percent of imported samples and 2 percent of U.S.grown samples had worrisome levels of chlorpyrifos. But it sometimes shows up at lower levels on organically grown produce too, including broccoli and grapes.

CYHALOTHRIN

It's thought to interfere with the body's neuromuscular system. It's the major contributor to the risk in cherries, and was found in more than half of nonorganic U.S.-grown samples, fresh and frozen. It's also responsible for some of the risk in other types of produce, including nonorganic U.S.-grown kale, lettuce, nectarines, tomatoes, and spinach, and imported lettuce, snap peas, tomatoes, and frozen green beans.

FAMOXADONE

Some research suggests that this pesticide is a hormone disruptor. CR thinks it shouldn't be used on food until more is known about its safety. It's the main reason both nonorganic and U.S.-grown organic spinach fare poorly in our ratings.

FLUDIOXONIL

This is one of several risky fungicides that's used after harvest, and it's thought to have hormone-disrupting effects. Of this group, fludioxonil was the one that contributed the most risk in our analysis. It's primarily responsible for the high risk in nonorganic fresh peaches and nectarines. It was found in 90 percent of U.S.-grown nectarines, 78 percent of U.S.grown peaches, and about half of imported versions of both. It's also a factor in the risk for nonorganic apples, applesauce, cherries, kiwifruit, pears, plums, and potatoes.

WHAT ABOUT GLYPHOSATE AND DICAMBA?

THESE TWO COMMONLY used headline-making pesticides weren't part of our analysis. That's not because they're risk-free, but because they're mostly used for growing grains and beans, not fruits and vegetables.

Glyphosate, the active ingredient in Roundup, is sometimes used in home gardens, and both chemicals are used on corn and soybean plants that have been genetically engineered to be resistant to them. Glyphosate and dicamba destroy weeds but leave the plants unharmed. (Glyphosate can also be found on other crops, including oats and chickpeas.)

The World Health Organization classifies glyphosate as a probable cancer-causing agent, and dicamba is known for drifting from where it's applied to neighboring farms, killing those crops. That's why a U.S. Court of Appeals ruled earlier this year that the Environmental Protection Agency shouldn't have approved dicamba in the first place.

CR's safety experts believe these two pesticides should also be prohibited. [CONT. FROM PAGE 26]

Animal studies, which can provide clues to potential harms, are limited by significant biological differences between, say, rats and humans. And epidemiological studies—which look at groups of people, their pesticide exposure, and their health outcomes over long periods of time—can link pesticides and illness but can't prove that the chemicals caused the diseases.

Another limitation: Pesticides are usually regulated and studied by considering the effects of just a product's active ingredient. Yet pesticide formulas contain many other substances. "Some of these are called inert ingredients, which gives you the impression that they're not harmful," Payne-Sturges says. But how they might affect health is largely unknown.

Also, health effects may be compounded when multiple pesticides are used together, which frequently happens. But most studies evaluate only the effects of a single type or class of pesticide, says Brenda Eskenazi, Ph.D., director of the Center for Environmental Research and Children's Health at the University of California, Berkeley. "What we should be looking at is the whole swimming pool of chemicals that we're exposed to," she says.

What does this mean for consumers? "Sadly, there's a lot we don't know about the human health effects of pesticides in food," says CR's Vallaeys. "Given this, it makes sense that we should err on the side of caution and base decisions about pesticide use not just on what we know but also on what we don't yet know."

Pesticide Regulation

Laws governing the use of pesticides on produce in the U.S. are based, at least in theory, on a philosophy of avoiding potential risk in the absence of definitive proof of their harm. But CR's experts say the government hasn't upheld its responsibility to protect consumers.

The EPA, which is responsible for



PESTICIDES AND FARM-WORKERS

PESTICIDES POSE SPECIAL dangers to people who work with them on farms and in factories, as well as to their families and people who live nearby.

A long-running project from the University of California, Berkeley known as the CHAMACOS study is a key source of evidence. (The name is an acronym for the Center for the Health Assessment of Mothers and Children of Salinas, and means "little children" in Mexican Spanish.) Starting in 1999, researchers began following hundreds of Latino children-many from before they were even born-in Salinas, Calif., an area where much of U.S. produce is grown.

The findings show that pesticide exposure in pregnant women and during childhood is linked to poor reflexes in infants (a sign of brain and nervous system problems), lower IQ, attention disorders, poorer lung function, and more. People facing greater economic and social challenges are also more likely to suffer harm from pesticide exposure, says Brenda Eskenazi, Ph.D., the study's director.

"The effects of pesticides on the people who grow and harvest our food is a big part of the reason CR recommends buying organic when you can," says Charlotte Vallaeys, CR's senior policy analyst. overseeing pesticides, sets limits on how much residue is allowed on food. The USDA and the Food and Drug Administration separately test fruits and vegetables for pesticides. Both agencies say that by and large, testing shows that levels are almost always below legal limits. But the research used to set these tolerances is imperfect, and they're often too high, says CR's Hansen.

At a baseline, the limits are set at one one-hundredth of the amount of a pesticide that doesn't cause apparent harm to animals in laboratory testing. That safety factor is meant to account for the uncertainty that arises when the results of animal studies are applied to long-term human exposure, and the fact that some people are more sensitive than others to pesticides.

The 1996 Food Quality Protection Act requires the EPA to apply extra protection when science doesn't conclusively show that a chemical is safe for infants and children. Known as the "FQPA safety factor," it lowers the cap on pesticide residue from one one-hundredth to one one-thousandth of the amount found not to harm lab animals. But with the exception of organophosphates, this safety margin has rarely been used.

A February 2020 analysis in the journal Environmental Health looked at 59 pesticide risk assessments from the EPA between 2011 and 2019. It found that the agency didn't apply the FQPA safety factor to more than 85 percent of nonorganophosphate pesticides.

The agency told CR it makes decisions about whether to apply the FQPA safety factor based on a variety of research, "a wealth of high-quality, peer-reviewed data." When it decides not to, it has determined that a particular pesticide doesn't affect infants and children any differently from adults.

But CR's scientists think that in many cases the EPA isn't looking at the entire spectrum of possible harm. The 1996 law instructs it to screen for



How much does organic really cost?

Not as much as you might think, and there are ways to save.



UYING ORGANIC protects not only your health but also the health of farmworkers and the environment. But

higher costs can be a major barrier. To see just how great the price differences between organic and nonorganic are, CR analyzed the USDA's Weekly Advertised Fruit & Vegetables Retail Prices report, which collects prices from more than 29,000 grocery stores in the U.S.

We focused on the 14 nonorganic fresh fruits and vegetables CR rated Fair or Poor for pesticides, the ones for which buying organic is most important (except spinach, because organic spinach rated Poor). We calculated an average national price for June 2020.

Although our analysis represents a snapshot in time-prices vary by region and season-it shows that at least for these items, the difference is often \$1 or less per unit. And simple strategies can help you save. **Check the frozen and canned aisles.** Frozen and canned organic versions are often less pricey than fresh, especially if you opt for store brands. **Shop sales.** When fresh organic produce goes on sale, the price can

rival nonorganic varieties. Compare unit prices. The price per pound, quart, or other individual measure is usually listed on the shelf below the food. If you compare those, you can sometimes save by choosing packaged. For example, the national average price for loose organic apples was \$1.95 a pound. But a 2-pound bag of organic apples was \$3.76. or \$1.88 per pound. Do the prep yourself. Lettuce in a plastic clamshell costs more than a head of lettuce, and a wedge of watermelon is more per pound than a whole one.

Shop different varieties. For our examples, we averaged the prices for different varieties—the price for peaches, for example, includes white and yellow types. But some varieties may be cheaper than others: During the first and last weeks of June 2020, organic Bartlett pears cost less than nonorganic Bosc.

Stock up on deals. You can often freeze produce and use it later for baking, snacks, and more. For example, organic white nectarines were slightly cheaper than nonorganic ones during the first two weeks of June. So that would have been a good time to buy more of them.

	ORGANIC	NONORGANIC
Apples	\$1.95/POUND	\$1.63/POUND
Blueberries	\$3.57/PINT	\$2.57/PINT
Celery	\$2.10/BUNCH	\$1.21/BUNCH
Cherries	\$4.89/POUND	\$3.44/POUND
Nectarines	\$2.54/POUND	\$1.95/POUND
Peaches	\$2.54/POUND	\$1.64/POUND
Pears	\$1.82/POUND	\$1.39/POUND
Strawberries	\$3.12/POUND	\$2.23/POUND
Watermelon Seedless, Mini	\$4.39	\$3.03
Potatoes	\$3.38/3-POUND BAG	\$2.47/3-POUND BAG
Green Beans	\$3.59/POUND	\$1.61/POUND
Kale	\$1.70/BUNCH	\$1.18/BUNCH
Lettuce	\$2.26/HEAD	\$1.29/HEAD
Summer Squash	\$1.97/POUND	\$1.27/POUND

endocrine-disrupting effects. But as of 2020, it has completed full endocrine screenings on only 52 pesticides.

Nor is it using the latest science, according to Hansen. "The tests the EPA uses to approve pesticides don't take into account new evidence on pesticide harms, and it hasn't incorporated many new scientific techniques," he says.

James Hewitt, an EPA spokesperson, says the agency's standard evaluations include some assessment of endocrine effects. And he says that while screening pesticides for endocrine-disruption potential is slow and resource intensive, the agency is working on developing newer, faster screening techniques, and that it refines its safety evaluation methods as science evolves.

What CR's Analysis Found

In our ratings, the "cleanest" produce receive an Excellent or Very Good score, while those that carry the most risk are rated Fair or Poor. They factor in the total number of pesticides, the level of each on fruits and vegetables, the frequency with which they were detected, and their toxicity.

To account for toxicity, we used the EPA's chronic reference dose for each pesticide (the amount it considers not likely to cause harm over a lifetime), and then applied the FQPA safety factor to known neurological toxins or suspected endocrine disruptors–even when the EPA doesn't. The goal was to "minimize the chance that risks are underestimated," says Chuck Benbrook, Ph.D., a consultant who helped develop CR's risk scores.

This means that fruits and vegetables with residue of many different pesticides can still receive a rating of Very Good or even Excellent if the amounts are low compared with the level we consider harmful, or if the pesticides have a low toxicity. But others rate poorly if they have even a very small amount of a more dangerous pesticide.

For example, fresh nonorganic tomatoes have a Very Good rating

despite having residue of 65 different pesticides, because the amounts weren't concerning and/or were found on only a few samples. On the other hand, imported nonorganic summer squash rated Poor because it had worrisome amounts of a particularly harmful pesticide on just one sample.

Thirty-one of 49 nonorganic fruits and vegetables—which include fresh, frozen, dried, and canned—earn a rating of Good or higher in domestic and/or imported forms.

But for the 18 nonorganic fruits and vegetables with a Fair or Poor rating, CR's experts say everyone, especially pregnant women, infants, and young children, should try to eat the organic versions. If you can't find them at a price you can afford, choose a higherrated similar alternative, such as broccoli instead of green beans. Still, if that's not possible, occasionally eating a low-rated fruit or vegetable doesn't pose a serious health risk.

There were a few items for which organic produce got a score lower than Excellent. For those rated Very Good, the likely reason is that pesticides banned in organic farming drifted from fields where nonorganic crops were grown. But drift probably doesn't account for the Fair or Poor scores for three organic items: imported frozen cherries, imported fresh snap peas, and U.S.-grown fresh spinach.

All but one of the contaminated frozen cherry samples were imported from Turkey. In recent years, questions have been raised about the integrity of the organic label on Turkish imports.

Organic imported snap peas are rated Fair because one of the 15 samples was contaminated with high levels of dimethoate, a potent neurotoxin.

And last, organic U.S.-grown spinach received a Poor score because 33 different pesticides were found on 76 percent of the samples. For some of these, the levels were similar to nonorganic. That includes famoxadone,



THE RIGHT WAY TO WASH

YOU CAN'T WASH away all pesticides. The chemicals can stick to soft skins, wax coatings can trap certain pesticides, and some are systemic, meaning they get into the flesh of fruits or vegetables. In fact, the USDA pesticide testing on which we based our ratings occurs after produce is washed, and if appropriate, peeled. Yet some still have pesticide residue.

To remove as much pesticide residue as you can, follow the method used by the USDA: Wash all produce-even those that will be peeled-in cold running water for 15 to 20 seconds. For hard produce with tough skins, like apples and potatoes, use a vegetable brush or rub with your hands. You can time yourself by singing the Happy Birthday song twice or any 20-second refrain of a favorite song.

That's it. There's no evidence that special washes remove more pesticides.

And you should certainly avoid soap and especially bleach. Concerns about the ongoing coronavirus pandemic have led many people to think that using those cleaners on produce can help prevent the spread of the disease. But it's far more likely that even after rinsing, soap or bleach left on food can make you sick. a pesticide banned in organic farming and a possible hormone disruptor.

"The vast majority of the USDA data show that while pesticides are sometimes found on organic foods, the levels are usually 10 percent or less of what's found on nonorganic, which would be consistent with drift from a neighboring field," CR's Hansen says. "When levels on organic and nonorganic are similar, government agencies should take a closer look."

A spokesperson for the USDA's National Organic Program says fewer organic fruits and vegetables are tested than nonorganic, which may skew findings. And when it has questions about compliance, it first contacts the certifier for that operation, who can usually help identify underlying issues and quickly bring the farm or business back into compliance. When there's indication of fraud or other serious issues, the program investigates, and when the evidence warrants, removes the offender from the organic system.

What Needs to Change

"Many federal policies should be altered to protect consumers from the harms of pesticides," says Brian Ronholm, CR's director of food policy. Particularly important is a system to quickly identify banned pesticides on imported produce to keep it out of the country. "The USDA must also take steps to maintain the integrity of the organic program and help farmers transition to organic, which will make organic options more widely available."

In addition, CR says the EPA should take the following steps: ■ Ban the agricultural use of the riskiest pesticides.

Apply the FQPA safety factor to all neurotoxins, suspected endocrine disruptors, and any pesticide for which there's uncertainty about its safety. That's already required under the Food Quality Protection Act. CR says the EPA needs to apply the law consistently.

SUPPLEMENT

SCHEMES

&

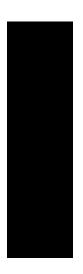
C O V I D - 1 9

An investigation by CR shows how companies seeking to sell questionable products can take advantage of a wideopen internet marketplace and how difficult it is for regulators to stop them.

BY RYAN FELTON ILLUSTRATIONS BY MIKE MCQUADE

COME-ONS





IN MID-MARCH, George Klipfel II, a retired laboratory scientist from California, received an email with an ad urging him to buy an "immunity oil" to prevent him from getting the coronavirus sweeping the U.S. The 67-year-old says he had "no doubt" the claims were bogus and promptly deleted it. A day later, he got another email. Then another. And then one more–all hawking the same product as a way to stop the virus, a claim that's illegal in the eyes of federal regulators.

"I'm always disappointed when someone tries to take advantage of tragedy to turn a profit," Klipfel says.

Of course, hucksters have a long history of separating people from their money by playing on their fears. But while snake oil salesmen of the past hawked their wares at circus sideshows or in the back of magazines, now they have the internet, where it's quick and inexpensive to find millions of potential customers. An investigation by Consumer Reports shows how easy it is for ads touting dubious cures to reach huge numbers of consumers and how complicated it is for overtaxed regulators to clamp down on the ads.

Such ads have "infested" the internet, according to the Better Business Bureau, as a growing number of companies have taken to the web to sell sketchy dietary supplements and other "health aids." In many cases, these involve duping consumers into signing up for a free trial, only to find that they have been unwittingly enrolled in a costly auto-renewal subscription.

But the damage to consumers is not just about money lost and the frustration of trying to get it back. It's also about the exposure to potentially unsafe products. Unlike pharmaceuticals, supplements don't have to be proved to be safe and effective before they're put up for sale.

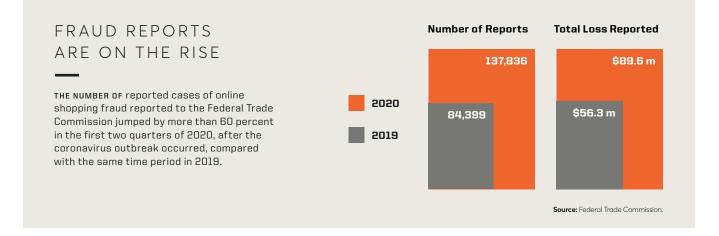
For regulators, it can be a struggle to

weed out scammers, especially at a time when those agencies have been flooded with complaints. (See "Fraud Reports Are on the Rise," below.) "Every state's attorney general and the Federal Trade Commission is overwhelmed," says David Vladeck, a former director of the FTC's Bureau of Consumer Protection and now a law professor at Georgetown University in Washington, D.C.

CR's investigation found that the business of moving the merchandise, through robocalls and spam emails and texts, often relies on the help of numerous parties-marketers, payment processors, suppliers, retailers-who allegedly work hand in hand and are structured in ways that insulate them from legal and financial backlash.

The investigation included a review of hundreds of pages of corporate filings, court records, and documents obtained through public records requests, as well as interviews with advocates, lawyers, and consumers.

Justin Brookman, director of privacy and technology policy at CR and a former FTC official, says consumers often assume the online marketplace for supplements is well-regulated. "In reality, consumer protection authorities are woefully understaffed and can pursue only a fraction of the scams," he



says. "And then the regulators have to peel back the layers to find out what's going on. Meanwhile, people keep getting ripped off."

A Window Into a Hidden World

Klipfel says the ad he received was similar to ads cited in an April 1 cease-and-desist letter issued by the New York state attorney general to a company called Finest Herbalist. The attorney general's office wrote that it was "extremely concerned" about claims presenting one of the company's products–a blend of essential oils called Pure Herbal Total Defense Immunity Blend–in emails, texts, and fake news stories as a cure for the coronavirus.

Finest Herbalist didn't respond to multiple requests for comment, and customer service representatives said they couldn't answer questions about the cease-and-desist letter. But CR-through an analysis of corporate documents and website code-found that Finest Herbalist is affiliated with a company called Offer Space, one of a network of interconnected firms owned by Unified Funding, based in Wyoming.

Unified's family of companies often work together to help clients launch an online business selling dietary supplements and other "natural health products" through websites such as Finest Herbalist. Those companies have been accused in lawsuits and Better Business Bureau complaints of sketchy marketing tactics to peddle unproven products and of allegedly roping customers into costly auto-renew subscriptions.

Websites created for clients are given unique brand names, records show, which can complicate figuring out who, exactly, is behind a particular online retail site. Indeed, it isn't clear whether Finest Herbalist is the name of a company or a brand name ascribed to it by Unified's family of companies. The only information about Finest Herbalist listed on the letter issued by the New



York attorney general's office—which declined to comment, citing an ongoing investigation—is a P.O. box in Utah.

CR attempted to contact multiple current and former employees and attorneys linked to Unified's family of companies, who either didn't respond or declined to comment. An attorney named Damon Wright ultimately did contact CR, and passed along answers from Offer Space to CR's questions about that company as well as about Unified and its affiliated companies.

Those statements didn't directly confirm that Finest Herbalist was the company cited in the New York case, saying only that an unnamed client did receive a cease-and-desist letter. Any bogus marketing related to Pure Herbal Total Defense Immunity Blend was the fault of contractors paid to drive traffic to the website where the product was sold, one statement said, and "swift action" was taken to try to have the content removed from the web.

Finest Herbalist and Unified Funding's family of companies are hardly unique: Hundreds of businesses probably have similar models. But New York's legal action, along with lawsuits related to Unified's affiliated companies, provide a view into the complicated online world where alleged scammers operate.

Unified's subsidiaries together function as a turnkey business opportunity for would-be supplement entrepreneurs. Marketing for their products in some cases appears to be tailored to the fad or crisis of the moment. For example, while it's unclear exactly when Pure Herbal Total Defense Immunity Blend was introduced, when the coronavirus outbreak began some of the product's ads preyed on consumers' concerns about the virus.

The products are marketed through third-party contractors who use an ever-shifting mix of robocalls, spam, and social media ads that, according to lawsuits, include phony celebrity endorsements and literal fake news.

"While the world is waiting for a vaccine, one mom has found a solution to fight back against the coronavirus outbreak," said a headline of a fake news article about Pure Herbal Total Defense Immunity Blend made to look like it had run on Fox News. Despite the warning from New York's top law enforcement official, CR found two similar phony articles online in June.

The ads were not authorized, according to a statement passed along by attorney Wright.

But while companies may blame contractors for bogus ads, the FTC says it has brought legal actions against other companies, alleging that they're responsible for the actions of third-party marketers who work on their behalf.

A Complicated Web

Last December, Jean Stone of Ontario, Canada, saw a Facebook ad promoting one of those products, an oil sold by a company called First Class Herbalist CBD, and decided to click through. "It sounded like it could help my husband," she says. And, as long as she covered shipping, it was free. "Of course," Stone says, "they get you that way."

What Stone, 62, didn't realize was that she'd stumbled into the complicated world of Unified Funding.

Unified says it helped process consumer transactions worth \$69 million in 2019. The company claims to have amassed a database of information on over 1 million customers.

Much of the company's revenue appears to come from Offer Space and two other subsidiaries it acquired last year: Traffic Space and Real Oil. Unified's co-founder, Ryan Hoggan, and a handful of others have roles across those subsidiaries, all sharing an address in American Fork, Utah.

Those subsidiaries are involved in the part of Unified's business that helps client companies sell supplements and other "natural" products online.

Offer Space, of which Hoggan is former president, manages clients' websites and customer service. Once a client's website is ready, Traffic Space–whose registered corporate agent is Christopher Armstrong, also an executive at Offer Space–handles marketing, mostly by farming it out to third-party agencies. Real Oil–where Hoggan was once president and partner, and Armstrong was a principal–manages a client's supplies and fulfills customer orders.

The connections get knottier still. Unified also has a majority stake in a company that owns Desert Lake Group, an online retail company that, records show, sold products by contracting as a client of Offer Space, Real Oil, and Traffic Space. Armstrong and Hoggan

> 'IT'S A SHELL GAME ... AN ATTEMPT TO MASK THEIR BUSINESS IDENTITIES AND PROTECT THEMSELVES FROM LIABILITY.'

-JOE P. LENISKI JR. ATTORNEY were former managers of Desert Lake, whose registered agent is Darin Toone– himself once a president of Offer Space and Traffic Space. Records show Desert Lake operated out of the same American Fork address.

Desert Lake is also affiliated with a man named Jared Forbush. The FTC issued a warning last year to 4Bush Holdings, a different company owned by Forbush, for allegedly making exaggerated product claims, according to government records. Desert Lake paid Forbush a monthly commission for unspecified work, records show, and in early April, 4Bush and Desert Lake merged.

As a client of Unified's family of businesses, Desert Lake sold products through websites with unique brand names, records suggest. Multiple plaintiffs have alleged that one such site affiliated with Desert Lake was First Class Herbalist CBD—the website from which Stone tried to buy her product.

If the corporate structure sounds complicated, it is—and it may be intentionally so, experts and plaintiffs' attorneys say.

"It's a shell game," says Joe P. Leniski Jr., an attorney representing an Arkansas consumer who claims one of the group's affiliated companies illegally texted him ads for natural products. "It's a deliberate attempt to mask their business identities and protect themselves from liability."

That the companies are separate legal entities can make it hard for consumers seeking refunds. "It creates some degree of plausible deniability," says CR's Justin Brookman. "At the very least, these complicated corporate structures can slow regulators, reporters, or consumers just trying to figure out what's going on."

When reached by a reporter, Toone said to call back, but later calls from CR went straight to voicemail. When CR reached him from a different phone number, Toone said, "I have no

BEWARE THESE COMMON SCAMS

WHILE ONLINE solicitations pitching bogus cures and treatments for COVID-19 are rife right now, the pandemic has set in motion many other types of scams, including these.



FINANCIAL FRAUD

Scammers may try to hook you into giving information they can use to set up financial accounts in your name. Be wary of coronavirusthemed phishing emails and phone calls touting work-athome schemes or offering help getting unemployment assistance. And watch out for any email that asks you to provide credentials, such as account numbers, passwords, or log-ins, that can be used to impersonate your identity to create new bank or credit card accounts or access existing ones.



UNSAFE E-SHOPPING During the pandemic, more and more people are shopping online. That means longexisting schemes to steal consumer information from online retailers are becoming bigger problems. Smallhusiness websites are especially risky right now. Local grocers, cafés, and shops that hastily set up to do e-commerce might not have adequate protections to safeguard your credit card or other information. Other shopping scams to watch out for: exorbitantly priced masks, and sellers claiming to have products, such as hand sanitizer, that are in demand but hard to come by. You place an order, but it's not delivered.



PREDATORY ROBOCALLERS

Robocall scammers are also preying on people's fears about the pandemic. Schemes include telemarketers offering "free" testing kitsbut asking for credit card information and charging high prices for shipping-and HVAC cleaning services that vendors falsely claim protect you. Consumer advocates say fake debt-collection robocalls asking for sensitive personal information or payment on debts you don't owe are likely to rise, given the high unemployment rate and economic instability.



FAKE CHARITIES

Scammers are also ready to take advantage of your generosity during the pandemic. They may reach you by mail, email, or a phone call, using names that sound like real charities, and ask you to donate by wiring money.



HEALTHCARE SCHEMES

Medical scams can take a number of forms. Some alleged fraudsters go door to door or call offering free medical services, such as in-home COVID-19 test kits and appointments for future COVID-19 vaccinations. Claiming to represent a government agency, a public health agency, or an insurance company, they may request personal information such as insurance numbers. Medicare IDs. and credit card information. They may even suggest that you've been exposed to the coronavirus and that your personal information is needed for public health purposes. Once a scammer has obtained your medical information, it can be used to impersonate you to obtain medical care for themselves or others, to hill for fraudulent medical goods or services, or to commit other types of identity theft.



PUPPY SCAMS

Scammers are also taking advantage of animal lovers. During guarantine, many consumers turned to the internet to look for a pet, only to find out too late that the animals they paid for do not exist. Though pet-buying scams have long existed, the pandemic provides new opportunities to tack on special fees or make excuses about why the pet could not be seen in person before would-be pet owners figure out they have been conned. –Donna Rosato

comment on anything," before hanging up. Hoggan, Armstrong, and Forbush did not respond to requests for comment.

'Shut Down' These Companies

Tracing the lineage of the CBD product Stone tried to buy illustrates how complex corporate relationships can result in practices that allegedly harm consumers while also shielding the companies from liability.

Stone says she never received the CBD oil she'd ordered. Instead, her credit card was billed \$89.99 for what seems to be an automatic refill plan that she says she was unknowingly enrolled in. She was also assessed multiple bogus charges-ranging from \$7 to \$10-from vendors she'd never heard of, she says.

Eventually, Stone had to cancel her Visa card to stop the billing. She kept trying to reach a helpful ear at customer service but got nowhere, until in February, when she says she received checks in the mail from another company she'd never heard of, First Class USA. That's another



name for Natural Brands USA, whichno surprise-is a subsidiary of Unified, according to records filed in May with the Canadian Securities Exchange. (The statements passed along by Wright deny that Unified owns First Class USA, contradicting what the documents say.)

The checks were ostensibly meant as a partial refund for the charges. But Stone has no plans to cash them. The memo line for each says, "firstclassherbtincture.com," a website she says she never went to.

These companies, Stone says, "need to be shut down."

How to Make a Sale

The type of advertising Stone encountered is known as affiliate marketing, a business model in which a company pays contractors who bring customers to its website. For example, in late June, affiliate marketers were being offered \$95 per sale if they delivered a customer for the Pure Herbal Total Defense Immunity Blend essential oil, the product cited by the New York attorney general.

Affiliate marketers typically don't use traditional ads but instead create content on social media and in emails, texts, and more that link to websites where purchases can be made. The model is legal. But the commission incentive can attract less-than-savory contractors who use unseemly tactics to promote products, says John Levine, president of the Coalition Against Unsolicited Commercial Email, a nonprofit advocacy group.

And coming by a list of consumers to target seems easy. One website CR reviewed offered a database of 180 million email addresses for just under \$200. "Too many affiliate marketers do minimal due diligence on who they sign up," Levine says, and the person sending the content "often only has the most tenuous relationship with the thing he's promoting."

Traffic Space, the marketing firm

WHAT'S THE GOVERNMENT **DOING TO PROTECT YOU?**

STAMPING OUT coronavirus scams is a bit like playing whack-a-mole because new ones pop up fast. Still, regulators as well as private companies are having some success stopping alleged fraudsters. Here are some that have been nailed.

MIRACLE CURE SELLERS

In March, televangelist Jim Bakker was sent a warning letter by the Federal Trade Commission and the Food and Drug Administration for allegedly making false marketing claims that products sold on his show, such as Silver Solution. could cure COVID-19. The product was removed from sale. To date, the FDA has sent 80 warning letters to other sellers allegedly making bogus COVID-19 claims. The agency has also removed online listings for more than 195 products claimed to diagnose, treat, prevent, or cure COVID-19.

PANDEMIC PROFITEERS

3M, one of the largest makers of N95 respirator masks, is waging a legal battle against alleged price gougers and swindlers selling fake or damaged masks under the 3M brand. One third-party seller has been accused of using 3M's trademark to sell \$350.000 worth of masks on Amazon for as much as 20 times the list price. As of mid-July, 3M says it has successfully shut down 7,000 online listings with fraudulent or counterfeit product offerings around

the world, and more than 10,000 false or deceptive social media posts.

COVID-19 RELIEF ABUSE

The Department of Justice, in coordination with state attorneys general, has gone after dozens of people who they say have fraudulently applied for Paycheck Protection Program (PPP) loans guaranteed by the Small Business Administration. That includes a funeral home operator who was arrested by the U.S. attorney's office in the Southern District of Texas after allegedly applying for \$13 million in PPP loans. Also snagged: a reality TV personality named Maurice Fayne, from "Love & Hip Hop: Atlanta," who was indicted by a federal grand jury in June for seeking a \$3.7 million loan and spending the money to pay \$40,000 in past-due child support and \$136,000 to lease a Rolls-Royce.

STIMULUS CHECK THIEVES

A host of regulators, including the FBI, the FTC, and the IRS, along with local authorities and the U.S. Postal Service, have worked to stop thieves from stealing stimulus checks by obtaining victims' personal information and then impersonating them. In some cases, people have been arrested for stealing stimulus checks out of the mail, including a man in Brooklyn who was arrested after allegedly stealing mail that included \$12,000 in stimulus checks. –Donna Rosato

owned by Unified, uses affiliate marketers but also monitors online ads to ensure that they don't make inappropriate claims, according to a statement passed along by Wright.

But lawsuits filed in California and Utah suggest otherwise. Eleven former clients of Traffic Space, Offer Space, and Real Oil allege that the companies rely on affiliate marketers who use fake celebrity endorsements, fake news, exaggerated results, "and similar deceptive advertising tactics to drive traffic" to their websites, potentially exposing them to regulatory action.

A statement passed along by attorney Wright denied the claims and said the plaintiffs are former "disgruntled" clients who wanted to "avoid paying for services rendered."

Lawsuits, previous reports, and government records allege that the companies have been linked to bogus advertising that claimed their clients' products were endorsed by the popular TV shows "Shark Tank" and "The Dr. Oz Show." "Jamie Richardson from Dallas Texas just netted one of the biggest deals in Shark Tank history," one ad said.

Mehmet Oz, M.D., of "The Dr. Oz Show," told CR he has tried "for years" to shut down such bogus ads, and he called on companies such as Facebook and Google to "take responsibility for what they display to consumers." A "Shark Tank" representative didn't respond to requests for comment.

A statement passed along by Wright says the company "takes diligent measures" to ensure that its clients do not use those sorts of ads.

Spam Galore

While Jean Stone was lured by an ad on social media, other consumers say they were inundated with unsolicited messages with links to products on websites affiliated with Unified through its subsidiaries.

Patricia Wheatley, a 64-year-old Texas resident, received a text from an unknown number in January containing a link to a website to buy CBD gummies, something she says she doesn't use. Screenshots of the website showed a warning of a "limited supply" due to "high media demand."

Wheatley, who enrolled in the Do Not Call Registry in 2007, tried running down who was behind the text, but it wasn't easy. She sent one email to customer service, on March 2, writing, "I'm hoping we can resolve this in a civilized manner ASAP." She attached a letter detailing what she saw as violations of the Telephone Consumer Protection Act, which created the Do Not Call Registry, including screenshots of the texts she'd received.

After a month of silence, a second attempt on April 2 generated an automated response that said she'd receive "more information shortly." "I want your legal counsel to contact me!!!!" she responded.

That message appears to have gotten someone's attention. In late April, she received an email from an attorney representing Desert Lake Group, the retail company affiliated with Unified.

PRO TIPS TO DETECT SCAMS



SOME SCAMS ARE obviousyou're asked to send cash or are contacted out of the blue with an offer that sounds too good to be true. But bad actors work hard to fool consumers-and scams are widespread. A nationally representative June 2020 Consumer Reports survey of 1,014 adults found that since the coronavirus pandemic began in March, 35 percent of Americans said they paid for or saw something they thought was a scam, or saw something claimed to cure or treat COVID-19. Here are signs to look for.

THEY USE SCARE TACTICS

Scammers often pretend to work for a government agency, such as the IRS or the Social Security Administration, and use threats of fines or suspension of Social Security benefits to get you to comply.

THE ATTACHMENTS OR LINKS LOOK ODD

Unsolicited emails and texts often come with links or attachments that contain malware, which can damage your computer or provide access to personal data on your device. Examine the link before you click on it: Hover your mouse over it to reveal the full address. An ending of ".ru," for example, means the site was registered in Russia, where a lot of scams originate. And don't open attachments in emails you're not expecting.

THE SITE ADDRESS HAS MISSPELLINGS

This is another tip-off to a fake website. Hover your mouse over the URL so you can see the full address, and if it seems off or wrong somehow, take that as a sign not to trust it. *—Donna Rosato*

Wheatley, though, has no idea what will happen next. "I can't stand this company," Wheatley says.

Unified's subsidiaries allegedly operate in other ways that harm consumers, too, according to lawsuits. For example, websites created for clients sometimes include incorrect email addresses, one complaint says, so consumers who try to contact customer service have emails bounce back.

Indeed, in interviews with CR and complaints to the Better Business Bureau, numerous consumers describe difficulty reaching customer service for websites associated with Unified's family of companies.

A statement passed along by attorney Wright says that Desert Lake's alleged conduct was due to rogue affiliate marketers, not the company itself.

\$3 Million Lost

Consumers aren't the only ones alleging that they were fleeced by Unified's subsidiaries. According to lawsuits filed by the eleven former clients, Offer Space, Traffic Space, and Real Oil scammed them out of at least \$3 million. They also allege that the companies "misappropriated" consumer data and, in turn, spammed consumers with ads for their own and third-party products.

When the former clients conducted test buys of their own products in March 2019, one of the email accounts they used received at least 230 "emails marketing other related products," one lawsuit alleges. The clients' lawsuits allege that charges for products customers purchased on websites handled for them by Offer Space were credited to bank accounts linked to the defendants.

That allegation fits the description of credit card laundering. According to the FTC, merchants engage in laundering to hide their "true identity from consumers, the acquirer, the card networks, and law enforcement."

Last spring CR conducted a test buy of its own, purchasing two bottles

'IT WOULD BE GALLING IF A COMPANY ALLEGEDLY PROFITING FROM FAKE COVID-19 CURES WAS PROPPED UP BY GOVERN-MENT AID.' -JUSTIN BROOKMAN, CR ADVOCATE

of Total Defense Immunity Blend from Nature's Exclusive CBD, a brand that Unified Funding recently sold. The wrong product was delivered– and trying to track down anyone to complain to was difficult. The charge showed up as having been processed by a company called Dinomys Keto, which lists another company, Red Roxelle LLC, as the point of contact.

That company, it turns out, was incorporated in March by an individual a few doors down from an address previously affiliated with Unified's co-founder, Ryan Hoggan. No one answered repeated calls to customer service. When CR did reach a phone number connected to Red Roxelle, the person answering said it was a wrong number.

A statement passed along by Wright didn't explain why the order was processed this way, but said that "the location of Red Roxelle ... appears to be coincidence."

Going Broke?

Despite the many allegations against Unified's family of companies, corporate records indicate that the company itself is doing just fine. In January, Unified brokered a deal with Canada-based Mota Ventures to buy one of its brands, Nature's Exclusive, in a deal valued at \$32 million. Soon after, Mota–which didn't respond to multiple requests for comment–named Hoggan its CEO. In June, Mota said it would acquire all of Unified–including Offer Space, Traffic Space, Real Oil, and the company that owns Desert Lake–for a deal valued at \$45 million. (Mota changed its name to Thoughtful Brands Inc. in August.)

Yet in April, Desert Lake Group filed for bankruptcy, citing dozens of consumer claims for violating robocall laws. The potential damages are so high, the company said in a filing, that it needed bankruptcy to pay its bills. Just prior to that filing, records show that Desert Lake's registered agent, Toone, incorporated DLGH, which is now the sole owner of Desert Lake Group.

Later, in June, Offer Space and Traffic Space told a judge, during a court hearing in an alleged fraud case against them, that they'll have to close up shop if forced to repay a former client the almost \$1 million demanded.

And just months after Finest Herbalist was cited in New York for allegedly marketing a product as a coronavirus cure, Offer Space and Traffic Space say that the pandemic has hurt business. The damage is so bad, in fact, that they say they needed to apply for–and were granted–federal assistance through the federal Payroll Protection Program, which was started to help companies harmed by the coronavirus pandemic.

CR's Justin Brookman noted the irony: "It would certainly be galling if a company allegedly profiting from fake coronavirus cures was being propped up by government aid meant to offset damage the virus has done to the economy."

Last month: Go to CR.org/fda1020 for more on the FDA's tattered safety net for dietary supplements.

COUNTERTOP HOLIDAY



HELPERS

Your toaster oven, multi-cooker, blender, and other small appliances can help you cook delicious and hassle-free feasts all season long. Here's how. BY KIMBERLY JANEWAY AND PERRY SANTANACHOTE



ZAVOR

TOASTER OVEN Slack+Decker **8-Slice Diaital** Extra Wide TO3290XSD \$100

OVERALL



MULTI-COOKER Zavor Lux

LCD ZSELL02 \$160



OLIDAY GATHERINGS WILL probably be more intimate this year because of the COVID-19 pandemic, making it an ideal time to turn to small kitchen appliances. These multitaskers simplify the preparation of a variety of holiday dishes, leaving you more time to enjoy yourself. Plus, they free up

your oven so that your main course can roast on its own.

"Small-appliance technology has become so advanced over the past decade that some of them can do most everything an oven can do, just on a smaller scale," says Emilio Gonzalez, associate director of lab operations at Consumer Reports. For instance, in the past, only ovens could convection-roast a whole chicken, and cook stews low and slow. But these functions, among others, can now be found in toaster ovens, air fryers, multi-cookers, and slow cookers.

Here, we offer suggestions for making side dishes with air fryers, blenders, multi-cookers, slow cookers, toaster ovens, and waffle makers, plus ways to make the best use of them throughout the year. Use the ratings at the end of this article to choose the best of these appliances for you. Here's to great home-cooked meals this holiday season and beyond!



STORE YOUR Leftovers Safely

No matter how many friends and family members you have at your holiday meals, you're bound to have leftovers. And one thing you definitely don't want to be left with is food poisoning.

November and December are the peak months for food poisoning caused by the bacteria Clostridium perfringens, according to the Centers for Disease Control and Prevention. The "cafeteria germ" grows in cooked foods, such as turkey, that are kept slightly warm or at room temperature for too long.

Here's how to ensure that your leftovers stay flavorful and are safe to eat.

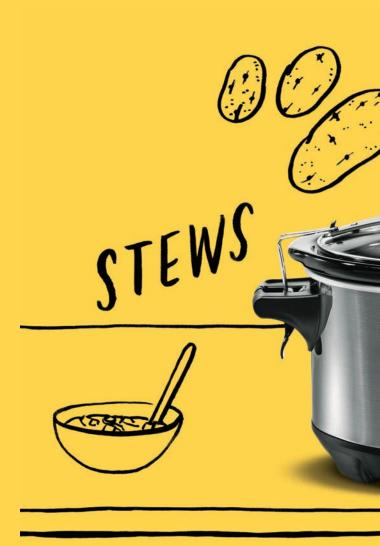
FOLLOW THE 2-HOUR RULE. Bacteria grow fast, so don't leave cooked food out for more than 2 hours from the time it's finished cooking.

STORE IN SMALL BATCHES. If you baked a whole turkey, it may take a while to cool, and its moist, warm interior is perfect for bacteria. So slice the meat off the breast for storing. Same goes for big pans of stuffing or dressing. Divide foods into smaller portions first.

KEEP FOOD REFRIGERATED FOR THREE

TO FOUR DAYS, TOPS. After that, it might not taste as good. You can keep food for longer by freezing it within the three- to four-day window. According to the Department of Agriculture, leftovers should stay good in the freezer for three to four months.

PIES ARE THE EXCEPTION. Fruit pies, such as apple and cherry, can be left on the counter as long as you eat them within a couple of days. But pies with dairy or eggs, such as pumpkin pie, have to be refrigerated.



🗟 SLOW COOKER

Designed to simmer foods at a low temperature for hours, this set-it-and-forget-it appliance is perfect for soups, stews, beans, and tough cuts of meat, such as brisket, that you want to turn out forktender. Just place the ingredients in the cooker in the morning, set it to high or low, and come home to a hot, ready-to-serve dinner.

Common mistakes to avoid:

Dairy separates during slow cooking, so add it in the last 15 to 30 minutes (or mix with flour, like with the scalloped potatoes, on the facing page). Because cooking temperatures are low, the Department of Agriculture warns against using frozen meats: They might not reach a safe bacteria-killing temperature. Always thaw meat and poultry in advance.



What's new: Certain models come with inserts that can go on the stovetop, so you can brown foods before slow cooking without dirtying a separate pan. A few high-end models can even brown foods right in the slow cooker.

For your feast: It'll take half a day to make one side dish in a slow cooker, but you can place the appliance in another room to free up counter space in the kitchen because you don't have to keep an eye on it while it's cooking.

COLLARD GREENS

Combine greens, pork, vinegar, salt, sugar, and pepper, then cover and cook on low for 9 hours. If your recipe includes ham hocks, carefully take them out and remove all fat and bone before stirring the meat back into the greens.

SCALLOPED POTATOES

Add ¼ cup of flour to the cream sauce in your scalloped potato recipe to help thicken it and keep it from separating in the slow cooker. (Dairy will break down during slow cooking.) Grease the insert and layer the potatoes and cheese as you would in a casserole dish. Cook on the high-heat setting for 4 to 5 hours, until the potatoes are tender. About 20 minutes before dinner, remove the lid, turn off the slow cooker, and let the potatoes sit, so the sauce thickens up. Before serving, pop the slow cooker insert under the broiler (be sure it's oven-safe) to make the top a nice golden brown.

STUFFING

Whether you prefer the extracrunchy toasted bits of stuffing or the squishy pieces soaked in herby broth, the slow-cooker delivers. The difference between making stuffing in a slow cooker and using an oven is that, in a slow cooker, the crunchy parts are on the bottom and sides rather than on the top. Prepare your favorite recipe and spread the stuffing in an even layer in a greased slow cooker. Cook on the low-heat setting for 3 to 4 hours, until the edges are crisp.

SOUTHERN FRIED APPLES

Slice up several Granny Smith apples and place them in a slow cooker with melted butter and the juice from one lemon. Add a couple of tablespoons of cornstarch to a cinnamon-sugar mixture and sprinkle it over the apples. The starch will help thicken up the sauce, which would otherwise be too runny. Cook on high for 3 to 4 hours, until apples are tender but not mushy.

For the rest of the year:

Slow cookers make it easy to cook large batches of soup and chili. And they're still tops when it comes to tenderizing large roasts. You might not have considered using a slow cooker for baking, but it does a great job with custard-based desserts, such as flan and crème brûlée. Any time a recipe calls for a water bath– cheesecake, for example–you can use your slow cooker.



💴 TOASTER OVEN

One-pot meals that would typically require hours to cook take half the time using a multi-cooker's pressure cook mode. It can steam, sauté, and slow cook, too (though our tests show that slow cookers are still better at that particular task).

Common mistakes to avoid:

The pressure cooking mode requires liquid to work properly. But the liquid will not evaporate, so use less than you usually would or your dishes could turn out watery and bland.

What's new: Certain models have separate broiling lids, either included or sold separately, that allow you to crisp up your foods once they're cooked. We're also seeing models that can dehydrate and sous vide.

For your feast: Take

advantage of the speedy pressure cook mode to make otherwise time-consuming dishes, such as wild rice and mac and cheese.

WILD RICE AND MUSHROOMS

Using the sauté function, cook chopped onions and garlic until soft. Add a couple of handfuls of sliced mushrooms, 1 cup of wild rice, 1 cup of brown basmati rice, and 2 cups of water or low-sodium broth. Stir to combine, and cook on high pressure for 30 minutes. Then manually release the pressure after 15 minutes, and top with chopped parsley and toasted nuts.

MACARONI AND CHEESE

Use 1 quart of water per pound of dry pasta. Cook it for 4 minutes on high pressure, then quick-release the pressure, switch to the sauté setting, and add milk, butter, and cheese. Top with a handful of panko, and toast with the crisping lid. Or you can crisp the topping in the microwave by mixing the panko with a little olive oil and stirring every 30 seconds until crumbs are golden brown.

DEVILED EGGS

Hard-boiled eggs prepared using the pressure cook mode peel like a dream. Pour 1 cup of water into the multicooker and place the eggs in the steamer basket. Cook at low pressure for 5 minutes, then let the pressure release naturally. Place the eggs in cold water to stop the cooking process. Peel the eggs and slice them in half, scoop out the yolks, and make the filling to your liking.

For the rest of the year:

It seems every dish under the sun has been adapted for the multi-cooker, but we still find that this appliance is best for stews, beans, and tough cuts of meat. It makes fast and flavorful chuck roast and pork shoulder, and amazing ribs. If you're new to the multicooker, start with recipes designed for it because there is a learning curve. A toaster oven can bake, roast, and broil, and is up to most any task your fullsized oven can accomplishjust on a smaller scale. That makes it a smart standby when the oven is occupied or when you're cooking for just a few people.

Common mistakes to avoid:

As with baking in a full-sized oven, a dark-colored pan accelerates the transfer of heat, possibly causing roasted vegetables or cookie bottoms to burn. So use a light-colored pan instead, or lower the temperature by 25° F.

What's new: In the past five years, certain toaster ovens have added features such as air frying, convection, dehydrating, and slow cooking.

For your feast: Consider the toaster oven a trusty sidekick to your full-sized oven, great for baking rolls and casseroles, and roasting meats in smaller portions.

ROLLS OR CORNBREAD

If your toaster oven can fit an 8-inch cake pan (most models we tested can), you can make 10 to 12 dinner rolls. Put balls of dough in a pan and bake at 375° F for 20 minutes, until golden brown. Cornbread also bakes nicely. Use a muffin pan for perfectly portioned pieces.

SWEET POTATO CASSEROLE

Mash boiled or roasted sweet potatoes with a little milk, butter, salt, lemon juice, brown sugar, and a spice such as nutmeg, cinnamon, or allspice. (You can skip the egg binder called for in larger recipes.) Spread the mixture in a buttered baking dish that will fit in the toaster oven, top with chopped nuts (or marshmallows), and bake at 350° F until it's heated through and the topping is toasted.

TURKEY BREAST OR LEGS

Try roasting just a turkey breast or legs if you have a small gathering this year. You might not get enough drippings to make gravy, but you can make it with broth or serve the turkey with chimichurri. (See "Blender," on the facing page.) The turkey may take less time in the toaster oven than in a conventional oven. If you're using more than one rack, move the top pan to the bottom and vice versa halfway through, and rotate each pan so that the turkey cooks uniformly.

For the rest of the year:

Using your toaster oven in summertime means you won't have to crank up the heat in your oven and roast yourself in a hot kitchen. From shrimp scampi to a whole chicken, a toaster oven can handle anything your oven can, just in smaller portions. It makes great toast, too, so it can replace a toaster. However, it tends to take longer to make toast in a toaster oven. (Based on our tests, toaster ovens take anywhere from 3 to 9 minutes on the medium setting; toasters take 2 to 4 minutes.)



BLENDER

Sure, blenders are great for smoothies, but you can also use them to make a velvety purée or sauce to go with your favorite foods. Some can even heat ingredients using the friction of the blades, so you don't have to separately heat up, say, soup.

Common mistakes to avoid: Hot ingredients can cause certain blenders to malfunction. Check your blender's manual to see whether hot ingredients can be used. If the blender lid doesn't have a vent hole, heat will build up pressure, which can cause the lid to pop off.

What's new: A growing number of models can heat ingredients while blending, so you can prepare soup without using the stovetop.

For your feast: Make a soup or an herb sauce to accompany the meal.

CURRIED SQUASH SOUP

If you have a high-performance blender that heats, toss in cubes of raw or roasted squash, some broth, garlic cloves or shallots, carrots, celery, curry powder, and any other seasonings you'd like. Start the blender on its lowest speed, then increase to its highest speed and blend for 6 minutes, or until steam escapes from the vented lid. If you have a traditional blender, roast or sauté the ingredients first, blend, then heat on the stove.

CHIMICHURRI

This garlicky herb sauce, widely used in Argentina and Uruguay, goes well with roasted turkey and most any side dish. Blend some parsley, oregano, red pepper flakes, garlic, vinegar, salt, and olive oil, and it's ready to serve.

For the rest of the year: Come summertime, make healthy smoothies, festive margaritas, and chilled soups. Blenders are also great for DIY plant-based milks. For small batches of foods such as fresh salsas and salad dressings, a blender is better than a food processor, which requires a higher volume of food to work properly.



Air fryers circulate hot air around food to cook it quickly and create a deliciously crisp texture using less fat than deep-frying. With just 1 or 2 tablespoons of olive oil, Brussels sprouts and cauliflower come out tender yet irresistibly crispy, asparagus is beautifully blistered, and salmon fillets are moist inside and nicely browned outside. You can even use an air fryer to bake: Banana bread emerges with an extra-crispy top. All the air fryers in our tests turn out nicely cooked food. The biggest differences are their capacity, how easy they are to use and clean, and how much noise they make.

Common mistakes

to avoid: Food can cook unevenly or turn out soggy if a batch is too large. For best results, don't overfill the basket, and shake it every 5 minutes or so for even browning.

What's new: Air-frying has become so popular that we're seeing this function added to all kinds of other appliances, including toaster ovens, microwaves, and multicookers. We tested the function as part of the evaluation of the toaster oven, microwave, and multicooker models that feature it in our tests, and all of them made delicious, crispy foods such as chicken, fries, and spring rolls. For your feast: Use it to roast potatoes or cook veggies for your holiday meals.

BRUSSELS SPROUTS

For beautifully browned but tender Brussels sprouts, trim the ends, then toss the sprouts with just enough olive oil to coat. Season with salt and pepper, and air-fry for 20 minutes at 360° F.

CARROTS

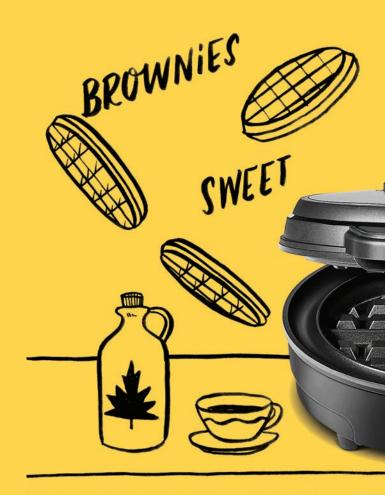
Toss cut-up carrots with a bit of melted butter and honey. Season with a sprinkling of salt, pepper, and coriander (or whatever spices you feel like using), and air-fry at 400° F for 30 minutes.

ROASTED POTATOES

An air fryer will yield golden taters that are crisp on the outside and creamy on the inside. Toss fingerling or marble potatoes with just enough olive oil to coat them, and season with a touch of salt and black pepper. Air-fry at 400° F for 15 to 20 minutes.

For the rest of the year: Say goodbye to soggy

pizza and dried-out fried chicken by using an air fryer instead of a microwave to reheat them. You can avoid having to fire up your oven just to cook and crisp up small portions, too. Fish and veggies, including kale chips, come out delicious in an air fryer: They were even a hit with the kids who tried them in the taste test we conducted in the CR labs.

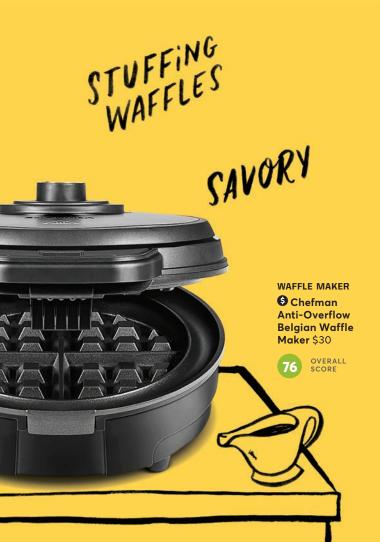


WAFFLE MAKER

The best waffle makers in our tests make it almost foolproof to churn out evenly browned waffles. Certain models come with portioned batter cups that take the guesswork out of how much batter to use, and indicators that tell you when a waffle's done. We test round and square Belgian waffle makers in our labs.

Common mistakes to avoid:

Most waffle makers have a nonstick coating, which can be damaged by nonstick cooking sprays, affecting performance. Use a pastry brush dipped in oil or melted butter to grease the iron instead.



the stuff. You get the crispy texture all over each waffleplus, gravy wells built in!

STUFFING WAFFLES

Any classic stuffing recipe will work. Instead of cooking it in the oven, lightly grease a waffle maker with butter or oil and pack it evenly with stuffing. Cook until it reaches your preferred level of brownness.

What's new: We're seeing more and more vertical waffle makers that cook waffles sideways, which saves counter space (you pour the batter through a spout on the top), but we haven't tested any of these models yet.

For your feast: If your guests fight over the crispy, crunchy bits of stuffing (or dressing), they'll love waffles made of For the rest of the year: A waffle maker can be used to prepare many dishes in addition to waffles. There are instructions online for cooking omelets, hash browns, brownies, and many other foods in a waffle maker.



HOW TO LIGHTEN UP Holiday meals

Meals are too important to holiday celebrations to have to consider whether you should serve both rolls and stuffing or if you should skip marshmallow sweet potatoes this year. Heartburn aside, for most people there's little harm in indulging occasionally. Still, some recipe tweaks and menu ideas can make holiday mealtimes a little healthier without affecting flavor. Our advice: Don't mess with your favorite traditional recipes. But try swapping or adding ingredients to less sacred dishes. Just be sure to do a test run before you're planning to serve them.

SKIP THE CREAM. Use Greek yogurt or whole milk instead in mashed potatoes, creamy soups, and creamed onion or spinach recipes.

REDUCE THE SUGAR. Cut it back by 10 to 25 percent in baking recipes. You'll barely taste the difference.

ADD SOME FIBER. Replace 25 to 50 percent of the all-purpose flour called for in recipes with whole-wheat flour. Or try half all-purpose, half white whole-wheat flour, a lighter, milder version of the whole grain. If your recipe calls for breadcrumbs or panko, opt for whole-wheat.

UPGRADE THE STUFFING. Replace half the white bread with whole-wheat, use low-sodium chicken broth, and add extra vegetables, such as carrots, mushrooms, and peppers.

BE SODIUM-SAVVY. Using the flavors of the season-thyme, sage, rosemary, cinnamon, nutmeg, cloves-will cut the need for salt. Choose low-sodium broths and homemade dressings (which are lower in sodium than many bottled ones).

BOOST NUTRITION. Adding small but mighty nutrition powerhouses can make food healthier and more flavorful. Try pomegranate seeds, dried cranberries, or chopped dried apricots in salads, and roasted pumpkin seeds or chopped nuts in stuffings.

SKIP THE CHIPS AND DIP. Instead of serving heavy appetizers before a meal, have a pot of a roasted vegetable soup, such as carrot or butternut squash, on the stove for guests to enjoy.

–Trisha Calvo

Ratings > Countertop Intelligence These small appliances bring major conveniences to the kitchen, including saving time and eliminating guesswork. They can also prepare tastier dishes than conventional cooking can.

Bra	and + Model	Overall Score	Price	Test Res	ults		Features				
				се	Coo	king		ht	ω <u>(</u> ,	5.4	
	0			Convenience	High	Low	Size (qt.)	Total weight (Ib.)	Exterior dimensions (HxWxD, in.)	Dishwasher- safe insert	Dishwasher- safe lid
	PROGRAMMABLE SLOW COO	DKERS									
Ø	Hamilton Beach Temp Tracker 33866 6 Quart	87	\$70	$\mathbf{\diamond}$	8	8	6	11	12x17x12	•	•
	Crock-Pot Cook & Carry SCCPVS600ECP-S	84	\$100	\bigcirc	0	8	6	12	11x17x13	•	•
	Kalorik SC 41175SS	82	\$75	$\mathbf{\circ}$	8	8	8	15	12x20x12	•	
Ø	Crock-Pot Thermoshield SCCPCT600-B	78	\$70	0	0	0	6	13	10x19x14	•	•
Ø	Calphalon Digital Sauté SCCLD1	78	\$120	$\mathbf{\diamond}$	0	٥	5.3	7	10x15x13		•
	All-Clad SD700450 6.5Qt. Programmable Oval-Shaped	75	\$170	0	0	8	6.5	17	12x18x13	•	•
	Black+Decker Digital Programmable SCD1007	72	\$50	0	0	0	7	14	11x18x12	•	•
	Elite Platinum MST-900D	72	\$60	\bigcirc	1	$\mathbf{\diamond}$	8.5	15	11x17x12	•	•
	Hamilton Beach 33443 Electric Slow Cooker	71	\$35	0	8	0	4	8	9x15x11	•	٠
	KitchenAid KSC6223	71	\$90	\bigcirc	•	$\mathbf{\diamond}$	6	14	llx17x11	•	•
	Hamilton Beach Flex Cook 33861	67	\$60	0	0		6	11	11x17x12	•	•
	Cuisinart PSC-650 Programmable	65	\$100	0	0	0	6.5	15	11x17x13	•	•

Bra	and + Model	Overall Score	Price		vey sults	Test Results							Features + Specs							
	<u></u> 8			Predicted reliability	Owner satisfaction	Reheat	Baking	Color range		Full batch	One slice	Ease of cleaning	Ease of use	Convection oven	Temperature range (° F)	Dimensions (H×W×D, in.)	Interior dimensions (HxWxD, in.)	Number of slices		
	TOASTER OVENS																			
	Breville BOV650XL Oven	77	\$180	⊗	⊗	\bigcirc	\bigcirc	⊗	⊗	\bigcirc	⊗	8	\diamond		120-450	9x17x15	4x13x10	4		
Ø	Breville Smart Oven Pro BOV845BSS	74	\$270	8	8	0	٥	⊗	\bigcirc	\bigcirc	⊗	8	8	٠	120-500	11x19x16	5x14x13	6		
•	Breville Smart Oven BOV800XL	72	\$270	8	8	0	\bigcirc	⊗	٥	\bigcirc	8	8	⊗	•	120-450	11x19x16	5x14x12	6		
Ø	Black+Decker 8-Slice Digital Extra Wide TO3290XSD	68	\$100	0	0	\bigcirc	\bigcirc	8	0	8	8	8	0	•	150-450	11x22x15	6x16x12	8		
0	Cuisinart Chefs Convection TOB-260N1	67	\$280	\bigcirc	\bigcirc	0	٥	⊗	٥	\bigcirc	\bigcirc	\bigcirc	⊗	•	150-500	11x21x17	6x14x13	9		
Ø	Cuisinart Deluxe Convection TOB-135N	67	\$160	\bigcirc	\bigcirc	0	٥	8	\bigcirc	\bigcirc	0	\bigcirc	8	•	150-500	10x18x16	5x12x11	4		
	Hamilton Beach 6 Slice 31411	64	\$65	0	0	\bigcirc	\bigcirc	\bigcirc		⊗	0	\bigcirc	\bigcirc		warm-450	9x17x15	4x13x10	6		
	Panasonic FlashXpress NB-G110P Oven	63	\$135	8	⊗	0	0	\bigcirc	8	8	\bigcirc	\bigcirc	8		250-500	10x13x12	4x10x11	4		
	DeLonghi Livenza Stainless EO 241250M	62	\$269	0		\diamond	٥	\bigcirc	0	0	⊗	\bigcirc	⊗	•	170-450	12x19x18	6x13x11	6		
	Black+Decker 4-Slice TO1755SB	62	\$33	0	0	\bigcirc	\bigcirc	0	0	8	\bigcirc	\bigcirc	0		min-450	9x16x11	4x10x9	4		
	Oster Designed for Life TSSTTVDFL2 6-Slice	61	\$40	8	0	0	⊗	\bigcirc	0	⊗	0	\bigcirc	\bigcirc	•	warm-450	10x17x13	5xllxll	4		
	Cuisinart TOA60	61	\$200	\bigcirc	\bigcirc	8	0	⊗	0	8	\bigcirc	\bigcirc	\bigcirc	•	warm-450	14x16x16	5x13x11	6		

8

 \bigcirc

0

POOR EXCELLENT

 \bigcirc

RECOMMENDED

6

CR BEST BUY

Br	and + Model	Overall Score	Price	Test	Test Results					Features + Specs								
	Ð			Pressure cooking	Slow cooking	Rice cooking	Steaming	Sautéing	Convenience	Size (qt.)	Total weight (Ib.)	Exterior dimensions (HxWxD, in.)	Nonstick pot	Dishwasher- safe insert	Dishwasher- safe lid			
	MULTI-COOKERS WITH PRE	SSURE COOK	ING M	ODE														
⊘	Zavor Lux LCD ZSELL02	82	\$160	8	⊗	\diamond	⊗		\diamond	6.0	12	14x14x12		٠				
•	Breville Fast Slow Pro 6 Qt. BPR700BSS	81	\$250	8	8	8	8	0	\bigcirc	6.0	12	14x14x14	•	٠	٠			
Ø	Instant Pot Max 6 Quart	80	\$150	$\boldsymbol{\otimes}$	0	\mathbf{O}	0	\mathbf{O}	\mathbf{O}	6.0	13	13x14x14		•	•			
Ø	Ninja Foodi OP302	79	\$230		\bigcirc	8	\bigcirc	8		6.5	21	13x17x15	•	٠				
	Instant Pot Duo60 7-in-1 6 Quart	75	\$100	⊗	0	\diamond	\bigcirc	\bigcirc	\diamond	6.0	11	13x14x13		٠				
	Crock-Pot 6-Quart Express Crock SCCPPC600-V1	69	\$70	⊗	0	\bigcirc			\bigcirc	6.0	12	14x14x13	•	•				

Br	and + Model	Overall Score	Price	Surv Res		Test	: Resu	ults				Features + Specs							
				Predicted reliability	Owner satisfaction	Icy drinks (smoothies)	Convenience	Purée	Ice crushing	Noise	Durability	Type of jar (glass or plastic)	Capacity (c.)	Speeds	Pulse	Height (in.)	Base dimensions (WxD, in.)		
	BLENDERS																		
6	Ninja Smart Screen Duo with FreshVac CT661V	81	\$170	8	\bigcirc	8	8	\bigcirc	\bigcirc		8	Р	9	8	•	18	7x9		
6	Ninja With Duo Auto-iQ BL642	80	\$170	8	$\mathbf{\diamond}$	8	⊗	\bigcirc	\bigcirc	0	⊗	Р	9	5	٠	18	7x10		
6	Ninja Foodi Cold & Hot HB152	76	\$130	8	\diamond	\bigcirc	\bigcirc		⊗	0	8	G	8	16	•	18	8x9		
	Instant Pot Ace Multi Use	74	\$60	-	-	8	$\mathbf{\bigcirc}$		8	0	⊗	G	7	11	٠	19	10x8		
	NutriBullet ZNBF30500Z Blender Combo	74	\$150			\bigcirc	8	8	⊗	\bigcirc	8	Р	8	4	•	17	8x8		
	Braun PureMix Power JB7350	73	\$100			\bigcirc	\bigcirc	\bigcirc	\bigcirc	0	8	G	7	6	٠	17	8x8		
	Midea CyclonBlade High Speed MBL17HS	71	\$140	-	-	\bigcirc	\bigcirc	8	\bigcirc	0	⊗	Р	9	6	•	19	8x10		
	Ninja Master Prep Professional QB1004	69	\$60	8	\bigcirc	\bigcirc	\bigcirc		\bigcirc	0	8	Р	6	1		14	9x6		
	Oster 800 Series BLSTKH-GMO-000	69	\$50	\bigcirc		\bigcirc	\bigcirc	\bigcirc	\bigcirc	0	⊗	G	6	5	•	15	7x8		
	Oster Classic Series With Food Processor BPMT02-SSF-000	69	\$90	\bigcirc		8	\bigcirc			0	8	G	6	1	•	16	8x8		
	GoWise USA GW22502 1450W High-Speed	68	\$80	-	-	\bigcirc	\bigcirc	\bigcirc	0	0	8	Р	8	11	•	19	9x10		
	Ninja Duo With Micro-Juice Technology IV701	68	\$170	8	\bigcirc	0	⊗	⊗	\bigcirc	0	⊗	Р	9	9	•	18	9x10		
	Ninja Performance BL-710WM	68	\$80	8	\bigcirc	0	⊗	\mathbf{O}	⊗	0	⊗	Р	9	3	•	17	8x10		
	Dash Cold Fusion Vacuum DVB300RMRD	67	\$150	0		\bigcirc	\bigcirc	\bigcirc	\bigcirc	0	8	Р	6	Variable	•	18	8x9		
	Oster Pro 1200	66	\$70					⊗	\mathbf{O}	0	⊗	G	6	7	٠	15	7x8		
	Cuisinart Velocity CBT-600GRY	66	\$100	0	0	0	\bigcirc	\bigcirc	\bigcirc	0	⊗	Р	6	5	•	16	7x8		
	Cuisinart Velocity Ultra Trio BFP-650	65	\$150			\bigcirc	8	\bigcirc	\bigcirc		⊗	Р	7	4	•	16	7x9		
	Hamilton Beach Professional Quiet Power 58870	63	\$150		8	\bigcirc	\bigcirc	\bigcirc			8	Р	4	13	•	16	8x9		

Ratings > Countertop Intelligence Continued

Bra	nnd + Model	Overall Score	Price	Test Results			Featur									
				Even browning	Color range	Ease of use	Waffle style (claimed)	Weight (Ib.)		Grid	Dimensions (HxWxD, in.)	Nonstick grid	Waffle cooked indicator	Countdown timer	Sound alert	Vertical storage
	WAFFLE MAKERS		1			:			:			:		:;		
•	Breville Smart 4-Slicer BWM640XL	89	\$250	8	8	8	Belgian	15	Square, v 4 waffle s		6x12x16	•	•	•	•	
Ø	Calphalon CKCLWF1	82	\$100	\mathbf{O}		⊗	Belgian	7	Rectangu 2 waffle s		6x10x12	٠	•	•	٠	٠
6	Chefman Anti-Overflow Belgian Waffle Maker	76	\$30	8	\bigcirc	\bigcirc	Belgian	3	Round		5x8x11	٠	•			•
	Proctor-Silex 26070	69	\$25		NA	0	Belgian	3	Round		5x8x10	٠				٠
	Cuisinart WAF-150	61	\$60	0	⊗	\bigcirc	Belgian	8	Rectangu 4 waffle		5x10x14	٠	•			•
			1													
Bra	and + Model	Overall Score	Price	Test	: Resi	ilts	Featur	es + (Specs							
	(1)			Controls	Noise	Ease of cleaning	Measured	apaci	ty paimed Clai	Recorded temp when set to 350°F	Dimensions	[HxWxD, in.]		Weight (Ib.)		Dishwasher- safe
	AIR FRYERS				:	:	1			!	!					
	NuWave 6-Qt 37001	75	\$130	8		$\mathbf{\diamond}$	5.8 qt.		6 qt.	320	14×11	x16		15		•
6	GoWise USA GW22731	73	\$80	8	8	0	4.9 qt.		5.8 qt.	334	14x12	2x15		12		•
	NuWave Brio Air Fryer 36011	73	\$100	8	\diamond	0	2.6 qt.		3 qt.	345	13x10)x14		12		•
⊘	Ninja AF100	71	\$100	8			3.0 qt.		4 qt.	340	13×11	Lx14		10		•
6	Farberware HF-919B	71	\$70	\bigcirc	8	0	3.2 qt.		3.2 qt.	360	14x12	2x15		10		•
Ø	Elite Platinum EAF-1506D 3.5Qt. Digital	71	\$95	\bigcirc	\bigcirc	\bigcirc	3.4 qt.		3.5 qt	350	11x12	2x16		12		•
	Hamilton Beach Digital 35050	70	\$70	8	\bigcirc	\bigcirc	2.6 qt.	i	2.5 liters	315	13x11	Lx14		9		
	Power AirFryer XL	70	\$100	\mathbf{O}	0	⊗	5.3 qt.		5.3 qt.	355	14x13	3x15		12		•
	Power XL Vortex PAF-7QB	70	\$100	8	\bigcirc	0	5.7 qt.		7 qt.	330	14x12	2x16		12		
	Kalorik With Dual Layer Rack FT 42139 BK	70	\$90	0	⊗	0	3.2 qt.		2 lb.	330	15x11	Lx14		10		•
	Dash Deluxe DFAF455GBAQ01	69	\$100	\bigcirc	\bigcirc	0	5.6 qt.		6 qt.	355	14x13	3x15		12		•
	Cuisinart AFR-25	68	\$100	\bigcirc	\bigcirc	0	2.1 qt.		2.5 lb.	350	12x13	3x16		12		
	Emerald 6.5 Liter Self-Stirring With Digital LED Timer and Temperature Control SM-AIR-1808	67	\$120	0	٥	0	4.8 qt.	I	6.5 liters	300	llxla	2x15		11		

HOW WE TEST: The Overall Score for slow cookers takes Convenience into account, as well as our tests on the High and Low settings, in which we cook beef stew for 5 and 8 hours, respectively. For **toaster** ovens, we bake muffins and cookies, see how well the appliances Reheat, evaluate them for Ease of use and Ease of cleaning, and put them through four separate Toasting tests. The Overall

Score for multi-cookers combines results from our tests of the Pressure cooking, Slow cooking, Rice cooking, Steaming, and Sautéing modes. We evaluate ease of controls, cleaning, and more to rate Convenience. For blenders. we test for Icy drinks, Puréeing, and Ice crushing to gauge how well a model mixes ingredients, and measure Noise in decibels. Convenience looks at ease of

use, and for Durability, we run the ice crushing test 45 times. For waffle makers, we assess for Even browning in cooked waffles and measure the Color range for brownness on the lightest and darkest settings. Ease of use factors in the clarity of the controls, how hot the handle gets, and how easy the model is to clean. For air fryers, we assess how easy it is to use the Controls, we measure

🕴 🖸 🚺

POOR EXCELLENT

Noise during operation, and we judge Ease of cleaning. Blenders and toaster ovens are also rated for Predicted reliability, the likelihood that a brand's models will experience problems within the first four years, and Owner satisfaction, the likelihood that CR members would recommend their brand. A dash (—) indicates insufficient sample size to provide a rating.

Ø

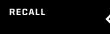


NEWS & EXPERT ADVICE TO KEEP YOU AHEAD OF THE CURVE™

ROAD REPORT

MONEY SAVER

Save Thousands on Your Auto Loan



Volvo

Volvo is recalling more than 300.000 cars in the U.S. because a cable that anchors seat belts can become compromised, reducing their ability to restrain occupants in a crash. Affected models include S60, S60CC, S60L, S80, S80L, V60, V60CC, V70, XC60, and XC70 vehicles made between 2007 and 2020. What to do: Volvo says it will contact owners of affected cars and replace the part. For more information, contact Volvo at 800-458-1552.

ASK OUR EXPERTS

Can I really drive my automatic like a manual?

Only about 16 percent of autos sold today have manual transmissions. But many upscale cars with automatic transmissions have paddle shifters, located within easy reach on the backside of the steering wheel, that allow drivers to override the gear selection without using a clutch. This can provide more control and can be helpful when descending hills.

What Does This Icon Mean?

- D BEWARE UNICYCLE RIDER
- D OBJECT IN MIRROR IS SMALLER THAN IT APPEARS
- FOOSBALL TABLE NEARBY
- ADAPTIVE SUSPENSION
 WARNING LIGHT

ANSWER: The icon is a warning light (showing a shock absorber) that indicates a problem with the **adaptive suspension system**, a computer-controlled feature that monitors road conditions and adjusts the suspension for optimal ride and handling. Some of these systems also offer driving modes, such as economy, comfort, and sport.

Interest rates are at record lows, so this could be a good time to refinance your auto loan. Personal finance company Credit Karma reports **average savings of \$3,000** for people who refinance loans through its platform. "The goal of refinancing should be to **reduce the overall cost of your vehicle**-not just to lower your monthly payment," says Rod Griffin, Experian's senior director of consumer education and advocacy. "But if you're having difficulty making your payments and refinancing will make them more affordable, it could also be a worthwhile move."

THE VITAL STATISTIC



Source: National Highway Traffic Safety Administration.

Greater likelihood that a hybrid vehicle will hit a pedestrian during a slow-speed maneuver, such as backing up, vs. a regular car. Since September, automakers have had to comply with a law intended to reduce crashes involving the silent operation of hybrids and EVs: It requires them to make noise when moving up to 19 mph.





Making Back Seats Safer

When it comes to safety advances, the back seat hasn't kept pace with the front—but that could be about to change.

by Keith Barry

N THE THREE YEARS Bob Anderson has been driving for Uber and Lyft near the Blacksburg, Va., campus of Virginia Tech, he's developed a routine. "I take time to introduce myself. I tell them my name is Bob,

which spelled backwards is 'Bob,' " he jokes. These days, he offers hand sanitizer, too. And then he pauses. If he doesn't hear the click of his passengers' seat belts, he'll ask, "Hey, are you buckled in and ready to go?"

Like other ride-hailing drivers, Anderson is on the last line of defense for keeping passengers safe in the back seat. Unbelted rear-seat occupants are eight times more likely to be injured and twice as likely to die as belted rear-seat occupants in a crash, but only 57 percent of ride-hailing and taxi passengers report always wearing their belt in the rear, according to a survey from the Insurance Institute for Highway Safety (IIHS). The problem is much more widespread than just Lyft, Uber, and taxis: Only 74 percent THE SAFETY ADVANTAGES OF SITTING IN THE FRONT SEAT



Side Curtain Airbags

These typically cover front and rear side windows to keep occupants from hitting their heads on the inside of the vehicle or on intruding objects during a side impact. They can also help to prevent ejection during a rollover or high-speed crash.

56 CR.ORG OCTOBER 2020

REAR PASSENGERS ARE less likely to benefit from safety features that are often standard up front. But new tests may help close that gap, spurring automakers to install new safety systems in the back seat. Automotive component supplier ZF has developed a rear-seat airbag, but Steve Peterson, a ZF vice president, says automakers are reluctant to install it until they know the specifics of a coming-and long-delayed-back-seat government crash-test program. Tomorrow's cars also should have seat belts that adjust to better fit people of all shapes and sizes, and that passengers actually want to wear, says Kristy Arbogast, co-scientific director of the Center for Injury Research and Prevention at the Children's Hospital of Philadelphia. "There's a limit to how much we can change behavior," she says. On this page are several lifesaving features found in modern vehicles-most of which prioritize front-seat passengers.



They inflate in a few milliseconds to cushion the body in a controlled manner and to keep occupants from hitting hard surfaces inside the vehicle. Airbags are meant to work with your seat belts, not replace them.

Adjustable Seat Belts

These allow up and down movement of the shoulder belt's upper anchor for a proper and more comfortable fit. Much more common on front seats than on back seats.

Pretensioners and Load Limiters

Pretensioners tighten up a seat belt at the start of a crash. Load limiters then introduce some slack to the belt during the crash to prevent chest injury. Less than 40 percent of new autos have these features in back seats.

Side Airbags

These are smaller airbags that pop out of the door trim or the outside edge of the seatback to protect occupants' torsos or hips in side-impact crashes. They're more common on front seats than on rear seats.



of passengers reported buckling up in the rear of private vehicles, compared with 91 percent of front-seat passengers. (Lyft and Uber told CR that they encourage riders and drivers to wear seat belts and to follow local laws.)

Some survey respondents said they find rear seat belts uncomfortable, so they don't wear them. Others said they think a belt is unnecessary because they perceive the back seat as safer than the front. "If rear occupants don't wear their belts, they're putting themselves at risk and putting other occupants in danger, too," says Emily Thomas, an automotive safety engineer at Consumer Reports' Auto Test Center.

Though it's true that sitting in the rear seat puts additional distance between passengers and the potentially deadly forces of a frontal crash, it's far from a substitute for wearing a seat belt. In a crash, unbelted passengers can become projectiles that could injure or kill others, and themselves, inside the car.

Even passengers who wear belts in the back seat may not be as safe as they assume: Recent safety advances designed to protect drivers and frontseat passengers aren't yet available in most new vehicle back seats. As a result, some belted rear passengers may be at a higher risk of dying in a crash than those belted in the front, especially passengers over 55. (Kids 12 and younger should always be in the back seat.)

Experts say this disparity is due to a combination of a lack of attention to rear-seat safety by manufacturers and a lack of urgency from regulators. So far crash-test evaluations, such as those performed by the IIHS and the National Highway Traffic Safety Administration (NHTSA), have prioritized front-seat crash protection because that's where people are more likely to sit. Those tests have led to a number of safety advances for the front seats that aren't yet available in the back. But experts say new crash tests that assess rear-seat safety are likely to spur automakers to create and add more rear-seat safety technologies.

Playing Catch-Up

Until the mid-2000s, the back seat was always the safest place to sit. But modern safety advances have largely focused on the front seat, partially because of a simple cost-benefit analysis. "We always know the driver position is occupied, so it makes sense that we would spend so much time focused on getting occupant protection up to speed in that seating position," says Jessica Jermakian, vice president for vehicle research at IIHS.

Front passengers now get airbags that protect in front and side crashes. The front seat belts on most newer cars have pretensioners, which tighten the belt at the onset of a crash, and load limiters, which let the belt spool out a bit to reduce any jerking force that might injure the occupant's chest.

By contrast, rear-seat safety has stagnated: Only 36 percent of new vehicles evaluated by CR have pretensioners in the rear, and only 38 percent have load limiters there. Less than 40 percent of vehicles have side airbags designed to protect the pelvis and torso of rear occupants. Similarly, only about a quarter of vehicles have rear seat-belt reminders, and NHTSA has not yet followed through on a congressional mandate to require them on all new vehicles, even though they've proved successful in getting front-seat passengers to buckle up.

As a result, the front seats of cars from the 2007 and newer model years are so safe that some occupants may have a slightly higher risk of death or injury if they sit in the back. Of the more than 260 vehicles currently rated by CR, only the new Nissan Rogue and Sentra come standard with all these features, plus rear occupant alerts, a feature that reminds drivers to check in the back for children so that they aren't left behind and at risk for heatstroke. More than 100 cars, trucks, and SUVs have none of these features standard, including all Acura, Alfa Romeo, Chrysler, Dodge, Honda, Jeep, Mitsubishi, and Ram vehicles. Mitsubishi would not discuss future products, but the other automakers say they have plans to add at least one of these features in upcoming model years.

Crash Tests Make Cars Safer

One reason the back seat hasn't kept up with the front is that NHTSA's five-star new car assessment program (NCAP) and IIHS' crash-test programs have focused on the front seats first. "Vehicle manufacturers are not incentivized with ratings to put technological innovations back there," says Kristy Arbogast, co-scientific director of the Center for Injury Research and Prevention at the Children's Hospital of Philadelphia and a fellow of the Association for the Advancement of Automotive Medicine.

Currently, only side-impact and head-restraint tests put a dummy in the rear seat. By contrast, Europe's Euro NCAP crash-test program does more extensive testing to assess rear-seat safety, and as a result more vehicles sold in Europe have back-seat safety innovations. Before Euro NCAP added rear-seat crash tests in 2015, only about 10 percent of vehicles sold in Europe came standard with rear seat-belt pretensioners and load limiters. Today, nearly all vehicles sold in Europe come with the features.

"Our point of view is wherever you sit, you should be protected as much as possible," says Richard Schram, Euro NCAP's technical director.

Change Is Coming

The IIHS is already in the process of introducing a rear-seat front-crash test. Jermakian says that test results will be available as soon as next year, and that testing is already underway. "When we look at the vehicles we've crashed already, we see that some vehicles are definitely doing better than others,"

THE FUTURE OF BACK-SEAT SAFETY

AS THE AUTO INDUSTRY

and regulators begin to focus on rear-seat safety, researchers and automakers are developing new ways to keep passengers safe. Here's a look at what you might expect to see in the near future.

■ VIRTUAL CRASH TESTS: Crash-test ratings aren't yet available for rear-seat safety, but researchers are already using computerized models of the human body to help fine-tune safety systems for rear passengers. For example, Jalaj Maheshwari

of the Center for Injury Research and Prevention at the Children's Hospital of Philadelphia is using these human body models to

evaluate how well booster seats protect children even if they're not seated properly. "Children don't sit in an ideal seating position," he says. "They move about, they have a lot of energy." So Maheshwari "places" human body models in seating positions that aren't included in traditional crash tests. Other labs run simulations of occupants of above- or below-average weightneither of whom are represented by existing crash-test dummies. **REAR-SEAT AIRBAGS:** Airbags prevent injury by spreading out crash forces and keeping occupants from striking hard surfaces. Mercedes-Benz and Ford already offer optional inflatable rear seat belts, which are designed to reduce forces on the wearer's chest. The 2021



Mercedes S-Class sedan will get rear airbags that deploy from the backs of the front seats and are meant to offer additional head, neck. and shoulder protection for rear occupants. Automotive supplier ZF also has developed a productionready rear airbag called Self Conforming Rearseat Airbag, or SCaRAB, which the company says several automakers have expressed interest in installing in upcoming vehicles. Additional testing may be necessary to make sure rear airbags are compatible with child car seats.

PERSONALIZED SAFETY:

In the future, back seats might be designed to automatically adjust to meet the safety needs of occupants of all ages, shapes, and sizes, says Kristy Arbogast of the Children's Hospital of Philadelphia. Just as today's vehicles have presets that can adjust seats for comfort, tomorrow's vehicles may have presets that customize safety features for different occupants. And some of those adjustments may be automated. Already, the driver's seat of some Mercedes-Benz and Genesis vehicles can automatically adjust to an ideal driving position when a driver inputs his or her height and weight.

Seat manufacturers and safety researchers are working on how to use that data to optimize safety features, too. "The position of the shoulder belt adjusts to you, the seat bottom you're sitting on may adjust to you," Arbogast says. "All of that is technologically possible. It costs money, it adds weight to the car, it's not a simple calculus, but it's one we can do."



she says, adding that early results show that vehicles with load limiters and pretensioners appear less likely to cause severe chest injuries.

IIHS will start evaluating rear seatbelt reminder systems as soon as 2022 and will incorporate those ratings into its influential Top Safety Pick ratings, which highlight the safest vehicles it evaluates each year. These reminders are designed to make sure kids in the back seat stay buckled and secured, but it will also help ride-hailing drivers like Anderson know whether their passengers are belted. "The best belt reminders tell you to buckle up at the start of a trip but also alert the driver if a rear passenger unbuckles during a trip," says Thomas, the CR safety engineer.

Congress ordered NHTSA to mandate rear seat-belt reminders in all new vehicles by 2015, but the agency is only now deciding how to implement the requirement after years of delays and a lawsuit filed by safety groups. NHTSA spokeswoman Kathryn Henry told CR the agency is also conducting research into rear-seat occupant protection that it expects to be completed by the end of next year, although William Wallace, CR's manager of safety policy, expects delays. "NHTSA misses many deadlines, in part because it's chronically underfunded," he says. "Congress should provide NHTSA far greater resources and push its leaders to set sensible priorities that could save lives today."

In the meantime, all the reminders, crash tests, and advances in the world won't matter if rear passengers don't buckle up. "Wear your seat belt every single trip," says Thomas. "It doesn't matter if you're just going around the block or have a cautious driver. Your seat belt is your first line of defense."



SAFETY FOR ALL AGES

THE MAJORITY OF backseat passengers are children, including those in car seats and boosters. But seniors who sit in the rear are especially susceptible to injury in a crash, largely because bones may weaken as people age. "They are a smaller piece of the problem of who is sitting back there, but they're a larger piece of who we need to protect in the back seat," says Jessica Jermakian, vice president for vehicle research at IIHS.

Older adults are especially vulnerable to seat-belt injuries, says Jingwen Hu, research associate professor at the University

of Michigan Transportation **Research Institute's** biosciences group, "The seat belt can actually hurt you," he says. "Rib fractures can create internal organ injuries." A load limiter adds slack to a seat belt during a crash, keeping it from crushing the wearer's chest while maintaining its effectiveness. But most cars lack load limiters in the back, and Hu says that may be why those as young as 55 are more likely to be injured in the back seat than if they're sitting up front.

Car seats and boosters are designed to protect children, but research says that up to 46 percent of child seats may be used or installed incorrectly. And some parents rush their kids out of booster seats based on age, instead of using height or weight as guides, says Kristy Arbogast of the Children's Hospital of Philadelphia. "There are plenty of kids who do not fit the adult belt without a booster seat," she says. "It's not any commentary on how advanced your child is."

What Young and Old Can Do Now to Stay Safer

Older adults should consider sitting up front. Hu hesitates to offer a blanket recommendation for where older passengers should sit. Some rear seat belts have load limiters, for example, and an individual's posture and bone strength matter, too. But studies show that the front seat is slightly safer for older people in newer vehicles, provided they wear their seat belt and adjust it for proper fit.

■ Don't rush kids. "Children should remain in rear-facing child seats until at least age 2, or until they reach the height or weight limits of their rear-facing seat," says Jen Stockburger, director of operations at CR's Auto Test Center.

Children in forward-facing car seats should remain harnessed as long as height and weight limits allow. Children under 4'9" don't typically fit vehicle seat belts and should stay in a booster seat until shoulder belts fit across midshoulder and lap belts fit low across the upper thighs, and low on their hips. State laws vary, so be sure your child meets age, weight, and height requirements. For help installing your car seat properly, go to nhtsa.gov to search for a child seat inspection station near you.

Always buckle up, regardless of age. Injuries caused by seat belts pale in comparison to the risk of severe injury and death for unbelted rear-seat passengers, who are twice as likely to die in a crash as those who buckle up. Seat belts also keep passengers from being ejected from the vehicle during a rollover.

CARS WITH REAR-SEAT SAFETY FEATURES

IMPORTANT SAFETY FEATURES that don't come standard in most vehicles' back seats include seat belt pretensioners, which tighten up belts at the onset of a crash; **load limiters,** which add slack to a belt during a crash to prevent chest injury; rear seatbelt reminders, which tell drivers when a passenger is unbuckled; and rear torso and pelvis airbags, which cushion the force of impact. Rear occupant alerts remind drivers to check for children or pets in the back seat so that they aren't left behind in a closed vehiclewhich can be deadly even in mild temperatures. Most of these features are not visible to the naked eye, so it can be difficult to know whether an individual vehicle has any of them. It's also important to note that having these beneficial features doesn't automatically mean a back seat is among the safest, because there are multiple variables that factor into overall safety. On this page are new vehicles CR evaluated that come standard with back seat pretensioners and load limiters, and at least one of the other safety features.

	Rear Occupant Alert	Rear Belt Reminder	Rear Side Torso/Pelvis Airbag	Rear Seat-Belt Pretensioner	Rear Seat-Belt Load Limiter
CARS WITH 5 BACK-SEAT SAFETY FEATURES					
NISSAN Rogue Sport, Sentra					
CARS WITH 4 BACK-SEAT SAFETY FEATURES					
BMW 2 Series Gran Coupe, X5, X6, X7					
FORD Escape					
LEXUS ES 350, IS 300, LS, RX 350, RX L, UX 200					
LINCOLN Corsair					
NISSAN Altima, Leaf, Maxima, Murano					
PORSCHE Macan, Taycan 4S					
TOYOTA Avalon, C-HR, Camry					
CARS WITH 3 BACK-SEAT SAFETY FEATURES					
AUDI A4, A4 Allroad, A6, A7, A8I, E-Tron, Q3, Q5, Q7, Q8, S4					
BMW 3 Series, 5 Series, 7 Series, 8 Series, X3					
FORD Explorer, Ranger					
JAGUAR E-Pace, F-Pace, I-Pace, XE, XF					
LAND ROVER Defender, Discovery, Discovery Sport, Range Rover Evoque, Range Rover Sport, Range Rover Velar					
LEXUS GS 350, GX 460, LX 570					
LEXUS LC 500, RC					
LINCOLN Aviator					
MERCEDES-BENZ CLA-Class, G-Class, S-Class					
NISSAN Titan Crew Cab, Titan XD					
PORSCHE Cayenne, Cayenne Coupe, Panamera					
TOYOTA Land Cruiser					
VOLVO S60 T5, S90, V60, V90, XC40, XC60, XC90					



RECOMMENDATIONS FROM CR'S TEAM OF AUTO EXPERTS

COMING SOON: 2021 Ford Bronco



PRICE: Starting at \$28,500 for the base and \$33,200 for the four-door, there are seven trim levels that range from bare bones to luxurious, topping out at \$63,500 before options. POWERTRAINS:

270-hp, 2.3-liter turbocharged four-cylinder with seven-speed manual or 10-speed automatic transmission; 310-hp, 2.7-liter twin turbocharged V6 and 10-speed automatic. Four-wheel drive is standard. **GROUND CLEARANCE:**

About 8.3 inches with the standard tires; 11.5 inches with the large 35-inch rubber that comes with the Sasquatch package, shown on both models above. FORDING CAPABILITY: 33.5 inches. (Select models have rubberized floors with drain holes.) OFF-ROADING ARMOR: The undercarriage has plates to guard the engine transmission

engine, transmission, transfer case, and fuel tank. Rock rails are available to protect from potential damage on tough trails. **INFOTAINMENT SYSTEM:** Ford's new Sync 4 infotainment system is housed in an 8- or 12-inch center screen. Tricks include over-the air updates and more than 1,000 curated trail guides.

SAFETY SYSTEMS: Each Bronco will be equipped with Ford Co-Pilot360, a suite of advanced safety and driver assist features that include forward collision warning. automatic emergency braking with pedestrian detection, backup camera with dynamic guide lines, automatic high beams, and postimpact braking. The Mid package adds blind spot warning with cross traffic alert, lane keeping assistance, and driver monitoring. G.O.A.T. MODES: The Bronco has up to seven selectable driving modes, including Normal, Eco, Sport, Mud/Ruts, and Rock Crawl for off-road driving.

FORD IS RESURRECTING the storied Bronco, which it originally launched for model year 1966 as an alternative to the crude Jeep CJ-5 off-roader, and retired three decades later to make way for the larger Expedition. Ford is no doubt tapping into nostalgia for the iconic nameplate. But with its removable top and doors and a spec sheet that shouts its off-road credibility, the new, highly anticipated midsized Bronco is also being aimed directly at outdoorsy drivers and off-road enthusiasts, whose prime choices today are the Jeep Wrangler and the Toyota 4Runner (see "The Competition," below). The Bronco will go on sale in spring 2021, following the introduction of the smaller Bronco Sport later this year. Reservations are open now for \$100. We look forward to buying our own (anonymously, of course) and reporting on whether it lives up to the hype.

THE COMPETITION

Jeep Wrangler MSRP \$28,295-\$42,195

26
36
8
0

Jeep has been an American icon since WWII, and the Wrangler, with its open top and go-anywhere abilities, has always represented freedom. The latest Wrangler is the most civilized to date, yet it trails almost every vehicle today in ride, handling, and noise. Still, the Wrangler remains the chariot of choice for fun-loving drivers looking for true four-wheel drive and the promise of adventure.

Toyota 4Runner MSRP \$36,120-\$49,865

OVERALL SCORE	65
ROAD TEST	55
PREDICTED RELIABILITY	8
PREDICTED OWNER SATISFACTION	٥

Last redesigned a decade ago, the 4Runner is a tough, dependable SUV with a powerful 4.0-liter V6 for people who need to travel off the beaten path. It also comes with standard advanced safety features. But its many compromises include a high floor and a low ceiling that limit access and hurt comfort, an unsettled ride, and clumsy handling due to pronounced body lean when cornering.





EXCLUSIVE RATINGS & REVIEWS BASED ON TESTING AT CR'S 327-ACRE AUTO TEST CENTER



LUXURY MIDSIZED 3-ROW SUVs

Audi Q7 Elegant and Nimble



AUDI HAS FITTED its Q7 with a new turbocharged V6 engine for 2020, giving the three-row luxury SUV a more refined driving experience to go with its already adept handling and beautiful interior. We still find that the controls take too much time to master, and we're disappointed that some important advanced safety features aren't standard.

Other than a slight power delay when accelerating out of a rolling stop, the new engine and eight-speed automatic transmission work in seamless harmony. The Q7 has a firm and steady ride, and is much more nimble than one might expect given its size. Fuel economy, at 20 mpg overall, didn't change from the previous version.

The Q7 offers an impeccably finished cabin filled with leather, wood, and chrome. CR testers of all sizes praised the comfort of the broad front

ROAD-TEST SCORE 92

HIGHS Powertrain, quietness, agility, fit and finish, front- and second-row seat comfort

LOWS Learning curve for controls

POWERTRAIN 335-hp, 3.0-liter V6 turbocharged engine; 8-speed automatic transmission; all-wheel drive

FUEL 20 mpg on premium fuel
PRICE

\$54,800-\$90,400 base price range \$71,010 as tested

seats. Three adults can fit in the second row, but the third-row seat is tight.

The controls and sleek dual display screens take time to master, but they ultimately prove logical after living with them. The Q7 is one of the few vehicles with wireless Apple CarPlay. Other hightech touches, such as the configurable instrument panel and wireless phone charger, add to the premium feel. Overall, the cabin is quiet and luxurious.

FCW, AEB with pedestrian detection, and LDW come standard. But BSW and RCTW-two proven advanced safety systems-require stepping up to the Premium Plus trim. The Q7's Overall Score is hurt by its belowaverage predicted reliability. That's because it shares a platform with the A6 and Q8, which were unreliable cars in their first year.



LUXURY COMPACT CARS

Cadillac CT5 Sharp Handling, But a Dull Powertrain



WITH THE LUXURY compact CT5, Cadillac is reinvigorating its sedan lineup as it tries to lure shoppers away from the Audi A4, BMW 3 Series, and Mercedes-Benz C-Class.

The CT5 has a dynamic ride and handling combination that should impress luxury sedan shoppers, but its powertrain lacks polish and could be a turnoff for consumers making test drive comparisons.

Slide inside and the front seats are comfortable and supportive. But the center console intrudes on the driver's right knee, and the upscale fit and finish has a somewhat somber presentation, offering hard plastic where established rivals feature softer, richer materials. The CT5's switches, buttons, and knobs feel upscale, and the controls are easy to master. Getting in and out of the rear requires some ducking and

ROAD-TEST SCORE 78

HIGHS Handling, braking, front-seat comfort, fit and finish

LOWS Unrefined transmission, engine noise, rear headroom, low dash vents

POWERTRAIN 237-hp, 2.0-liter 4-cylinder turbocharged engine; 10-speed automatic transmission; all-wheel drive

FUEL 24 mpg on premium fuel

PRICE

\$36,895-\$47,695 base price range \$53,520 as tested

mild contortions, and the headroom is limited.

The suspension delivers a steady, taut ride and agile handling, vanquishing memories of decades of floaty Cadillacs. This is where the CT5 shines most brightly.

But the powertrain comes across as unpolished. The 2.0-liter turbocharged engine is wheezy, and the exhaust note is gritty-sounding. The 10-speed automatic lacks refinement, tending to delay upshifts. And acceleration and fuel economy trail the CT5's competitors.

On the plus side, wet and dry braking distances are short for the segment. Standard advanced safety systems include FCW, city-speed AEB with pedestrian detection, and a safety alert seat that ties in with a driver attention monitoring feature. Still, we think there should be more standard safety features.





COMPACT SEDANS

Nissan Sentra

Masterful Makeover



NISSAN DIDN'T HOLD back with its 2020 redesign of the Sentra, metamorphosing the dowdy, also-ran sedan into one that now stands with the top models in its class. This is the best Sentra we've ever tested, with its comfortable ride, nimble handling, great fuel economy, roomy cabin, and intuitive controls.

The four-cylinder engine and well-tuned transmission deliver smooth power. While the Sentra is frugal at 32 mpg overall, it's only 1 mpg better than Nissan's larger Altima.

Handling is quite enjoyable, a marked improvement over the previous version. The redesign also transformed the ride, making it supple and controlled over bumps. In addition, the new cabin remains quiet under most driving conditions.

The interior is nicely appointed for this price range, with a noticeable step up

ROAD-TEST SCORE 81

HIGHS Ride, handling, controls, rear seat, braking, fuel economy LOWS Nonpower front seat that's short on lower-back support, footoperated parking brake, headlights

POWERTRAIN 149-hp, 2.0-liter 4-cylinder engine; continuously variable transmission; front-wheel drive

FUEL 32 mpg on regular fuel

PRICE \$19,310-\$21,650 base price range \$21,400 as tested

in the quality of materials. Despite these improvements, it can't match the polish of the pricier Mazda3.

The rear seat is surprisingly roomy. And the Sentra's driving position provides unobstructed outward visibility. Drivers found that the front seats became too soft over longer drives, losing support. But the power seat, part of a pricey options package, provides better lower back support and cushion height adjustment.

The infotainment and climate controls are a model of simplicity and a snap to use, but it's too easy for the driver to bang his or her left shin into the antiquated footoperated parking brake.

FCW, AEB with pedestrian detection, and BSW are standard, but not LKA. All but the base model come with Android Auto and Apple CarPlay capabilities.



MIDSIZED 3-ROW SUVs

Toyota Highlander Hybrid

A Fuel-Efficient, Do-It-All SUV



SCORE

THE HIGHLANDER HYBRID

is a versatile three-row SUV with a twist: It achieves 35 mpg overall, an impressive feat that some smaller hybrid SUVs can't touch.

But the Hybrid doesn't feel as powerful as the regular Highlander, with its lively V6. The Hybrid does glide effortlessly at low speeds on electric power, up to about 20 mph. But when more acceleration is needed, the four-cylinder kicks in with an unpolished roar, amplifying the engine noise. It's also slightly slower from 0 to 60 mph and has longer stopping distances in dry and wet conditions. For these concessions, the Hybrid offers a stunning 13 mpg gain over the regular Highlander-and nearly every same-sized competitor.

We found the Hybrid to be a bit more responsive in cornering, and the ride

ROAD-TEST SCORE 84

HIGHS Fuel economy, ride, controls, second-row seat comfort

LOWS Engine noise

POWERTRAIN 243-hp, 2.5-liter 4-cylinder hybrid engine; continuously variable transmission; all-wheel drive

FUEL 35 mpg on regular fuel

PRICE \$38,200-\$50,200 base price range \$44,463 as tested

was just as comfortable, performing well over bumpy roads.

In other respects, the Hybrid is the same as the regular version. The interior is roomy and functional, but it lacks flair unless buyers spring for the high-end versions, such as the Platinum trim. The front seats are comfortable for various body types, our testers found, and the secondrow seats provide good support and ample room. But the low third row is snug and uncomfortable, and it's a chore to climb back there.

Toyota has stepped up its infotainment game by making Android Auto and Apple CarPlay compatibility standard. And the controls are easy to use.

FCW, AEB with pedestrian detection, LDW, and LKA are standard, and the Hybrid includes the convenience of adaptive cruise control. **Ratings** > Vehicle Variety We have test results and ratings on both mainstream and luxury versions of three-row SUVs and compact sedans.

Make + Model	Overall Score		vey sults	Roa	Road-Test Results										Advanced Safety					
		Predicted reliability	Owner satisfaction	Road-test score	Overall mpg	Seat comfort, front/rear	Usability	Noise	Ride	Fit+finish	Routine handling	Avoidance-maneuver speed, mph	Acceleration O-60 mph, sec.	Dry braking 60-0 mph, ft.	Suitcases + duffels/ cargo volume, cu. ft.	FCW	AEB, city	AEB, pedestrian	AEB, highway	BSW
3-ROW SUVs \$35,000)-\$55,000				:															-
Kia Telluride 3.8L	92		8	97	21	🔷 / 🔕	\bigcirc	⊗	\bigcirc	\bigcirc	0	53.5	7.2	127	47.5	S	S	S	S	s
Hyundai Palisade 3.8L	87		⊗	88	21	🔷 / 🔕	\bigcirc	⊗	\bigcirc	\bigcirc		52.5	7.1	132	47.5	S	S	S	S	О
Toyota Highlander 3.5L	86		0	86	55	🔷 / 🔕	\bigcirc	\mathbf{O}	\bigcirc	\bigcirc	0	50.0	7.3	132	41.0	S	S	S	S	О
Mazda CX-9 2.5T	86		\bigcirc	80	55	🔷 / 🔕		\bigcirc	\bigcirc	\bigcirc	\bigcirc	50.0	7.9	139	34.0	S	S	S	S	S
Toyota Highlander Hybrid 2.5H	85			84	35	🔷 / 🔕	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	49.5	8.0	141	41.0	S	S	S	S	О
Subaru Ascent 2.4T	82			93	22	△ / ⊗	8		8			52.0	8.0	129	40.5	S	S	S	S	0
Honda Pilot 3.5L	75	0		80	20				0		0	49.5	7.5	136	48.0	S	S	S	S	0
Ford Explorer 2.3T	69			78	21	\bigcirc / \bigcirc						51.5	7.4	136	44.5	S	S	S	S	S
Chevrolet Traverse 3.6L	65	8		95	20	∧ / ⊗	8					50.5	7.3	130	54.5	0	Ο	О	0	0
Volkswagen Atlas 3.6L	61	8		84	20	⊘ / ⊗		\bigcirc		\bigcirc		51.0	8.7	135	50.5	S	S	S	S	S
3-ROW SUVs \$55,000)-\$75,000		:	<u> </u>	:									·		1	:		:	:
Lexus RX350 L 3.5L	81			80	20	🔕 / 🙆	0	⊗	⊗	⊗	0	51.5	7.7	136	31.0	S	S	S	S	0
Buick Enclave 3.6L	76	0		87	18	∧ / ⊗		8		\bigcirc		53.5	7.4	130	48.5	0	Ο	0	0	0
Lincoln Aviator 3.0T	72			82	19	\bigcirc / \bigcirc	\bigcirc	8		8		52.0	6.2	138	49.0	S	S	S	S	S
Audi Q7 3.0T	72			92	20	⊗/⊗		8	\bigcirc	8	\bigcirc	50.5	7.0	133	35.5	S	S	S	S	0
Volvo XC90 2.0T	63	8	0	84	20	8/8	0	\bigcirc	0	8	0	52.5	7.7	126	35.0	S	S	S	S	S
SEDANS \$45,000-\$55	,000				:														:	_
Audi A4 2.0T	87			88	27	🔗 / 🕕		⊗	\bigcirc	⊗	⊗	53.5	6.3	135	2+2	s	S	S	0	0
Lexus ES350 3.5L	87		\bigcirc	84	25	⊗ / 🕕	\bigcirc	⊗	⊗	⊗	\bigcirc	53.0	6.9	132	3+1	S	S	S	S	О
Mercedes-Benz C300 2.0T	76	0	0	85	26	⊗ / 🕕	0	\bigcirc	8	8	\bigcirc	55.5	6.8	136	2+1	S	S	S	S	S
Volvo S60 2.0T	63			71	26	⊘ / ①	\bigcirc					53.5	7.3	125	2+1	S	S	S	S	0
BMW 330i 2.0T	63	8		86	29	⊘ / 🚺			0	8	8	54.0	6.4	129	2+2	S	S	S	О	О
Cadillac CT5 2.0T	59			78	24	⊗ / 🕕	\bigcirc	\bigcirc	\bigcirc	8	\bigcirc	54.0	7.7	127	2+1	S	S	S	0	О
SEDANS UNDER \$25,0	000				:												:		:	
Subaru Impreza 2.0L	79		0	85	30	1 / 🔿	⊗	$\mathbf{\bigcirc}$	\bigcirc		\bigcirc	56.0	9.5	124	2+2	0	Ο	0	0	0
Toyota Corolla 1.8L	75		\bigcirc	68	33		\bigcirc		\bigcirc		\bigcirc	53.0	10.4	134	3+1	S	S	S	S	О
Nissan Sentra 2.0L	73		0	81	32	1 / 🔿	8	\bigcirc	\bigcirc	\bigcirc	\bigcirc	55.5	8.5	129	3+2	S	S	S	S	S
Honda Civic 1.5T	72	0		75	31		0		\bigcirc		\bigcirc	54.5	7.1	129	3+1	S	S	S	S	-
Mazda3 2.5L	68	0		75	30							54.0	7.7	125	3+1	S	S	S	S	0

All-Access and Digital members can find the latest, complete ratings at **CR.org/cars**. When you're ready to buy, configure the vehicle and find the best price in your area by clicking the green "View Pricing Information" button on the model's dedicated page.

HOW WE TEST: Recommended models did well in our Overall Score, which factors in Road-Test Results, Predicted reliability, Owner satisfaction, and

Advanced Safety, which includes crashtest results and the availability of crashprevention features, such as forward collision warning, automatic emergency braking, pedestrian detection, and blind spot warning. - means no such safety system is offered; O means it's available but not as standard equipment; S means it's standard on all trims. We deduct points if a model's gear selector lacks failsafes. Digital or All-Access members can go to **CR.org/cars** for complete ratings.



THIS INDEX LISTS ALL THE ARTICLES PUBLISHED IN THE MAGAZINE OVER THE PAST 12 MONTHS (INCLUDING THIS ISSUE). FOR INDEXES COVERING THE PAST FIVE YEARS, GO TO **CR.ORG/SYEARINDEX**.

A

~	
Air purifiers	Mar 20, 13
effective for coronavirus	Jul 20, 16
Air fryers	Oct 20, 44
ratings	Oct 20, 54
Air travel	Feb 20, 42
refunds	Jul 20, 9
safety	May 20, 7
timeline	Feb 20, 14
Antibiotics in food	Feb 20, 16
Appliances	
for backyard BBQ	Jul 20, 17
countertop	Oct 20, 44
ratings	Oct 20, 52
easy-to-clean	Aug 20, 18
reliability ratings	Aug 20, 42
Arbitration	Mar 20, 38

AUTOMOBILE RATINGS

AUTOMOBILE RATINGS	
Audi A6	
Audi E-Tron	Nov 19, 63
Audi Q3	Jan 20, 61
Audi Q7	
Buick Encore GX	Sep 20, 64
Cadillac CT5	
Cadillac XT6	Nov 19, 63
Chevrolet Silverado	
Ford Escape	Feb 20, 59
Hybrid	
Ford Explorer	Dec 19, 59
Honda ĈR-V Hybrid	
Hyundai Palisade	
Hyundai Sonata	May 20, 60
Hyundai Venue	
Kia Seltos	
Lincoln Aviator	
Lincoln Corsair	
Mazda CX-30	
Mercedes-Benz A-Class	
Mercedes-Benz CLA	
Mercedes-Benz GLB	
Mercedes-Benz GLS	
Nissan Leaf Plus	
Nissan Sentra	
Nissan Versa	
Subaru Legacy	
Subaru Outback	
Tesla Model Y	
Toyota Highlander	
Hybrid	
Toyota Supra	
Volkswagen Arteon	
Volkswagen Passat	

AUTOMOBILES & AUTO EQUIPMENT

Best & worst lists	Apr 20, 13
Bicycle mounting	May 20, 16
Brand Report Card	Apr 20, 14
Buying from home	Aug 20, 56
Car care during coronavi	
Cars for your driving styl	e May 20, 54
Child car seats	Feb 20, 20
ratings	Feb 20, 23
Coming in 2020	Apr 20, 34
Data collection and shari	
Driver assistance systems	3
naming standards	Apr 20, 26
risks	
Electric vehicles	Dec 19, 7; Apr 20, 28
fees	
Ford Bronco preview	Oct 20, 62
Fire prevention	Jan 20, 16
Infotainment systems	Sep 20, 56
built-in vs. smartphone	e
troubleshooting	Sep 20, 62
Insurance	Nov 19, 48
pricing practices	Apr 20, 21
ratings	Nov 19, 54
Luxury cars	
timeline	Jul 20, 16
Potential deal breakers	Nov 19, 56
Profiles, 2020	Apr 20, 48
Ratings, 2020	Apr 20, 38
Reliability	Jan 20, 50; Apr 20, 86
ratings	Jan 20, 55; Apr 20, 88
Repair timeline	Mar 20, 14
Safety systems	
back seat	
repair costs	Mar 20, 54
as standard equipmen	

for women	Feb 20, 52
Test drive tips	
Tires	
inflators	
ratings	Dec 19, 56
timeline	Jan 20, 14
Top Picks for 2020	Apr 20, 8
Used cars	Apr 20, 82

B-D

Bidets ratings Bike helmets Blenders ratings Blood pressure monitors Botanicals Bottled water Bread makers Cable TV fee transparencyJan 20, money saving tips	. Aug 20, 27 Jun 20, 14 . Oct 20, 44 Oct 20, 53 Oct 20, 16 Dec 19, 26 Nov 19, 36 Sep 20, 14 7; May 20, 7 Jun 20, 42
Bike helmets Blenders ratings Blood pressure monitors Botanicals Bottled water. Bread makers Cable TV fee transparency	Jun 20, 14 Oct 20, 44 Oct 20, 53 Oct 20, 16 Dec 19, 26 Nov 19, 36 Sep 20, 14 7; May 20, 7 Jun 20, 42
Bike helmets Blenders ratings Blood pressure monitors Botanicals Bottled water. Bread makers Cable TV fee transparency	Jun 20, 14 Oct 20, 44 Oct 20, 53 Oct 20, 16 Dec 19, 26 Nov 19, 36 Sep 20, 14 7; May 20, 7 Jun 20, 42
Blenders ratings Blood pressure monitors Botanicals Bottled water Bread makers Cable TV fee transparency	Oct 20, 44 Oct 20, 53 Oct 20, 16 Dec 19, 26 Nov 19, 36 Sep 20, 14 7; May 20, 7 Jun 20, 42
ratings Blood pressure monitors Botanicals Bottled water Bread makers Cable TV fee transparency	Oct 20, 53 Oct 20, 16 Dec 19, 26 Nov 19, 36 Sep 20, 14 7; May 20, 7 Jun 20, 42
Blood pressure monitors Botanicals Bottled water Bread makers Cable TV fee transparency	Oct 20, 16 Dec 19, 26 Nov 19, 36 Sep 20, 14 7; May 20, 7 Jun 20, 42
Botanicals Bottled water Bread makers Cable TV fee transparency	Dec 19, 26 Nov 19, 36 Sep 20, 14 7; May 20, 7 Jun 20, 42
Bottled water Bread makers Cable TV fee transparencyJan 20, ' money saving tips.	Nov 19, 36 Sep 20, 14 7; May 20, 7 Jun 20, 42
Bread makers Cable TV fee transparencyJan 20, money saving tips	Sep 20, 14 7; May 20, 7 Jun 20, 42
Cable TV fee transparencyJan 20, money saving tips	7; May 20, 7 Jun 20, 42
fee transparencyJan 20, money saving tips	Jun 20, 42
money saving tips	Jun 20, 42
Cameras	Nov 19, 13
instant print	Jul 20, 15
Cauliflower pizza crusts	Jul 20, 21
Cell phones	
ratings	Sep 20, 45
service providers	Sep 20, 38
ratings	
Cleaning tips	
car interiors	Sep 20, 63
flat-screen TVs	
laundry stains	
mattresses	
using vinegar	
Coffee	
coffee makers	
cold-brew	Aug 20, 13
ratings Nov 19, 26	; Nov 19, 30
cold-brew	Nov 19, 27
Complaining effectively	Jan 20, 24
Computers	
all-in-one desktop ratings	Dec 19, 25
ergonomic keyboards & mice	
ratings	
laptops	
ratings	
COVID-19	Juli 20, 7, 18
liability immunity	
scams	
stress relief	.Aug 20, 44
supplement schemes	Oct 20, 34
CR Recommended program	
Credit card strategies	Jul 20, 54
Credit freezes	Feb 20, 7
Data privacy	Mar 20, 7
children's	
health	
Zoom	
Debt collection	
Digital divide	
Dishwashers	
ratings	
DIY home projects	
Drugs	
dropped by insurance	.Aug 20, 48
prices Jan 20, 7	7; Jan 20, 38

E-G

Earbuds Apple AirPods vs.	
Samsung Galaxy Buds	Jun 20, 17
true wireless	
E-bikes	Jun 20, 13
E-books, free	Jul 20, 21
Electric kettles	Feb 20, 15
Electric toothbrushes	Oct 20, 18
ratings	Oct 20, 22
Ergonomic keyboards & mice	Sep 20, 20
ratings	Sep 20, 24
Eyeglasses	Mar 20, 15
lens coatings	Sep 20, 28
timeline	Jun 20, 14

R (C 1	
Fast food	E 1 00 40
chains' antibiotic use	
healthy	
	May 20, 31
timeline	May 20, 14
Fees	
cable TV	
hotels	
Financial tips during coro	
cash flow	
credit cards	
mortgages	Jul 20, 51
retirement savings	Jul 20, 45
Food	
antibiotics in	
coronavirus safety	Jul 20, 19
holiday treats	Dec 19, 16
labeling	Oct 20, 7
meat	Dec 19, 7
nutrition	Jan 20, 17
pesticide in	
produce health risks	Oct 20, 28
plastic in	Jun 20, 26
processed	Jan 20, 32
Frozen meals	Aug 20, 28
ratings	Aug 20, 34
Garbage disposals	Aug 20, 20
ratings	
Generators	8
home standby	Sep 20, 16
ratings	
safety	
Gifts for \$50 and under	Dec 19, 13
Glasses	
lens coatings	
timeline	
Grape products	
Grills	
ratings	

H-K

Headphones, noise-cancelin	Ig Nov 19, 14
Healthcare	May 20, 34
costs	Jun 20, 36
Helmets, bike	Jun 20, 14
Hot car death prevention	
HVAC filters	Jun 20, 16
Inclined infant sleepers	Feb 20, 7; Sep 20, 7
Insect repellents	Jul 20, 23
ratings	Jul 20, 25
Instant print cameras	Jul 20, 15
Insurance	
auto	Nov 19, 48
ratings	Nov 19, 54
drugs, dropped coverage	Aug 20, 48
health	Jun 20, 36
Kettles, electric	Feb 20, 15

L-P

Laptops	Dec 19, 18
ratings	Dec 19, 23
Lawn tools, battery-powered	Aug 20, 16
Luggage	Feb 20, 49
lifetime warranties	Feb 20, 47
ratings	Feb 20, 50
shipping services	Feb 20, 45
Magnets in toys	
Mattresses	Feb 20, 24
ratings	Feb 20, 36
shopping for online	
Mixers, stand	May 20, 18
Moldy washers	May 20, 46
Mosquito-borne diseases	
Multi-cookers	Oct 20, 44
ratings	
Noise-canceling headphones	Nov 19, 14
.Org domains	Aug 20, 7
Ovens, self-cleaning	Mar 20, 14
Password managers	Jul 20, 22
Pasta	Mar 20, 16
Patient care	
Pesticide in produce	
health risks	
Pillows	Feb 20, 36
ratings	
Pizza crusts, cauliflower	
ratings	Nov 19, 34

Plastic	
in food	Jun 20, 26
recycling	Jun 20, 31
timeline	Jun 20, 32
Predatory lending	
Product safety secrecy	
Projectors	Sep 20, 13

R-S

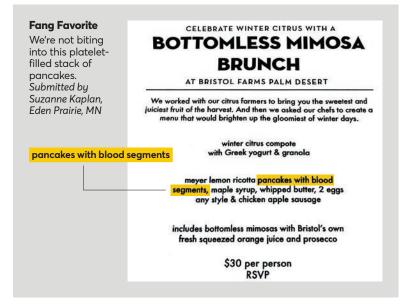
Radon detection	
Ranges	Nov 19, 16
Reading on devices	
Recall failings	
Refrigerator features	Sep 20, 46
Repainting home interiors	
Retail memberships	
Ring device user security	May 20, 17
Robocalls Nov 19, 7; Ma	
Roofing	
ratings	Jan 20, 23
Routers	Mar 20, 46
ratings	Mar 20, 51
Samsung Galaxy Fold	Feb 20, 17
Security systems, home	
Ring user security	May 20, 17
Siding	May 20, 20
ratings	
Skin cancer	
Sleep aids	Feb 20, 34
Slow cookers	
ratings	Oct 20, 52
Smart speaker privacy	Oct 20, 16
Smartphones	
affordable models	Ian 20, 13
Google Assistant translator	
money saving tips	
ratings	
service providers	
ratings	
Smoothies	
Sprinkler controllers	
Stand mixers	
Strawberry products	
Stress relief during COVID-19	
String trimmers	
ratings	
Stuffing	
Sunscreens	
ratings	
Supplements	
FDA oversight	
schemes	
schellies	

T-Z

Tea drinks	
labeling	Sep 20, 17
timeline	Sep 20, 14
Tech budget savings tips	Jun 20, 42
Telemedicine	Aug 20, 17
Televisions	
ratings	
shopping for	Nov 19, 18
Timeshares	Feb 20, 24
Toaster ovens	Oct 20, 44
ratings	Oct 20, 52
reliability ratings	Oct 20, 15
Toiletries timeline	Oct 20, 14
Tools timeline	
Toothbrushes, electric	Oct 20, 18
ratings	
Toy magnets	Jun 20, 7
Treadmills	
Turmeric supplements	
TV streaming	
free services	
Waffle makers	
ratings	Jan 20, 14; Oct 20, 52
Washers	
mold problems	May 20, 46
ratings	
Water, bottled	
Wireless chargers	
Work-from-home setups	
Zoom privacy	Jul 20, 9

Tricky Treats

These Halloween offers left us feeling kind of scared



Ghost Town?

This could be a purchase that comes back to haunt you. Submitted by Ken Ducote, New Orleans

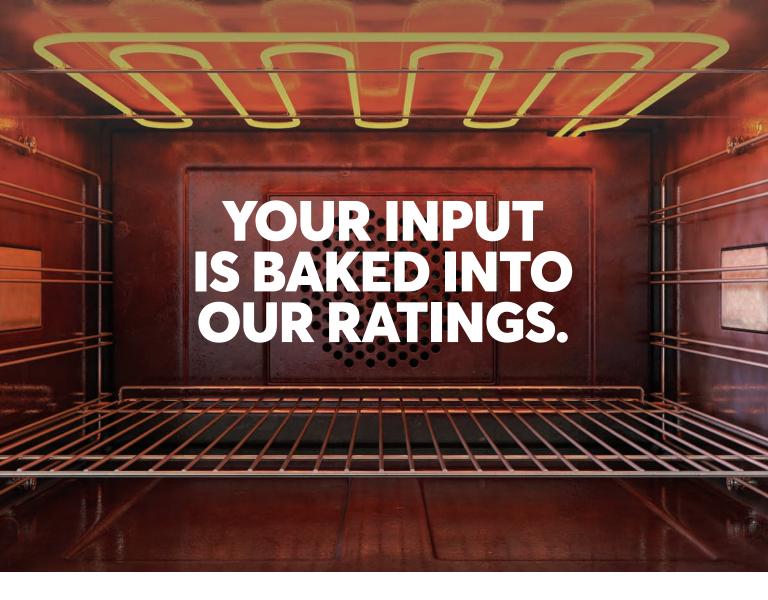


Spoky Schoolyard This sign placement seems like a grave mistake. Submitted by Bruce Foulke, Yardley, PA



SHARE

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



Our ratings and reviews are only complete when they include YOUR input. Your experience makes our ratings BETTER.

WHAT YOU THINK MATTERS.

Look out for our online survey invitations and make sure we have your email by visiting

cr.org/QQreg

