

# COVID-19 VACCINES: YOUR QUESTIONS, ANSWERED

MARCH 2021

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## What You Need to Know About Genetic Testing Kits

Our experts examine the exciting claims—and noteworthy concerns—of at-home DNA testing.



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At-home DNA testing kits are widely accessible and promise to give you important answers about your family, and even your health—but at what cost?

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### 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

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See page 63 for more details.

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✅ VERY GOOD    ⚡ EXCELLENT



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CRM13ASN

# A Trusted Marketplace



FOR THE PAST 85 YEARS we have played a vital role in delivering trusted, independent, rigorously tested information to help consumers navigate the marketplace. That was essential when we started in 1936 and remains just as critical today as we emerge from a pandemic and the economic devastation caused by it. Because just as when we first hung the sign on the door, we

are now seeing the perils of misinformation run rampant in society, and a lack of trust in our institutions.

As the articles on genetic home-testing kits (page 34) and credit score mistakes (page 46) attest, the issues confronting consumers today are more complex and consequential than ever before. The potential for good on both fronts is enormous. There is the possibility to get a glimpse of your origins or to learn about potential medical conditions, not to mention the ability for scientists to use vast troves of data to spark advances. For credit reporting there is the ability to safeguard your financial future by tracking and gaining insight into your individual score.

And yet the potential for harm exists, too—bad actors and a lack of trustworthy information in either of these arenas could seriously threaten our privacy and security. The central marketplace issues of tomorrow may be more digitized and less evident than those of the past, but they require standards just as high and safeguards just as thoughtful in order to ensure our safety and well-being.

With so much at stake in achieving a modern marketplace that works for all—particularly in this moment when we are beginning to emerge from crisis and rebuild our economy for the future—CR will continue to lead the way on behalf of our members and all consumers to ensure that the path forward includes trusted information and policies that put people first.

*Marta Tellado*

**Marta L. Tellado,**  
President and CEO  
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## Ending Surprise Medical Bills

### WHAT'S AT STAKE

Long before anyone ever heard of COVID-19, U.S. consumers were plagued by surprise medical bills. These are typically charges for medical care that a patient believed would be covered by insurance but turn out to have been provided by an out-of-network doctor or other provider. Almost 1 in 5 emergency room visits triggers a surprise medical bill. And they often amount to many thousands of dollars.

The pandemic has only made the problem worse. Loopholes in COVID-19 relief legislation have left many consumers vulnerable to large medical bills for tests and treatments they reasonably assumed would be covered by insurance.

### HOW CR HAS YOUR BACK

CR has been fighting surprise medical bills for much of the past decade, most recently as part of the No Surprises coalition. CR advocates have helped pass state-level bans, briefed federal legislative staffers on the issue, recruited patients to tell their stories in public forums, and collected thousands of consumer signatures demanding legislative action.

All these efforts have finally paid off. The \$900 billion pandemic relief bill signed into law Dec. 27 included provisions that, among other things, end balance billing (the practice of charging consumers the difference between the provider charge and the insurer's allowed amount), ensure that emergency room care is billed at in-network rates, and relieve consumers of the burden of negotiating surprise bills with providers. Even enormous air ambulance charges—a problem CR called attention to in a May 2017 report—are now banned. The restrictions on surprise

bills go into effect Jan. 1, 2022.

### WHAT YOU CAN DO

Until then, learn how to fight surprise medical bills at [CR.org/surprise0321](https://cr.org/surprise0321).

## Bridging the Digital Divide

### WHAT'S AT STAKE

Throughout the COVID-19 crisis, millions of us have headed online every day to get food, healthcare, education, and work—not to mention connect with family and friends. It's no surprise that, in a nationally representative survey of 2,164 U.S. adults last April, four-fifths said access to broadband is as vital as electricity and running water.

But there are obstacles to getting broadband service for some, especially in rural areas. And a lack of competition among providers has enabled costs to soar, shutting out the most financially vulnerable Americans. Almost half of low-income households don't have broadband internet at home.



### CALL TO ACTION

Your credit report can make or break your financial future, potentially determining whether you get a home loan, affordable auto insurance, or even a job. **Yet credit reports can be rife with errors.** And most Americans don't check their reports annually. So CR is launching the Credit Checkup. Sign up and we'll show you how to check your credit report free of charge and what errors to look for. And we'll ask you to report back to us on the results, which will help us hold credit bureaus more accountable. Sign up at [CR.org/creditcheckup](https://CR.org/creditcheckup). And learn more about how to protect your credit score on page 46.

### HOW CR HAS YOUR BACK

As Congress debated COVID-19 relief, CR pushed for an emergency program defraying the cost of broadband. More than 88,000 people signed a CR petition or wrote emails calling on Congress to help. When the relief bill passed, CR scored a win: \$3.2 billion will go to help struggling families stay connected, including up to \$50 per month in internet assistance.

### WHAT YOU CAN DO

Learn more about CR's Digital Lab and its fight for digital rights, at [lab.cr.org](https://lab.cr.org).

## Banning Toxic Packaging

### WHAT'S AT STAKE

CR has reported extensively on per- and polyfluoroalkyl substances (PFAS), known as "forever chemicals" because they don't easily break down in the environment or the human body. Exposure has been linked to an array of health problems, including cancer and immune disorders, as well as learning delays in children.

Manufacturers add PFAS to food packaging to make it water- and grease-resistant. But it can contaminate the food it touches. The Food and Drug Administration has detected PFAS in foods sold around the country, including in produce, meat, seafood, and dairy products.

### HOW CR HAS YOUR BACK

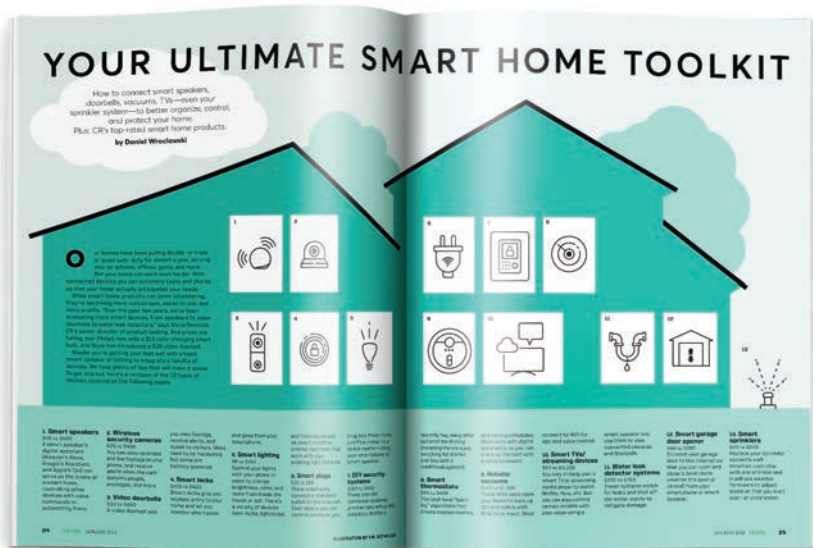
CR advocates are working with state and federal policymakers to minimize exposure to PFAS. In December, CR helped pass a law banning PFAS-containing food packaging in New York, which joins Washington and Maine as the first states with such prohibitions.

### WHAT YOU CAN DO

Learn more about the risks of PFAS and how to protect yourself at [CR.org/pfas0321](https://cr.org/pfas0321).







Our January cover story, “Your Ultimate Smart Home Toolkit,” offered a guide to smart speakers, thermostats, doorbells, and TVs, and how to connect them. Here, our readers discuss their “smart home” experiences. To join the conversation, go to [CR.org/smarthome0321](https://CR.org/smarthome0321).

I HAVE TO SAY the Ecobee thermostat that we bought has been amazing. Apple HomeKit has worked great with it. It turns on when someone comes home or says “good morning” to Siri and turns down when nobody is at home or we tell Siri “good night.” It has started learning these things on its own, too, so if we miss something, it usually figures it out. We plan on getting one for my mother. It’s simple enough to use that she won’t be intimidated by all it can do.

—Sean Carson, via Facebook



WRITE

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

I HAVE THREE ZONES in my house, and three Honeywell WiFi thermostats. They aren’t particularly “smart” in that they have no sensors in addition to temperature, and no self-learning, but they work with Google Home/Google Assistant and Honeywell’s app to be controlled and programmed accordingly. And for \$80 each, it’s an easier pill to swallow when you need more than one. A connected thermostat like Honeywell’s can send alerts to a smartphone/email for various conditions, like low temps, or if it loses connection with the service (usually in the event of a power failure). These are nice options, and you don’t need a \$250 thermostat to get them.

—Mike Schmitt, via Facebook

YOUR ARTICLE helps prospective customers identify devices for home automation, but just saying that the smart speakers will tie everything together is an oversimplification, particularly when dealing with devices that use different communication protocols. For example, most water leak detectors will detect the leak, send a command to turn off the water flow—thus avoiding flood damage—then use home WiFi to communicate to the homeowner via email/text. This is a good thing! But if the hot water system also has a recirculation pump installed, this needs to be turned off, too. Here’s where items like SmartThings or Wink hubs play a part in the home automation solution. These hubs handle a

variety of protocols and allow complex automation scenarios, allowing compound decisions.

—Rick Gruber, via CR.org

SMART HOME DEVICES—from beds to thermostats—capture detailed information about our homes and our daily activities. Such information can be transmitted to manufacturers or software companies that then sell it to others for marketing purposes. It’s a gross violation of privacy, and it’s the reason I won’t be buying smart devices.

—Geoffrey Nash, Alpharetta, GA

**EDITOR’S NOTE** Here at CR, we think consumers need far more control over who uses their data, and for what purpose. To learn more about how we’re working to protect your digital privacy on connected devices and services, go to [CR.org/dataprivacy](https://CR.org/dataprivacy).

YOU RATED the Eufy T8200 video doorbell as having poor privacy. I bought its sibling product because it stores video locally and not in “the cloud.” Why do you rate it poorly?

—Dave Crocker, Sunnyvale, CA

**EDITOR’S NOTE** Our data privacy score is a measure of how the device and/or its service provider collect, share, and use your data, as well as the user’s ability to control the flow of their data. For video doorbells, we base our analysis primarily on user interfaces and publicly available materials like privacy policies, which detail companies’ claims on how they collect, share, and use one’s video data. That analysis showed that video doorbells from other companies have better policies and controls than the Eufy T8200. Also note that, in general, storing content locally isn’t likely to be more secure or private than in the cloud, unless you can ensure that the local copy is the only one and can’t be accessed without your permission.





## TESLA TALK

YOUR TESLA MODEL Y review (January 2021) and earlier Tesla Model 3 review list long charging times and limited range as lows. Are you comparing range with ICE (internal combustion engine) vehicles? I believe Tesla's EPA range (long-range model) is currently the longest available from any BEV. And if you have a V3 Tesla Supercharger, a charge might take 30 minutes.

—Arthur Packer,  
Edmonton, Alberta

**EDITOR'S NOTE** Tesla models do have impressive range: The Y is claimed to have 326 miles; the S, 402 miles. But we believe it's our obligation to present not only the economic and environmental benefits of EVs but also their shortcomings. Despite significant improvements, even the best EVs don't match the range of an ICE vehicle, and quick chargers are still not nearly as fast as stopping to get gas at a service station.

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YOU GIVE the Tesla Model Y an overall score of 50, decidedly on the low side. Yet you assign a favorable score of 78 to the Tesla Model 3, which you indicate is essentially the same car except for the body size. The detailed ratings for each car show that the Model Y does as well as or perhaps a bit better than the Model 3, except for reliability. Clearly, you give great weight to reliability—greater than do the owners, because the owners of both cars give the highest possible owner satisfaction score to each.

—Elliot Wicks, Reston, VA

**EDITOR'S NOTE** Consumers consistently tell us that reliability and safety are the most important factors when they buy a new car, and so we do weigh those factors most heavily in the Overall Score. But we realize that some drivers may have different priorities. That's why we also list the road-test score separately from the Overall Score, so you can see that the Model Y did slightly better in our road test than the Model 3.



## DIABETES + COVID-19 CONCERNS

DOES "Why Diabetes + COVID-19 Is So Dangerous" (January 2021) apply only to type 2 diabetes or also include those with type 1 diabetes? Government websites consider those with type 2 diabetes to be "at increased risk" of COVID-19 complications, and those with type 1 diabetes "might be at increased risk" of COVID-19 complications.

—Nick Bachovchin,  
Marlborough, MA

**EDITOR'S NOTE** Yes, our article applies to people with type 1 and type 2 diabetes. Compared with



## READERS SHARE THEIR FAVORITE OATMEAL TIPS

Regarding "What's in Your Oatmeal Cup?" (Insights, January 2021): I blend a handful of oats with some plain tea as the beginning of a smoothie, then add whatever fresh and frozen fruits I have (usually bananas and raspberries), plus an egg and some ground flaxseed. Drinking my oatmeal means I don't lose any nutrients due to cooking. And there's a cost to convenience: Those individual oatmeal cups are very, very expensive.

—Donna Freedman,  
via CR.org

There are lots of choices for oatmeal, but I use raw honey and cinnamon to sweeten mine.

—Roger Groot, via CR.org

There's no need to buy single-serving oatmeal cups. Quaker Old Fashioned Oats "cook" in the microwave in 2½ minutes. Couldn't be easier, and there's a lot less packaging waste.

—Linda Fuchs, via CR.org

people with well-managed type 1 diabetes, those with type 2 appear to be at greater risk of COVID-19 complications. This is, in part, because type 2 is often associated with obesity and heart disease, which are risk factors in their own right for COVID-19 complications. But researchers and physicians are finding that anyone with blood sugar issues (caused by type 1 or type 2 diabetes) may be at heightened risk of more serious cases of COVID-19. Also, type 1 diabetes (which is an autoimmune disease) can impair a person's ability to fight an infection (like COVID-19), especially if blood sugar levels are not well-controlled. So it's key for those with either type 1 or type 2 diabetes to keep their blood sugar levels in check.



## YOGURT HISTORY

AS AN ARMENIAN/GREEK, born in Providence, RI, in 1947, I must take issue with your CR Time Traveler (Insights, November 2020) assertion that in 1942 Daniel Carasso/Danone "starts the first American yogurt company." If you Google "Colombo yoghurt," you'll see that in 1929 Rose and Sarkis Colombosian, Armenian immigrants, started the first yoghurt dairy in Andover, MA. They shortened the name for easier pronunciation.

—Leon "Lee" Juskalian,  
Santa Barbara, CA

**EDITOR'S NOTE** We welcome your feedback and completely respect the Colombosian family's rich legacy as yogurt producers. We carefully checked our sourcing and appreciate the additional context.

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

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

## Energy-Efficient Refrigerators

**WE TESTED:** 97 models  
**WE TEST FOR:** Thermostat control, temp. uniformity, and more.

### ABOUT THE SCORES:

#### BOTTOM-FREEZER

Median: 71, Range: 40-81

#### TOP-FREEZER

Median: 61, Range: 40-78

#### SIDE-BY-SIDE

Median: 66, Range: 45-79

### Top-Notch Bottom-Freezer

LG LRDCS2603S  
\$1,400 (\$72 energy cost per year)\*

**81**  
OVERALL  
SCORE



### Low-Cost Top-Freezer

Frigidaire Gallery FGTR2037TF  
\$900 (\$55 energy cost per year)\*

**78**  
OVERALL  
SCORE



### Spacious Side-by-Side

Samsung RH25H5611SG,  
\$1,700 (\$77 energy cost per year)\*

**73**  
OVERALL  
SCORE



## Laser Printers

**WE TESTED:** 77 models  
**WE TEST FOR:** Graphics quality, text quality, speed, and more.

### ABOUT THE SCORES:

#### B&W ALL-IN-ONE

Median: 76, Range: 69-81

#### B&W REGULAR

Median: 76, Range: 69-81

#### COLOR REGULAR

Median: 63, Range: 54-69

### Includes a Scanner

Brother HL-L2395DW  
(black-and-white all-in-one)  
\$180

**80**  
OVERALL  
SCORE



### Speedy Text Printing

Lexmark B2338dw  
(black-and-white regular)  
\$150

**80**  
OVERALL  
SCORE



### Color Laser Printing Deal

HP Color LaserJet Pro  
M255dw (color regular)  
\$300

**67**  
OVERALL  
SCORE



## Ask Our Experts

**What should I look for in a laser printer for my home office?**



THE BEST LASER PRINTERS deliver crisp text with great speed, making them a smart pick for a home office. Black-and-white models, such as the two above, are cost-effective when printing text and don't waste ink the way inkjet models do. But if you need to print graphics, try a color laser like the HP above, which rates Very Good at printing charts. Also look for a model with auto-duplexing, which prints on both sides of a page, and WiFi Direct, which allows printing directly from an in-range smartphone without being connected to your home WiFi. If the printer has a scanner, having OCR (optical character recognition) software included is useful for making scans editable in a word processor.

ILLUSTRATION: SERGE BLOCH



For the latest ratings of these and other product categories, readers with a Digital or All Access membership can go to [CR.org](https://www.consumerreports.org).

## Latte-Capable Coffee Makers

**WE TESTED:** 152 models, 13 of which include a milk frother  
**WE TEST FOR:** Performance and speed of brewing, convenience, and more.

### ABOUT THE SCORES:

#### ALL SINGLE-SERVE

Median: 72, Range: 35-91

#### ALL DRIP

Median: 68, Range: 34-90

### Best Single-Serve Pod Style

Nespresso by DeLonghi  
 Citiz EN267BAE  
 \$300

88

OVERALL  
SCORE



### Has Full-Sized Drip Carafe

Ninja Specialty CM401  
 \$170

82

OVERALL  
SCORE



### Quick & Consistent Brewing

Keurig K-Café Special Edition  
 Coffee, Latte & Cappuccino  
 Maker K84 (pod style)  
 \$200

71

OVERALL  
SCORE



## Smart Speakers for \$100 or Less

**WE TESTED:** 20 models  
**WE TEST FOR:** Sound quality, ease of use—including wireless setup, console, and voice controls—versatility of useful features, and more.

### ABOUT THE SCORES:

Median: 55

Range: 38-69

### Bargain for Alexa Users

Amazon Echo (4th Gen.)  
 \$70

65

OVERALL  
SCORE



### Great Deal for Google Users

Google Nest Audio  
 \$100

63

OVERALL  
SCORE



### Affordable for Apple Users

Apple HomePod Mini  
 \$100

50

OVERALL  
SCORE



## 4-Slice Toasters

**WE TESTED:** 6 models  
**WE TEST FOR:** How well a toaster can make both very light and very dark toast, how fast it can toast a full batch of bread, ease of use, ease of cleaning, and more.

### ABOUT THE SCORES:

Median: 79

Range: 69-83

### Speedy & Tops at Toasting

Cuisinart CPT-142 Toaster  
 \$50

82

OVERALL  
SCORE



### Easy to Use & Clean

Breville BTA840XL Smart  
 Toaster  
 \$180

80

OVERALL  
SCORE



### Luxe Pick & Long Warranty

Wolf Gourmet 4-Slice  
 WGTR104S  
 \$400

78

OVERALL  
SCORE



## Carpet Cleaners

**WE TESTED:** 16 models  
**WE TEST FOR:** How well a model removes red clay stain from carpet, how much wet solution it leaves behind after cleaning, how noisy it is during use, and more.

### ABOUT THE SCORES:

Median: 57

Range: 25-71

### Best Overall Performance

Bissell ProHeat 2X Lift-Off  
 Pet 15651  
 \$300

71

OVERALL  
SCORE



### Great Value

Hoover PowerDash Pet  
 FH50700  
 \$90

69

OVERALL  
SCORE



### Cleans Well but Noisy

Bissell TurboBrush  
 PowerClean 2987  
 \$100

69

OVERALL  
SCORE



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

COMING NEXT MONTH Bike Helmets & More



## Is buying a used appliance a good idea?

Our experts say that buying a lightly used appliance can be a smart move—particularly when it comes to ranges, washers, dryers, and refrigerators. Our research found that you might pay about half the price of a new model. Sometimes buying and installing a used appliance can even cost less than repairing a current broken one.

“It takes some legwork, and you need to be willing to live with a mismatched kitchen or laundry suite, but in return you can find a top-of-line appliance for a fraction of what it would cost new,” says Jim Nanni, director of appliance testing at CR. “You may even get features you couldn’t afford otherwise.”

We recommend looking in used-appliance stores or local repair shops instead of places such as Facebook Marketplace or yard sales. Prices tend to

be lower at local shops, and we found that many offer a warranty, with coverage ranging from six weeks to six months, including parts and labor. Plus, some repair shops have technicians who inspect appliances and replace worn-out parts before selling. Thrift stores may also offer good deals, but their presale inspections might not go beyond plugging in an appliance to ensure that it turns on.

Wherever you shop, always try to learn the age of the appliance. That way, you can balance its remaining useful life with its price. Go to [CR.org/used0321](https://www.consumerreports.org/used0321) for a list of how long different types of appliances are estimated to last. It’s also smart to check to see how the brand of any used appliance scores in CR’s brand reliability ratings—go to [CR.org/reliable0321](https://www.consumerreports.org/reliable0321) for a helpful brand ratings chart.

### Do I need to wear a mask after I get the COVID-19 vaccine?

Wearing a mask—even after being vaccinated—is still crucial. That’s because there

may still be many people who haven’t received a vaccine, and scientists are still learning more about whether being vaccinated also prevents you from spreading the coronavirus. (For more information on COVID-19 vaccines, see page 18.)

Keeping your mask clean also continues to be important: If you’re using a washable one, you should clean it at the end of every day you use it rather than wearing it unwashed for multiple days in a row, advises James Dickerson, PhD, CR’s chief science officer. Run it through the laundry with your usual detergent or wash it by hand: Soak it in a solution of ½ cup of bleach in a gallon of room-temperature water, then give it a vigorous scrub. Be sure to rinse it thoroughly and to let it dry completely before you wear it.

For masks with a pocket for a PM 2.5 filter (named because it captures particulate matter that is 2.5 micrometers in diameter), manufacturers advise replacing the filter after 6 to 24 hours of active use. (Discoloration can also be a sign that a filter should be replaced.) Insert a clean one when your mask is dry. Remember that disposable masks should be thrown away after one use. And whenever removing or handling a

used mask, touch it only on the ear loops or ties, then wash your hands.

### Is it safe to buy discounted pet medications online?

The use of pet meds and supplements continues to increase each year, according to the American Pet Products Association. The medications can be expensive: Heartworm medication alone costs dog owners \$86 per year on average (cat owners, \$45). While buying medications directly through your vet may be the priciest option, some experts also think it’s the easiest way to be sure prescription medications are safe. The National Association of Boards of Pharmacy reviewed over 22,000 online pharmacies and found that almost 95 percent don’t meet NABP patient safety and pharmacy practice standards or applicable laws. “The scope of the problem is expansive,” the NABP says. The good news? You can rest assured that NABP-approved retailers are safe and reputable.

So it’s fine to buy pet medications online as long as you do your homework to make sure the retailer is approved first. Learn whether a website has been approved by the NABP by copying its URL into a search box at [safe.pharmacy](https://www.safepharma.org). (Approved websites include 1-800-PetMeds, Chewy, and PetCareRx.)



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



# CR Insights

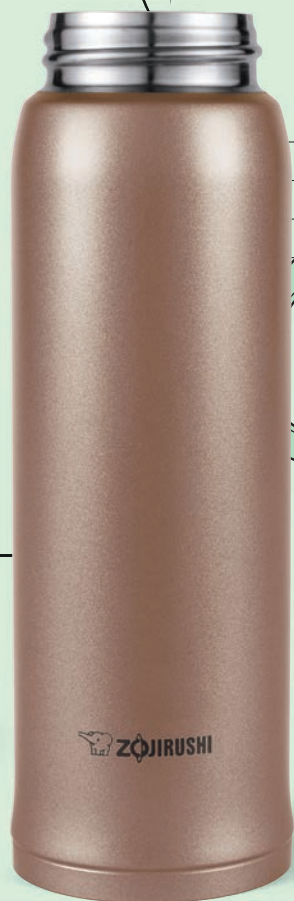
## IN THE KNOW

### THE TRAVEL MUGS THAT STAY HOTTEST, LONGEST

TOP PERFORMER,  
STAYS HOT FOR 13.5 HR.

**Zojirushi, 16 oz. \$25**

- 5/5 TEMPERATURE RETENTION
- 4/5 TOP CLEANING
- 5/5 GASKET REMOVAL
- 5/5 GASKET REPLACEMENT



AN INSULATED travel mug lets you transport your favorite drink, hot or cold, anywhere you go. And a good one feels like it was designed with your routine, and even you, in mind. It slips effortlessly into a cup holder and opens easily so that you can sip safely while keeping your eyes on the road. You arrive with a drink that's still hot. But some travel mugs promise all that and don't deliver anything except a tepid drink that spills onto your lap.

"One of our most interesting findings was that some well-

known brands, such as Yeti, fell short of the competition," says Bernie Deitrick, CR's test engineer for travel mugs. "In certain cases, the mug would be beautifully styled but the lid would be hard to open, or would allow heat to escape or liquid to spill." Our tests of 10 popular mugs included a shake test to see how well they resist spills and leaks, how easy they are to clean, and how many hours it took for mugs filled with 212° F water to drop to 140° F.

The 16- and 20-ounce mugs here are some of the slimmest in

our tests, easily fitting a variety of vehicle cup holders. And though every mug kept drinks hot for at least a few hours, the Zojirushi above outlasted them all, keeping drinks hot for 13½ hours—6 hours longer than the closest competitor. Deitrick also says to look for a mug with a removable, replaceable gasket—the thin silicone circle around the lid that helps prevent leaks—because it can wear out and/or smell. Being able to remove it for cleaning and swap in a new one means that your mug can last longer.



BUILT-IN HOOK FOR TEA BAGS, STAYS HOT FOR 7.5 HR.

**Thermos Stainless King, 16 oz. \$20**

- 5/5 TEMPERATURE RETENTION
- 4/5 TOP CLEANING
- 4/5 GASKET REMOVAL
- 4/5 GASKET REPLACEMENT



BUDGET-FRIENDLY BUT TRICKY TO CLEAN, STAYS HOT FOR 5.5 HR.

**Bubba Hero, 20 oz. \$12**

- 4/5 TEMPERATURE RETENTION
- 3/5 TOP CLEANING
- 3/5 GASKET REMOVAL
- 3/5 GASKET REPLACEMENT



EASY TO CLEAN BUT NOT LEAK-PROOF, STAYS HOT FOR 4.5 HR.

**Yeti Rambler, 20 oz. \$30**

- 4/5 TEMPERATURE RETENTION
- 5/5 TOP CLEANING
- 4/5 GASKET REMOVAL
- 4/5 GASKET REPLACEMENT

# FOOD IQ™

## EXTEND THE SHELF LIFE OF THESE PANTRY STAPLES

These storage techniques make pantry items last their longest, saving you money—and extra trips to the supermarket.

**FLOUR** “Consumers think flour is flour is flour,” says Nancy Bock, senior director of communications and marketing at the American Association of Family and Consumer Sciences (AAFCS). But if you don’t use yours much and leave the bag folded over in a cupboard, it might not work as well—or may even get bugs. Tightly wrapping and refrigerating the flour bag can extend all-purpose or bread flour’s usable life up to a year. Or store it in the freezer, where it will keep even longer. Note that whole-grain flour degrades more quickly because of the oils in the grain’s germ. It lasts up to 3 months in a cool, dry place; 6 to 8 months if frozen.



### ALL-PURPOSE FLOUR LASTS ...

**6-8 months** in the pantry after opening

**8-12 months** in the pantry, unopened

**1 year** in the fridge after opening

**More than a year** in the freezer

**PASTA** Dried pasta in an unopened package can be stored and used for up to two years, even past its “best by” date. Opened dried pasta is good for up to a year (but egg noodles last just one to two months). Meredith Carothers, MPH, technical information specialist at the Department of Agriculture’s Food Safety and Inspection Service, recommends storing dried pasta in airtight containers to prevent it from going stale and developing an off-flavor.

**BREAD** You can freeze bread, whole or sliced, depending on whether you’ll be defrosting by the slice or the loaf. Just be

sure to wrap it tightly in foil or plastic wrap and put it in a sealed container, and it will keep for three months. You can even pop slices straight from the freezer into the toaster. But don’t refrigerate it. Baked goods can go stale faster in a fridge than if you stored them in a dark, cool breadbox.

**OLIVE OIL** A bottle can last 3 to 5 months after opening, but the longer you store olive oil, the more likely oxidation will occur. And a large bottle is more prone to oxidation because of more exposure to air at the top of the bottle. So it’s best to buy only the amount of olive oil you can use within a

few months—and resist the urge to store it near the stove. “Heat accelerates oxidation,” says Selina Wang, PhD, a food science researcher at the University of California, Davis. Choose packaging that blocks light and air, such as dark glass. Toss it if it smells a little like Play-Doh or oil paint, which means it may have gone rancid.

**WHOLE GRAINS** Healthy whole grains, such as farro, don’t keep as well as refined grains, largely because of the oils that remain in the grain’s germ. Store in an airtight container in a cool place and it should keep about six months; the freezer can double that.

PHOTO, TOP: SHUTTERSTOCK

## CR Time Traveler SLEEP

**1937** We test 15 sets of sheets and find that the biggest brand names prove inferior. Heavily advertised Pepperell sheets are flimsy and shrink, we report.

**1942** We test 42 pairs of men’s pajamas for strength, shrinkage, and more. Though most are good, some patterned pj’s run in the wash, “so stick to solid color pajamas,” we say.



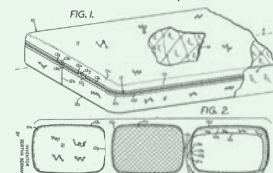
**1959** Bertha Berman patents a design for a fitted sheet with elastic pockets that fit around the edges of the mattress.

Brand	Price	Material	Shrinkage	Strength	Color	Pattern	Overall
Pepperell	1.99	100% Cotton	15%	Good	Good	Good	Good
Wards	1.99	100% Cotton	10%	Good	Good	Good	Good
Best Buy	1.99	100% Cotton	10%	Good	Good	Good	Good
Target	1.99	100% Cotton	10%	Good	Good	Good	Good
Amazon	1.99	100% Cotton	10%	Good	Good	Good	Good
Costco	1.99	100% Cotton	10%	Good	Good	Good	Good
Sam's Club	1.99	100% Cotton	10%	Good	Good	Good	Good
Kroger	1.99	100% Cotton	10%	Good	Good	Good	Good
Hy-Vee	1.99	100% Cotton	10%	Good	Good	Good	Good
Food City	1.99	100% Cotton	10%	Good	Good	Good	Good
Winco	1.99	100% Cotton	10%	Good	Good	Good	Good
Price Costco	1.99	100% Cotton	10%	Good	Good	Good	Good
Price Sam's Club	1.99	100% Cotton	10%	Good	Good	Good	Good
Price Kroger	1.99	100% Cotton	10%	Good	Good	Good	Good
Price Hy-Vee	1.99	100% Cotton	10%	Good	Good	Good	Good
Price Food City	1.99	100% Cotton	10%	Good	Good	Good	Good
Price Winco	1.99	100% Cotton	10%	Good	Good	Good	Good
Price Price Costco	1.99	100% Cotton	10%	Good	Good	Good	Good
Price Price Sam's Club	1.99	100% Cotton	10%	Good	Good	Good	Good
Price Price Kroger	1.99	100% Cotton	10%	Good	Good	Good	Good
Price Price Hy-Vee	1.99	100% Cotton	10%	Good	Good	Good	Good
Price Price Food City	1.99	100% Cotton	10%	Good	Good	Good	Good
Price Price Winco	1.99	100% Cotton	10%	Good	Good	Good	Good

**1938** Our first test of mattresses examines nine brands of innerspring—which are “enjoying great popularity,” we say. But only a Spring-Air with flexible coils is a Best Buy.



**1954** CR tests foam rubber mattresses and measures spinal curvature using X-ray analysis. A Wards Best model is tops for overall quality.





## FACE-OFF

## WHAT'S THE DIFFERENCE BETWEEN THE NEWEST MAC LAPTOPS?

SINCE 2006, all Apple computers have been powered by an Intel processor (the processor is essentially the brain of a computer). But the newest laptops from Apple—both the 13-inch MacBook Air and MacBook Pro—now contain a processor developed by Apple itself: the M1 chip.

The company calls it the biggest leap ever for a Mac. And there's good reason to believe that might be true. In our tests, the new processor performed with admirable speed, rivaling other powerful chips on the market, such as the Intel Core i7 and Ryzen 7 processors. And when compared with the older Mac models they replace, the new Air and Pro are faster at everyday tasks, says Antonette Asedillo, who oversees laptop testing at CR. The M1 can quickly

compress and decompress digital files, and makes using Apple's QuickTime video editing software a breeze.

On the surface, the specs of these two 13-inch laptops seem so similar that it may be hard to choose between them. And in our labs, they had similarly impressive performance in many aspects of our rigorous testing—both excel in our ratings for display and sit at the top of our current ratings for all 12- and 13-inch laptops.

But perhaps the biggest difference in our tests came down to battery life: The Pro can outlast the Air by 5 hours, making it a more ideal travel companion. (It is a smidge heavier than the Air—just 0.2 pound—due to the addition of a cooling fan.) The Pro also has a brighter screen, and the keyboard comes with a “touchbar”—a slim touch screen that stretches across the top of the keyboard like an extra row. “Most consumers looking for an Apple laptop will be happy with the MacBook Air,” Asedillo says. At \$300 less than the Pro, it's also good for your wallet. “Only those who need extra power for extended or heavy use may prefer the Pro.”



✓ **Apple MacBook Pro 13-Inch (M1)**  
\$1,300

81

OVERALL  
SCORE

✓ **Apple MacBook Air 13-Inch (2021, M1)**  
\$1,000

80

OVERALL  
SCORE

⬆	Portability	⬆
⬆	Performance	⬆
⬆	Display	⬆
⬆	Ergonomics	⬆
!	Versatility	!
17.5	Battery Life—Web (hr.)	12.5
15	Battery Life—Video (hr.)	10.75
3	Weight (lb.)	2.8

For more ratings, Digital and All Access members can go to [CR.org/laptop0321](https://www.consumerreports.org/laptop0321).



**1971** Inventor Charles P. Hall patents the waterbed—and it's a hit. Reportedly, 13 million waterbeds are sold in this year alone.



**1992** Tempur-Pedic sells mattress toppers made with a material first made to cushion NASA pilots during flights.

**2012** We rate 44 hotel chains. Wingate, Drury Inn & Suites, and Hampton Inn & Suites by Hilton earn an Excellent for bed comfort.



**Chili Ooler**  
\$699-\$1,499

5/5  
OVERALL  
SCORE

**1964** CR finds that a heavier-weighted blanket isn't always warmer. In our tests of 29 blankets, acrylics are generally superior to wool ones (and are moth-proof).



**1987** A national survey finds that 17 percent of us have trouble falling asleep, we report. Much of the difficulty is ascribed to stimulants like caffeine before bedtime.



**2021** We test mattress pads that can chill (or in some cases heat) you. The one above garners our top spot. Turn to page 30 for more ratings.

## CR MONEY SAVER

## ARE INSTANT POT ADD-ONS WORTH BUYING?

One of the selling points of the popular Instant Pot multi-cooker is that it can be used as a slow cooker, pressure cooker, rice cooker, and steamer. But it also offers tempting add-on accessories. CR staffer Perry Santanachote bought nine accessories to see which ones boost your Instant Pot game—and which ones aren't worth your cabinet space.

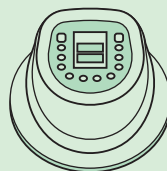


**DUO60 7-in-1  
6 Quart  
Multi-Cooker**  
\$80

**75** OVERALL  
SCORE



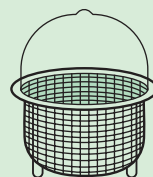
**Air Fryer Lid\***  
\$79



This lid comes with a 3.5-quart air fryer basket that you slip into its inner pot—great for crisping a small batch of fries. But it also turns your pot into a mini convection oven capable of roasting, broiling, and more. "It crisped the skin of a whole chicken beautifully," Santanachote says.



**Mesh Baskets**  
\$30



A smaller basket nests inside a larger one, letting you steam two separate vegetables at once. But in our labs, Instant Pot models receive a Fair rating for steaming veggies. Do fine mesh wire baskets help at all? "They didn't for me," Santanachote says after trying them in her home kitchen.



**Metal Egg Rack**  
\$20



Instant Pot egg racks come in metal and silicone. Both hold whole eggs (14 in the metal, nine in the silicone) so that they cook evenly and the yolks stay centered, Santanachote says. The multitiered metal racks are great for "pot-in-pot" cooking, meaning two dishes at once.



**Ceramic Nonstick Inner Pot**  
\$20



Instant Pot models come with a stainless steel inner pot that's great for most meals "but can be a pain to clean if you make sticky, starchy foods," Santanachote says. The ceramic pot was a breeze to clean, even after cooking cheesy pasta. And it's oven-safe up to 680° F.



**Tempered Glass Lid**  
\$15



The glass lid lets you see what's cooking and provides a looser seal than the pressure-cooker lid. Instant Pot models underperform at slow-cooking in our lab tests, "and this lid didn't make it better for me," Santanachote says. "My beef stew came out tough and watery."



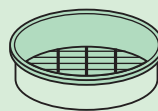
**Springform Cake Pan**  
\$13



The moist environment of a multi-cooker is ideal for making custardy desserts. And though it's possible to make cheesecake in your Instant Pot without it, this affordable 7.5-inch pan is sized to fit snugly in the inner pot and locks into the silicone steam rack (below, left) for easy removal.



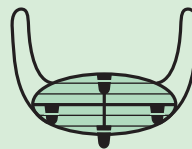
**Silicone Steamer Basket**  
\$10



This looks like a traditional bamboo steamer, but the silicone prevents food from sticking. It locks onto the silicone steam rack accessory (at right), and you can nest three of them on top of each other. "It did a great job steaming dumplings and fish in my kitchen," Santanachote says.



**Silicone Steam Rack**  
\$9



"This rack, which has a locking-rim design to secure other accessories to it (such as the cake pan above, right), is a game-changer," Santanachote says. It holds food high out of the water during steaming, and its long handles make it easy to lower and lift dishes in and out of the pot.



**Yogurt Maker Cups, Set of 5**  
\$8



"Yogurt made in the stainless steel insert can taste a bit metallic," Santanachote says. But when you pour milk straight into these plastic half-cup yogurt cups, it turns into yogurt without the mess of sterilizing milk directly in the pot. Then just put the cups in the fridge (some cups thickened more than others).



CR SMART SOLUTION

## KEEP YOUR HOME TREADMILL WORKOUT INTERESTING

TO AVOID THE RISK of going to a gym during the COVID-19 pandemic, many Americans have created at-home exercise programs for themselves—driving up sales for home gym equipment such as treadmills and fitness bikes. But running on your home treadmill all winter long can get boring fast, making it a challenge to stay motivated. Here, experts offer easy ways to stay engaged.

### Try an interval training program.

Check out the machine's built-in workout programs, suggests Chris Gagliardi, a personal trainer, medical exercise specialist, and health coach. There is often a variety of interval runs, which alternate between an intense pace and a recovery pace. In general, these programs should take you out of your comfort zone, but there should be enough

recovery time between sprints to get your breathing under control again.

### Switch up how you run.

A good way to keep things fresh is to alternate between types of running. For example, **progression runs**, which gradually increase your speed, can help runners build endurance, says Roberto Mandje, senior manager of runner training and education at New York Road Runners. Start at a moderate pace, then increase speed by 0.5 to 1 mph every 5 to 10 minutes so that you'll finish much faster than the pace you started at.

Then try a **tempo run**, where runners try to maintain a quicker pace to improve speed. Warm up at a slow pace, then run at a faster pace for a set distance—try 3 to 5 miles—and then cool down at a recovery pace. Mandje also recommends **hill running**, where you run on an incline, adding intensity and building heart and lung health.

### Build in strength training.

Your treadmill workout doesn't need to be all on the treadmill: Pause your run, let the belt come to a full stop, then get off the treadmill to use a



resistance band, lift weights, or do body-weight exercises such as pushups or squats before jumping back on. Repeat this circuit several times to work toward aerobic fitness and strength goals on the same day. The Centers for Disease Control and Prevention recommends doing strength training at least twice a week.

### Consider a 'sled workout.'

Some specially designed treadmills (or regular models

with the power turned off) can be used for a "sled" workout. This involves holding onto the handrails while the treadmill is off and pushing the belt with your feet to mimic the effects of pushing a weighted sled across the floor. Try this in 30-second bursts (with rest in between) to strengthen your legs. (Check the manual to make sure pushing the belt with the motor off won't damage the machine or void its warranty.)

## TOP TESTED TREADMILLS

If you're looking to start or upgrade your home gym, these machines performed well in CR's labs.

BEST OVERALL EXPERIENCE BUT PRICEY

✓ **Peloton  
Tread**  
\$4,300



90

OVERALL  
SCORE

FOLD-AWAY WITH VERY GOOD PERFORMANCE

💰 **LifeSpan TR2000e**  
(also above)  
\$1,200



76

OVERALL  
SCORE

BUDGET-FRIENDLY FOLDING BUY

**Horizon Fitness T101**  
\$650

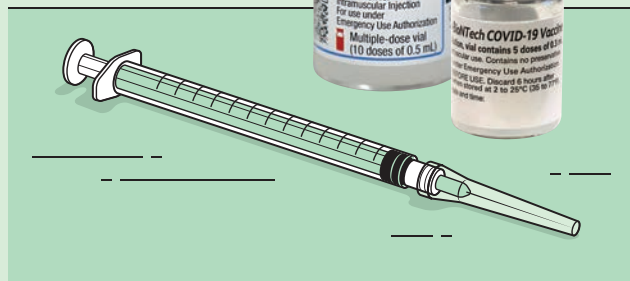


69

OVERALL  
SCORE

## HEALTH UPDATE

## YOUR QUESTIONS ABOUT THE CORONAVIRUS VACCINES, ANSWERED



IN A SHORT PERIOD of time—less than one year—scientists managed to design, create, and test several potential vaccines for SARS-CoV-2, the coronavirus that causes COVID-19. Americans began receiving the first approved vaccines, from Pfizer and BioNTech and another from Moderna, in December of 2020, with healthcare workers among the first in line. Today, vaccine distribution continues—you may even have gotten the vaccine already or know someone who has. But you also may still have questions about how these vaccines will affect you and your loved ones. Here, CR consulted with experts and combed through government guidance to answer some of the most common questions.

### What does it mean for the FDA to provide emergency use authorization?

Because of the public health crisis caused by the ongoing pandemic, the Food and

Drug Administration is empowered to provide expedited permission to distribute a vaccine before fully approving that vaccine, provided it meets certain standards for safety and efficacy. This constitutes an emergency use authorization, designed to more quickly and easily enable use of a vaccine. But it's still a rigorous process that balances the potential risks vs. benefits: Before the first two vaccines were authorized this way, the manufacturers needed to provide at least two months of safety data on people who received the vaccine, which the FDA then reviewed.

### Where will I be able to get a vaccine?

Vaccines will be distributed at a wide variety of locations, including hospitals, long-term-care facilities, mobile and temporary clinics, doctors' offices, and pharmacies, according to the Centers for Disease Control and Prevention.

### Are the coronavirus vaccines free?

Yes. The U.S. government will pay for vaccines given to Americans, according to the CDC. Providers may charge a fee for administering the vaccine, but the government has mandated that insurers (or the government, in the case of uninsured individuals) cover this fee, so people should not have any out-of-pocket expenses for vaccination.

### How long does protection take to kick in?

The Pfizer and Moderna vaccines, like most of the other vaccines that have completed or are in the last stage of trials before being submitted to the FDA for approval, require two doses—an initial shot and a booster, usually several weeks later. Generally with a two-dose vaccine, it takes about two weeks from the second dose for a vaccine's protection to fully kick in, according to Natalie Dean, PhD, an assistant professor of biostatistics specializing in infectious disease and vaccine development at the University of Florida.

But though both doses are necessary, the FDA's analysis of the Pfizer vaccine indicates that people appear to be somewhat less likely to get COVID-19 within two weeks of receiving the first dose. It's unclear how long protection from that first dose may last. And the second dose is still required for full protection, to ensure a more durable immune response.

### How effective are the COVID-19 vaccines?

Very effective. In vaccine trials, roughly an equal number of participants receive the real vaccine or a placebo. Pfizer calculated that its vaccine was approximately 95 percent effective, for example, after

observing that 172 out of the 181 COVID-19 cases that occurred in trial participants were in the placebo group—demonstrating that people who received the vaccine appear to be generally well-protected. It's possible that the degree of effectiveness in a real-world setting could be lower or higher, however.

### If I've had COVID-19, should I still get vaccinated?

Researchers have a range of estimates on how long people may be protected from reinfection after recovering from COVID-19, varying from months to years. But because reinfection is possible, the CDC recommends that people who have recovered from COVID-19 get vaccinated.

Some of the vaccine trials included people who recovered from COVID-19, according to Kathleen Neuzil, MD, director of the Center for Vaccine Development and Global Health at the University of Maryland School of Medicine, and it appeared to be safe for these people to get the vaccine. Even if recovered patients have some natural immunity, the vaccine could provide longer-term benefit, she says. The immune system's natural response to a SARS-CoV-2 infection is varied, and in some cases, protection may not last very long.

### Will these vaccines put an end to the pandemic?

Researchers are hopeful that vaccination campaigns will end the pandemic once there is sufficient vaccine supply and enough people get vaccinated. However, some experts caution that the whole world will need to have access to these vaccines for the disease threat to be fully eliminated. If the disease is still spreading somewhere, it could reemerge, especially if people's immunity wanes.



## RECALLS

TO STAY INFORMED ABOUT RECALLS FOR YOUR VEHICLES, READERS WITH MEMBERSHIP CAN USE OUR FREE CAR RECALL TRACKER AT [CR.ORG/MORE](http://CR.ORG/MORE).



### GRACO INCLINED SLEEPER ACCESSORIES

Graco is recalling about 51,000 inclined sleepers, sold as accessories included with the following play yards: Graco Pack 'n Play Day2Dream Playard with Bedside Sleeper, Graco Pack 'n Play Nuzzle Nest Playard, Graco Pack 'n Play Everest Playard, and Graco Pack 'n Play Rock 'n Grow Playard. This is due to infant fatalities that have been reported about similar inclined sleep products from other manufacturers. The sleepers were sold in stores and online from November 2017 through September 2020 for Day2Dream Playard with Bedside Sleeper, May 2015 through December 2018 for Nuzzle Nest Playard, September 2015 through December 2018 for Everest Playard, and December 2019 through April 2020 for Rock 'n Grow Playard for \$270 to \$350.

This announcement marks the

eleventh recall of inclined sleepers and comes more than 1½ years after CR uncovered dozens of deaths in connection with the Fisher-Price Rock 'n Play Sleeper and other inclined sleepers. To date, CR's investigation has prompted the recall of more than 5.9 million inclined sleepers sold by companies including Fisher-Price, Graco, Evenflo, and Delta.

**What to do:** Stop using the sleeper accessory and contact Graco at 800-345-4109 or go to recalls.gracobaby.com for details and a refund. You can continue to use the Playard portion of the product and other included accessories. For more information on CR's infant sleeper investigation, go to [CR.org/sleeper0321](http://CR.org/sleeper0321).

### CROCK-POT MULTI-COOKERS

Crock-Pot is recalling about 914,430 Crock-Pot 6-quart Express Crock multi-cookers because they can pressurize when the lid is not fully locked. This can cause

the lid to suddenly detach while the cooker is in use, posing a burn hazard. The cookers were sold at Walmart, Target, and other retail stores nationwide, and online at Amazon and other online retailers from July 2017 through November 2020 for \$70 to \$100.

**What to do:** Stop using the Crock-Pot in pressure cooker mode, but you may continue to use it for slow-cooking and sautéing. Call Crock-Pot at 800-323-9519 or go to [recall.crock-pot.com](http://recall.crock-pot.com) for details and to get a free replacement lid.

### FISKARS BRANDS PRUNERS

Fiskars Brands is recalling about 467,680 16-foot extendable pole saw/pruners because the telescoping poles can separate, posing a laceration hazard. The pruners were sold at home improvement and hardware stores and online at [fiskars.com](http://fiskars.com) from December 2016 through September 2020 for about \$100 (Model No. 9463) and \$65 (Model Nos. 9440 and 9441).

**What to do:** Stop using the pole saw/pruner and contact Fiskars Brands at 888-847-8716 or go to [fiskars.com](http://fiskars.com) for instructions on how to dispose of the product in exchange for a full refund.

### SURE SCENTS CANDLES

ADCO is recalling about 142,740 Sure Scents 2-1 Peaceful Stream/Moonlit Waves candles because the candles' high flames can ignite the surface of the wax or cause the glass to break, posing

fire hazards. The candles were sold at Dollar Tree stores from July 2020 through September 2020 for \$1.

**What to do:** Stop using the candles and call Dollar Tree at 800-876-8697 or go to [dollartree.com](http://dollartree.com) for details and a full refund.

### HONDA ROVs

Honda is recalling about 118,600 Honda Pioneer 700 and 1000 Recreational Off-Highway Vehicles (ROVs) with electric power steering (EPS) because they can lose steering control, posing a crash hazard. The ROVs were sold at authorized Honda Powersports dealers from August 2015 through March 2020 for about \$10,000 to \$21,000.

**What to do:** Stop using the ROV and contact a Honda Powersports dealer for a free inspection/repair. Call Honda at 866-784-1870 or go to [powersports.honda.com](http://powersports.honda.com).

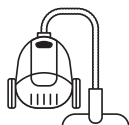
### CRAFTSMAN CORDED CHAINSAWS

Black & Decker is recalling about 82,000 Craftsman CMECSP610 10-inch corded chainsaws with extension poles because the chainsaw can start unexpectedly, posing a laceration hazard. The chainsaws were sold at Lowe's and other hardware stores and online at Amazon from October 2019 through August 2020 for about \$100.

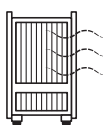
**What to do:** Stop using the chainsaw. Contact Craftsman at 855-237-6848 or go to [craftsman.com](http://craftsman.com) to get a free repair kit.

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

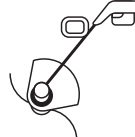
#### VACUUM CLEANERS



#### AIR PURIFIERS



#### STRING TRIMMERS



For more info, go to [CR.org/buy0321](http://CR.org/buy0321).



Of the estimated 32.8 million men in the U.S. who sport facial hair ...\*



**10.9**  
million  
have full  
beards



**9**  
million  
have a  
goatee  
or partial  
beard



**8.7**  
million  
have  
"scruff"



**10**  
million  
have a  
mustache

# PRODUCT UPDATE

THE LATEST REVIEWS FROM OUR LABS

## The Best Tools for a Great- Looking Beard

At-home beard maintenance has become a core skill for many people. What's the best trimmer for the job? We put five popular models to the test.

by **Laura Murphy**



**PHILIPS  
NORELCO  
MULTIGROOM  
7000** \$55



**REMINGTON  
VACUUM BEARD  
& STUBBLE  
TRIMMER** \$50



**BRAUN BT5070  
MEN'S BEARD  
TRIMMER** \$50



**REMINGTON  
SMART BEARD  
TRIMMER** \$70



**WAHL LITHIUM  
ION+ STAINLESS  
STEEL** \$70

**T**HE QUARANTINE BEARD is officially a thing. Some people are skipping their morning shave and cultivating facial hair while working from home during the coronavirus pandemic.

“I was allowed to grow one due to work changing the rules,” Glenn Foldy said in response to CR’s Facebook query. “Love my beard.”

But all those new beards are going to require a little maintenance, which could mean a lot of new customers for manufacturers of electric beard trimmers.

To find out more about the world of beard trimmers and how people use them in their daily lives, CR’s Consumer Experience & Usability Research team worked with a group of volunteers—sporting a variety of facial hair lengths, styles, and types—to evaluate five popular beard trimmers on the market today.

Before we get into the results of our evaluation, here’s what to expect when shopping for a beard trimmer and using one for the first time.

## Beard Trimmer Basics

When shopping for a beard trimmer, it’s easy to get overwhelmed—there are many on the market. But Steven Wilson, founder of All About Beards (beards.org), a website dedicated to promoting beards, recommends focusing on three factors: ease of use, durability, and performance.

Blades are the most important part of a beard trimmer. Look for a model with strong, sharp blades made of stainless steel or titanium. (You should be able to find this information on the packaging or in the product details online.)

Depending on how you plan to use the trimmer, you may want additional features. Someone who travels a lot, for example, might benefit from a travel lock—which prevents a trimmer

from turning on while in transit—and a model that supports universal voltage.

Box contents will vary, but generally, you can expect to get the core trimmer unit; several comb or trimming guards of various lengths; attachments for ear, nose, and brow trimming; clipper oil and a cleaning brush; a storage case or pouch; and a charging or power cord.

## How We Evaluated

To find out which beard trimmers are easiest to set up, maintain, and handle, CR’s consumer experience experts enlisted 24 people ranging in age from 18 to 74, all CR staffers or their family members, with a variety of hair types, facial hair lengths, styles, and levels of prior experience using beard trimmers.

Each was asked to try out one of five widely sold models: the Braun BT5070 Men’s Beard Trimmer, Philips Norelco Multigroom 7000, Remington Smart Beard Trimmer, Remington Vacuum Beard & Stubble Trimmer, and Wahl Lithium Ion+ Stainless Steel. Each beard trimmer model was assigned to four or five people.

Volunteers were expected to use the beard trimmer at least twice over a period of two to four weeks, to share their experiences in the form of written notes, and to score their trimmers on the following factors.

**SETUP AND HELP** Participants were asked how easy or difficult it was for them to get started and set up the model for their needs, and how useful the instructions were.

**MAINTENANCE AND CLEANING** Participants were asked about the required cleaning steps, including the process of disassembling and reassembling the device, as well as anything else they needed to do to take care of it.

**OPERATION** Participants were asked how easy or difficult it was to handle the trimmer and how satisfied they were overall with the results.

**BASIC FEATURES** After at least two uses

of the beard trimmer, participants were asked what they thought about the model’s settings, attachments, and features, as well as how easy or difficult it was to change the attachments.

**ADVANCED FEATURES** For this study, two models with “advanced features” were assessed. One, the Remington Smart Beard Trimmer, had a digital touch screen with memory settings; the other, the Remington Vacuum Beard & Stubble Trimmer, had a vacuum to collect hair clippings. Only participants who tried out these models scored advanced features.

All participants also answered 10 usability questions about their beard trimmers, including whether they thought they needed help from an experienced person to use the model; how confident they felt using it; and whether they liked using it.

## What Our Volunteers Liked

First of all, participants appreciated having a beard trimmer during the pandemic. “I like it a lot,” one participant—who usually gets his beard trimmed by a barber—said about having a beard trimmer at home. “I definitely can see myself using the device to help stretch out the time I take in between barbershop visits.”

The features and qualities they liked include the following.

**EASY-TO-FOLLOW INSTRUCTIONS** Some participants said they like to use third-party tutorials, such as YouTube videos. Most also appreciated receiving clear and thorough instructions from the manufacturer.

“The instructions were comprehensive,” said a first-time trimmer user who tried the Wahl Lithium Ion+, adding that the manual “discussed the basics of trimming and using all of the different components.”

**STURDINESS AND DURABILITY** Durability was a key point for many participants, reflected in how sturdy their model



## PRODUCT UPDATE

felt overall, and the sturdiness of its component parts.

**FULLY WASHABLE** Participants who got “fully washable” models liked being able to simply run their trimmers under water to clean them.

**TRAVEL LOCK** Participants responded enthusiastically to the travel locks on the Remington Smart Beard Trimmer and Wahl Lithium Ion+. This feature prevents these trimmers from turning on while in transit.

**PACKAGING** Clean, elegant, and informative exterior packaging made a difference in beard trimmer appeal.

### What They Didn't Like

**LOTS OF SMALL, FLIMSY PARTS** Trimmers that came with many small parts made participants nervous about whether they could keep track of them all. Some also worried that the small parts looked “cheap” and might break over time. “Feels a little flimsy,” one user said in a typical comment regarding parts.

**MAINTENANCE AND CLEANING REQUIREMENTS** Participants who tried models that cannot be rinsed under running water worried that this would make cleaning more onerous over time. Some models also require the user to oil the blades

periodically, which participants felt would be overly time-consuming.

### SHORT BATTERY LIFE OR LONG CHARGE TIME

Long battery life was a key feature for most participants, many of whom said that they don't want to have to charge their trimmer between uses. Long charge times also annoyed participants who wanted to use their trimmer as soon as they unboxed it.

**NOISE LEVEL** Although some participants said a louder trimmer gave them more confidence that it was a robust machine, most preferred trimmers with quieter motors.

## BEARD MAINTENANCE TIPS

We asked several professional groomers for tips on using a beard trimmer and keeping your beard looking smart.



### Do your prep work.

Take care of your facial hair much like the hair on your head, says Dez Marshall, a barber based in Brooklyn, N.Y. Keep it clean. Comb it out so that it doesn't tangle. And brush it to make it lie flat. (Specialty tools are available, but Marshall says any comb or brush will do.) And your hair should be clean and dry when you start trimming.

### Start slow.

It may seem obvious, but beard-trimming novices should keep this in mind: You can always remove more hair, but you can't put it back once it's shorn.

So take an incremental approach, Marshall says. Use the plastic trimming (or comb) guards, which hold the cutting blades off your face to get a preset and uniform whisker length. Start with one of the longer guards and run it through your beard with the grain—in the

direction your whiskers naturally lean, in other words. (Going against the grain will result in a significantly closer cut.)

Then, if you want to take off more, switch to a slightly shorter guard and repeat. And so on. Once you like the length, run over it all again to make sure your whole beard is even.

### Watch the neck.

Many first-timers get tripped up by the neckline, which you form using your trimmer without the comb guards. The key question is how far down your neck your beard should end.

“Some people are tempted to make it line up with their jaw, or trim it to just under their chin,” Marshall says. Instead, she says, create “balance” by following the natural line of your beard.

Craig Whitely, aka Craig the Barber, a men's grooming expert based in Los Angeles, agrees, cautioning that your beard

line should never be higher than half an inch above your Adam's apple. Having it too high, he says, will make your neck look long—something that most people don't want, especially since we're all on Zoom.

### Consider applying product.

As your beard grows, your skin is likely to get red, itchy, or flaky, especially after about two weeks of growth. For relief, Whitely suggests regular exfoliation—once every few days using a fine-grained exfoliant—and a daily facial moisturizer. Cassie Kurtz, a barber based in Manhattan, N.Y., is partial to beard oil, which she says relieves irritated skin and softens your beard hair. “Warm a few drops in your hands,” Cassie says, “then give yourself a mini face massage along the neck, jawline, and cheeks.”



## HOW THE TRIMMERS STACKED UP

Consumer Reports asked four or five staffers (or their family members) to try out each of these popular beard trimmers. The users scored the trimmers on a range of factors and took notes on the overall user experience. All the models performed their basic functions fairly well, according to the users, but relative strengths and weaknesses emerged from their scores and comments. The models are listed in rank order, with the Remington Smart Beard Trimmer taking the top spot and the Braun BT5070 Men's Beard Trimmer landing in fifth place.



**Remington Smart Beard Trimmer**  
(MB4700) \$70

### SETUP & HELP

5/5

### MAINTENANCE & CLEANING

4/5

### OPERATION

5/5

### BASIC FEATURES

5/5

### ADVANCED FEATURES

4/5

### USABILITY

5/5

**CR'S TAKE** The Remington Smart Beard Trimmer ranked the highest among our volunteers. Users appreciated the trimmer's smart features, such as the digital setting to auto-adjust the trimmer length and the travel lock. Most users expressed no discomfort to their skin or hair while using this model. One said this model is not user-friendly for left-handed people, given that the travel lock button is on the right side of the trimmer.



**Philips Norelco Multigroom 7000**  
(MG7750/49) \$55

### SETUP & HELP

4/5

### MAINTENANCE & CLEANING

5/5

### OPERATION

5/5

### BASIC FEATURES

5/5

### USABILITY

5/5

**CR'S TAKE** Users felt that the Philips Norelco MG7750/49 Multigroom 7000 was appealingly precise and had the blade strength to cut through coarse hair. It was easy to clean, they said, but setup and use instructions were difficult to follow, even for those who had used beard trimmers before. Users liked that it was fully washable, small enough to pack easily for travel, and simple to use.



**Wahl Lithium Ion+ Stainless Steel**  
(09818-5001) \$70

### SETUP & HELP

5/5

### MAINTENANCE & CLEANING

5/5

### OPERATION

4/5

### BASIC FEATURES

4/5

### USABILITY

4/5

**CR'S TAKE** Participants found the setup instructions comprehensive, covering the basics of trimming, as well as how to use all the components. However, the model fell short on basic features; many participants felt the attachments were flimsy. One participant observed that the charge seemed to be weakening by the second shave.



**Remington Vacuum Beard & Stubble Trimmer**  
(MB6850) \$50

### SETUP & HELP

4/5

### MAINTENANCE & CLEANING

4/5

### OPERATION

4/5

### BASIC FEATURES

4/5

### ADVANCED FEATURES

4/5

### USABILITY

4/5

**CR'S TAKE** The vacuum feature on the Remington Vacuum Beard & Stubble Trimmer appealed to the volunteers, but it requires more maintenance because users are required to empty out the vacuum chamber. The model and its attachments felt a little flimsy to some, and some didn't think it worked well with their thick or coarse hair. Overall, however, users were satisfied with the trimmer's performance.



**Braun BT5070 Men's Beard Trimmer**  
\$50

### SETUP & HELP

4/5

### MAINTENANCE & CLEANING

4/5

### OPERATION

4/5

### BASIC FEATURES

4/5

### USABILITY

4/5

**CR'S TAKE** While the Braun BT5070 Beard Trimmer ranked the lowest out of the beard trimmers we evaluated, it still scored well. Although the model appeared to be simple to use, volunteers without prior beard trimmer experience did not find the setup instructions to be helpful. Users said that cleaning the trimmer wasn't difficult, but this model is not fully washable, so cleaning it isn't as easy as running it under the faucet.

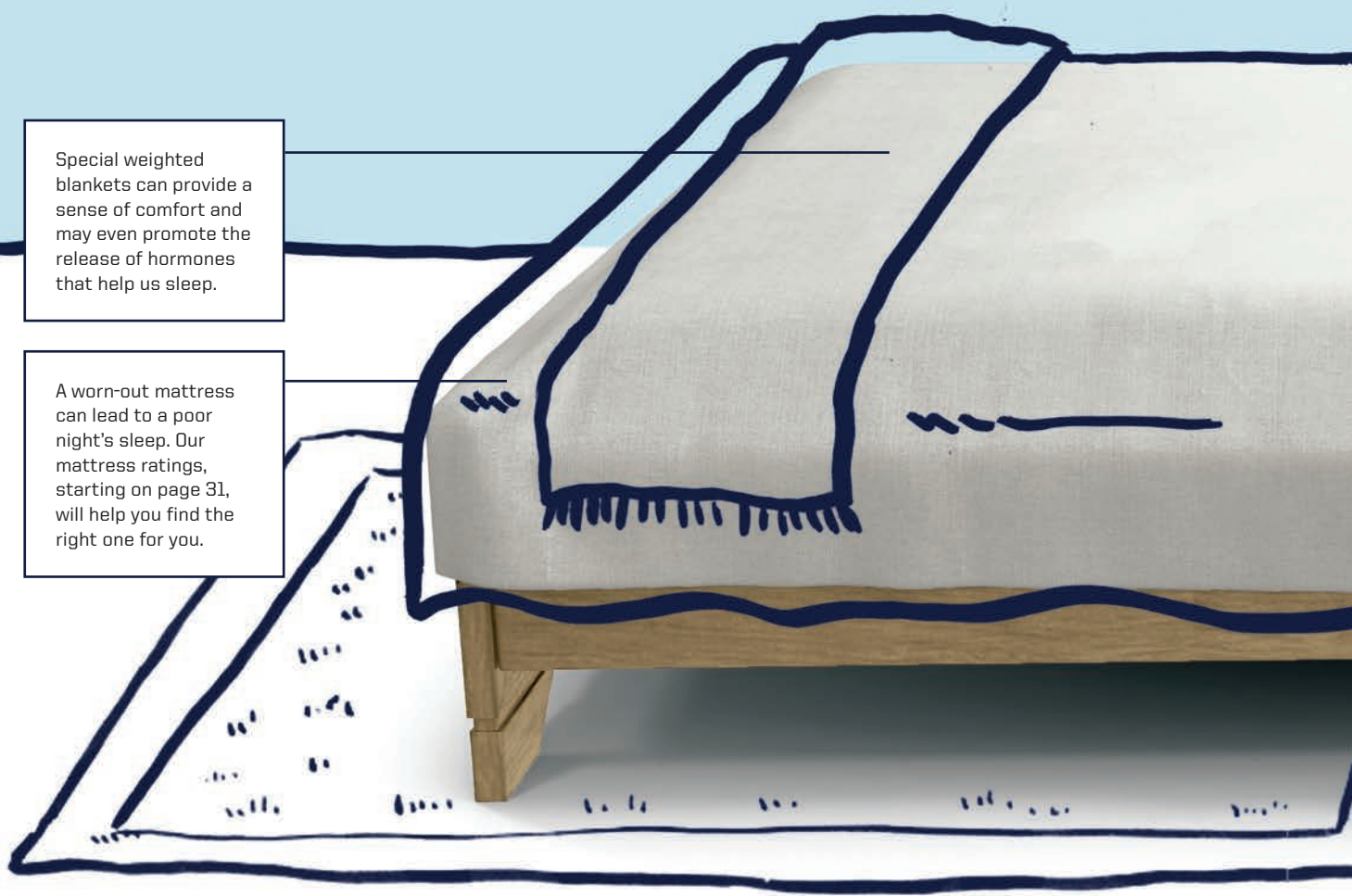
# 20 WAYS TO SLEEP BETTER TONIGHT

Counting herds of sheep these days? A good night's rest has probably never been more necessary—or harder to get. Use our mattress, pillow, and sheet ratings along with our advice on how to tweak your bedroom and revise your morning and evening routines to get the shut-eye you crave.

**by Haniya Rae, with additional reporting by Lisa Lombardi**

Special weighted blankets can provide a sense of comfort and may even promote the release of hormones that help us sleep.

A worn-out mattress can lead to a poor night's sleep. Our mattress ratings, starting on page 31, will help you find the right one for you.





Blocking out all light by outfitting windows with shades, blinds, or heavy curtains can help your body produce melatonin and improve sleep.

A supportive pillow can help you sleep through the night and wake up without feeling kinks and knots. See our pillow ratings on page 33.



## SLEEP IS CRITICAL TO OUR HEALTH.

But for many of us, a restorative night's slumber is another casualty of the COVID-19 pandemic at the very time we all need it the most. In a nationally representative CR survey of 2,851 U.S. adults last November, 28 percent of Americans reported having more trouble falling or staying asleep since the pandemic hit the U.S.

"Not getting enough sleep can weaken the immune system," says Rafael Pelayo, MD, a sleep specialist and clinical professor of psychiatry and behavioral sciences at Stanford University and author of "How to Sleep: The New Science-Based Solutions for Sleeping Through the Night" (Artisan 2020). "If you add on top of chronic sleep deprivation the stress of an infection, our system can be overwhelmed." The National Institutes of Health has found that improving our sleep can help protect against COVID-19, making it more important than ever.

Using our bedrooms as work and exercise spaces or even as classrooms, as many people are doing now, only makes getting a good night's sleep more difficult, experts say.

"We typically tell patients that the bedroom is only for two things: sleeping and sex," says Mathias Basner, MD, a professor in the division of sleep and chronobiology at the University of Pennsylvania. He explains that limiting the bedroom to those activities sends a clear signal to your brain when it's time to hit the sack. "But obviously we realize that not everybody may have that option."

No matter how much tossing and turning you're doing these days, we're here to help you get on track to better sleep. In the following pages, we explain the smartest ways to prepare for solid snooze time and steer you toward the mattress, pillows, and sheets that will keep you cozy all night long. For those who wake to find themselves baking under the covers at night, we offer new ratings on mattress cooling pads. And if you're among the many using a bedroom for double duty, we have tips to minimize the mixed message this sends to your brain. We even offer expert advice on ways to start your day that can lead to a better night's sleep.



## HOW TO GET READY FOR BED

A HEALTHY BEDTIME routine can help you make the transition from keyed-up to Jell-O-limbed and prepare your body and mind to melt into slumber's warm embrace. The key is to ease into it. Follow these tips.

**1 TRY MEDITATION** There's some evidence that meditating during the day can improve sleep at night. A study published by the Journal of the American Medical Association found that mindfulness meditation improved sleep in older adults with sleep disturbances. Resources are widely available online, including from the Center for Mindfulness at the University of California at San Diego. (Go to [medschool.ucsd.edu](https://medschool.ucsd.edu) and enter "mindfulness" into the search bar.) Some research shows that widely available apps such as Calm and Headspace, which use guided imagery and even bedtime stories to encourage sleep, are effective.

**2 GIVE YOUR BELLY A BREAK** Stuffing yourself can make you groggy, but experts say that going to bed with a full stomach can cause reflux, which can wake you up. Sue X. Ming, MD, a professor in the neurology department at the Rutgers New Jersey Medical School, recommends staying away from heavy meals 3 to 4 hours before bedtime. "Especially avoid foods with a high fat content or dense carbohydrates, which stay in the stomach longer," she says.

**3 PUT THE PLUG IN THE JUG** If sales figures are any indication, people are drinking more during the pandemic. Sales of spirits and hard liquor increased by 33 percent during the first six months of 2020 compared with all of 2019, according to Ibotta, a

cash-back app that rewards people for everyday purchases. A drink or two might seem like a good way to quiet the mind before bed, but experts say that alcohol actually decreases rapid eye movement (REM) sleep, a critical phase of the sleep cycle that helps our emotional equilibrium and enables us to retain things we learn during the day. “Alcohol will get you to sleep,” Ming says, “but you’ll wake up in the middle of the night.”

**4 TURN DOWN THE TEMP** The National Sleep Foundation recommends keeping bedrooms at a cool 65° F for optimal sleep. Being too hot or losing too much heat can interrupt REM sleep and cause people to wake up, Ming says. A programmable thermostat can be set to cool a room just right in the wee hours. Another way to regulate your body temperature is to use a mattress cooling device. (See “A Cool Way to Get a Better Night’s Sleep,” on page 30.)

**5 EASE INTO BEDTIME** Building wind-down time into your routine is a good way to prepare your mind and body for sleep. Sara Benjamin, MD, a clinical associate and instructor in neurology at the Johns Hopkins Center for Sleep, recommends a personal-care ritual (washing your face, brushing your teeth, etc.) an hour before bedtime, and then moving on to relaxing activities until it’s lights out. These could include reading, listening to music, writing in a journal, praying, meditating, or doing gentle forms of yoga such as restorative, yin, or yoga nidra, all of which involve little or no movement. Just be sure that whatever you do is calming: No rock and roll, horror flicks, or murder serials.

**6 TURN OFF THE TV (AND ALL OTHER SCREENS)** Bright light and the blue light produced by TVs, cell phones, and computers can suppress the production of melatonin, the hormone responsible for regulating your sleep.

“Cell phone displays are extending the day into the night,” says Lisa Ostrin, OD, an associate professor at the University of Houston College of Optometry. She says that the nighttime mode on devices may reduce the effect of blue light somewhat, but not the stimulating effect that reading email can have on your brain. Sleep experts recommend turning off all screens and dimming bedroom lights at least 30 minutes before bedtime.

**7 FADE TO BLACK** Heavy curtains or blinds will reduce light exposure and can improve sleep. “Anything that blocks out light helps you stay asleep or sleep more soundly,” says Ming, adding that darkness promotes the secretion of melatonin, too.

**8 TAKE SOME SOUND ADVICE** “If environmental noises disturb your sleep, white noise can be very helpful,” Benjamin says. Generated by a white-noise machine or certain apps, white noise masks sounds—such as honking horns or slammed doors—that wake you or keep you from falling asleep.

**9 CONSIDER A SLEEP TRACKER** Devices such as the Oura Ring are becoming increasingly popular and more sophisticated. (Some fitness trackers and smart watches also offer sleep tracking capabilities.) Research has found that they can do a good job of tracking the overall time you sleep and encouraging good habits by, for instance, reminding you when to power off devices and begin getting ready for bed. Some can even track environmental factors, such as the light and temperature in a bedroom. Benjamin notes, however, that they can’t accurately track sleep stages. Even so, some people find the data on sleep time, as well as on heart and respiration rates and body temperature, useful for gauging how factors like exercise and alcohol may affect their sleep. In rare cases, people can become obsessed with their sleep stats and lie awake at night worrying about what the data will reveal in the morning. If you’re someone who really digs data on your sleep habits, go for it. But if the device becomes one more thing you worry about, it’s better to ditch it.



Mindfulness meditation can improve memory and cognitive functioning, and make it easier to fall asleep at night.



## MAKE A BED YOU CAN'T RESIST

FOLLOW THESE TIPS to create a bed you can't wait to get into at night.

**10 ASSESS YOUR MATTRESS** One that isn't supportive and doesn't properly distribute your body weight can cause joint or muscle pain, make you restless, and interfere with your sleep. If you feel sore in the morning or if your mattress feels lumpy, has a permanent depression in it, or is more than 10 years old, it's probably time for a new one. In our tests, we rate mattresses for how well they support various body types. We also point you to the brands that are the most comfortable based on feedback from 73,676 CR members who purchased one within the past decade. For CR's ratings of innerspring, foam, and adjustable air mattresses, see our mattress ratings starting on page 31.

**11 PILLOW TALK** The more a pillow keeps your neck and spine naturally aligned, the more comfortably you'll sleep. "Try to find a pillow that keeps your neck in as neutral a position as possible and doesn't crane it in any position," says Joel Press, MD, physiatrist in chief at the Hospital for Special Surgery in New York City. A supportive pillow can prevent excessive motion and keep your neck in a better position without straining it. The Coop Home Goods pillow, for \$60, tops our ratings. You can customize its support by adding or removing filling, and it comes with a generous 100-night sleep trial policy.

**12 CHOOSE YOUR SHEETS WISELY** As with all bedding, the most important thing about sheets is that they're comfortable. To rate cotton sheets, we test how well they fit on

a mattress after a year's worth of washing, how much they wrinkle, and how easily they tear. Our testing panel also grades them for softness. L.L.Bean's Pima Cotton Percale sheets are nearly as good as the top-ranked Matouk Sierra but are far less expensive (\$149 for a queen set vs. \$258 for a single fitted sheet). The L.L.Bean set shrank only slightly after a year's worth of washing, and like the Matouk was judged to be soft. Pelayo says that sleeping on clean sheets can lessen allergic reactions to dust mites, which can make you congested and agitated. CR recommends washing sheets at least once every two weeks.

**13 TRY A WEIGHTED BLANKET** Long used to calm children with autism or behavioral disorders, weighted blankets have caught on with the general public as a way to improve sleep. Sales of these heavy, quilted bed coverings (some weigh up to 35 pounds) were soaring even before the pandemic. "The idea is that weighted blankets give a sense of comfort and may facilitate the secretion of oxytocin," Pelayo explains. "But to what degree and whether it's a short-term or long-term effect is not clear. I have patients who like weighted blankets and others who don't. Those who like them really like them."

The rule of thumb for choosing a weighted blanket is that it should be about 10 percent of your body weight. Popular models include the YnM (starting at \$70) and the Harkla (starting at \$110) for a 15-pound blanket. Both are available in weights up to 25 pounds.



## POWER UP IN THE A.M.

NO MATTER WHICH side of the bed you wake up on, the way you manage your mornings can set the tone for the entire day. "Our wake-up routine is just as important to the day ahead

as a relaxing nighttime routine is to sleep," says Kien Vuu, MD, an assistant professor of health sciences at UCLA and author of "Thrive State: Your Blueprint for Optimal Health, Longevity, and Peak Performance" (Lifestyle Entrepreneurs Press, 2021).

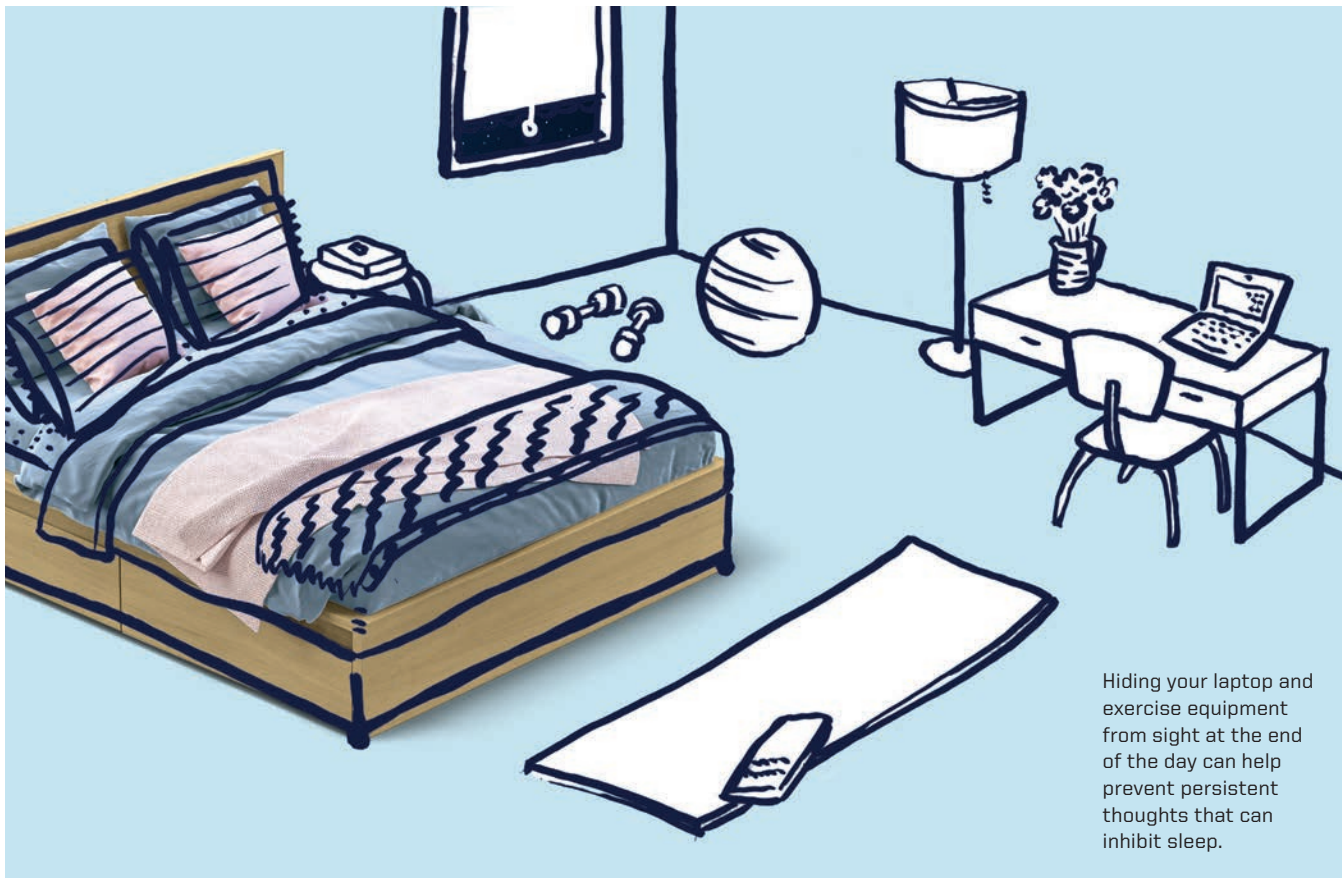
Here, the habits that will set you on course to a less stressful, more productive day.

**14 GET A HEAD START** The right way to start your day actually begins the day before, according to Alexis Haselberger, a productivity coach in San Francisco. She suggests devoting your last 15 minutes at work to making a to-do list for the following day. This allows you to mentally disconnect from work and avoid starting the next day in a chaotic state of mind wondering what to do first.

**15 LET THERE BE LIGHT** A small study published in the journal Behavioural Brain Research found that sleep-deprived people exposed to simulated, slowly increasing sunlight in the morning did significantly better at attention-based tasks throughout the day than those exposed to steady dim light. Based on that finding, you might consider using an alarm clock that wakes you by gradually bathing your bedroom in light. Once you're awake, soak up some sunshine ASAP. "Getting 10 to 20 minutes of direct sunlight just as soon as we're out of bed resets our circadian rhythms," Vuu says, "making it easier to fall asleep at bedtime."

**16 TAKE A TECH BREAK** Resist the temptation to check your email, texts, Slack channels, or other electronic communication first thing in the morning or even at the start of your workday. Haselberger says that reserving the first hour of your workday for other tasks helps give you a sense of control over your day. "It rarely makes a difference to others whether we respond





Hiding your laptop and exercise equipment from sight at the end of the day can help prevent persistent thoughts that can inhibit sleep.

to messages at 9 or 10 a.m., but you can get an incredible amount done in that hour if you avoid checking email,” she says. “[Those] are other people’s priorities, but because we are social creatures, the second we’ve read a message, we feel compelled to respond.”

Depending on your profession and how demanding your boss is, your “off the grid” time may be more like 10 to 15 minutes, but that’s fine, too.

## 17 BEGIN THE DAY BY COMPLETING A TASK

Quickly making your bed while the coffee brews or putting away the dishes while you wait on your toast can give you a feeling of accomplishment right off the bat. “It’s easier to stay productive if you’ve started the day with a small accomplishment,” Haselberger says.



## THE DOUBLE-DUTY BEDROOM

WHILE EXPERTS AGREE that bedrooms should ideally be reserved solely for sleeping and sex, reality is often far from that ideal. In our survey, 45 percent of Americans told CR they’ve regularly used their bedroom for at least one other purpose since the pandemic began. (More than 7 in 10 of them said they were doing so even before the pandemic.) Since the pandemic began, though, Americans say they have started using their bedrooms for purposes they didn’t before: as a home office (11 percent),

dining room (6 percent), hobby space (6 percent), exercise room (6 percent), meditation space (6 percent), or classroom (5 percent). If you’re among them, the following tips will help limit any negative impact this may be having on how you sleep.

## 18 REDUCE WORK REMINDERS

If you need to use your bedroom as a workspace, experts recommend taking an “out of sight, out of mind” approach. “Clutter, work papers, even phones and other connected devices signal to the brain and body that there is work to be done or a problem to be solved, making it harder to sleep,” says Janet Kennedy, PhD, a psychologist and founder of NYC Sleep Doctor. Effective ways to minimize

reminders of work include using a laptop rather than a desktop so you can stow it away at the end of the day, tucking your desk into a corner of the bedroom, or using a bedside table for your desk during the day and restoring it to its original purpose when it's time to clock out. The same advice goes for bedrooms that double as classrooms during the day.

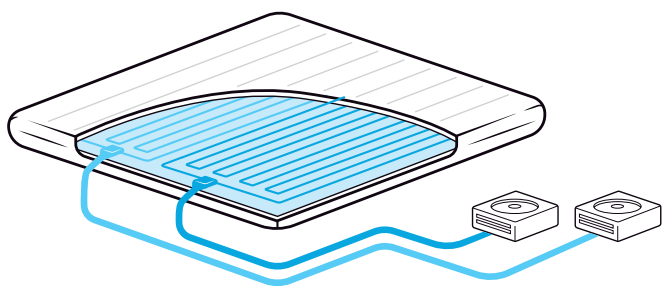
**19 CREATE AN EXERCISE ZONE** Exercise, like sleep, is vital to good health. But having hand weights, yoga blocks, and

other exercise equipment lying around a bedroom can “trigger rumination and increased brain activity, which can cause insomnia and erode sleep quality,” Kennedy says. So stash them in your closet or put them in a storage container under the bed when you’re not using them. Joanna Teplin, co-founder with Clea Shearer of The Home Edit, a full-service home organization company, recommends thinking of your bedroom the way someone with a studio apartment might, giving each area its own

purpose. Place large equipment like treadmills as out of the way as possible, and consider using decorative screens or room dividers to hide them from view.

**20 CONTROL KIDS’ CLUTTER** Their art projects and toys have a way of migrating to the primary bedroom. Create a pristine sleep environment by putting everything in bins and placing them in another area of the home at the end of the day, Shearer says.

## A COOL WAY TO GET A BETTER NIGHT’S SLEEP



**IF YOU'RE A** fitful sleeper who always feels a tad too toasty under the covers, you might find relief from a mattress cooling pad. Praised by trend-spotting health and tech pundits such as Tim Ferriss (who says they're a hit with Silicon Valley types) and Peter Attia, they typically go under a bed's fitted sheet and circulate chilled water to maintain a temperature you choose. (Some cool by using a fan to blow air under the covers.) Some pads can also heat up a bed. Temperature settings can range from 55° F to 113° F.

While there's limited research to show that cooling pads improve sleep, there's ample data showing that people sleep better in a cool environment.

“We know you get the most deep sleep in a cool bedroom,” says Philip Richard Gehrman, PhD, an associate professor of clinical psychology at the Hospital of the University of Pennsylvania.

“Studies were done years ago on whether passive cooling induced sleep, but they used cooling gloves that people wore before bed, and results were

mixed,” Gehrman says. “A cooling pad would impact more surface area of the body and presumably would be more effective.”

CR's testing found that some of these pads did a good job of lowering the mercury under the covers, while the performance of other pads was affected by the temperature of the room. Prices for the models we tested ranged from \$155 to \$1,500 for a dual-zone California king-sized pad.

The Chili Ooler, the ChiliPAD, and the Perfect Sleep Pad top our ratings. All of them cool or heat water in a reservoir before sending it through tubes to the pad. They come in typical mattress sizes and half-mattress or single sizes.

Mattress cooling pads can be pricey, but they can also help reduce energy costs, says Bernie Deitrick, a Consumer Reports project leader who tested them. “In warm weather you don't have to crank up the A/C to cool your whole room,” he says. “In winter, you can keep the thermostat set lower because most pads can also heat your bed.”

**Chili Ooler** \$699-\$1,499

■ 5/5 OVERALL  
■ 5/5 COMFORT  
■ 5/5 COOLING

**ChiliPAD** \$499-\$599

■ 5/5 OVERALL  
■ 5/5 COMFORT  
■ 4/5 COOLING

**Perfect Sleep Pad** \$649-\$1,499

■ 4/5 OVERALL  
■ 5/5 COMFORT  
■ 5/5 COOLING


**BedJet3 Climate Comfort System** \$499-\$999

■ 3/5 OVERALL  
■ 5/5 COMFORT  
■ 2/5 COOLING


**Mattress Cooler** \$155

■ 2/5 OVERALL  
■ 3/5 COMFORT  
■ 2/5 COOLING

**Ratings** ➤ **Dream Team** Find the mattress, pillow, and sheets to improve your sleep from among the top-performing models from our tests.

Brand + Model		Overall Score	Price	Survey Results		Test Results								Features							
				Comfort	Owner satisfaction	Petite side sleeper	Average side sleeper	Large/tall side sleeper	Petite back sleeper	Average back sleeper	Large/tall back sleeper	Durability	Stabilization	Firmness rating	Resists bounce	Eases movement	Grips	Retains warmth	Adjustable frame	Mattress-in-a-box	
INNERSPRING																					
✓	Avocado Green	85	\$1,400	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	7	●	●	4		●	●	
✓	Ethan Allen EA Signature Platinum Plush	81	\$2,250	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	5	●	●	6		●		
✓	Charles P. Rogers Powercore Estate 5000	80	\$1,500	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	6	●	●	8				
✓	Avocado Green Mattress Pillowtop	79	\$1,800	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	5	●	●	4	●	●	●	
✓	Sealy Response Performance Briar Rose 11.5" Cushion Firm	78	\$1,100	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	5	●	●	0		●	●	
💰	Beautyrest BR-800 12" Medium Firm	77	\$770	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	6	●	●	0		●		
✓	Charles P. Rogers Real Bed	77	\$950	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	3	●	●	4		●		
💰	Tuft & Needle Nod Hybrid MAT-NODH-01-Q	76	\$675	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	4		●	0		●	●	
✓	Hotel Collection by Aireloom Coppertech 12" Firm Tight top	76	\$1,800	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	6	●	●	2		●		
✓	Charles P. Rogers St. Regis Pillowtop	76	\$1,160	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	6	●	●	4	●			
✓	Sealy Posturepedic Performance Copper II	76	\$1,580	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	4	●		0	●	●		
💰	Beautyrest Silver BRS900-TSS Medium Firm Tight Top	75	\$790	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	4	●	●	0		●		
✓	Sealy Posturepedic Premium Silver Chill	75	\$2,000	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	3	●		0		●		
✓	King Koil Luxury Almond 13" Plush	75	\$1,600	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	5	●	●	0		●		
✓	Diamond Intention Hybrid	75	\$1,300	—	—	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	2	●	●	6		●	●	
✓	Tuft & Needle Hybrid with Pillow top	74	\$1,345	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	4		●	0	●	●	●	
✓	Nest Bedding Alexander Signature Hybrid Copper Infused Thermic Phase Change Cooling Fabric	74	\$1,500	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	2	●	●	4		●	●	
💰	Denver Mattress Doctor's Choice Plush	74	\$580	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	3	●	●	4		NA	NA	
💰	Allswell Luxe Hybrid	74	\$645	—	—	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	7	●	●	0		●	●	
✓	Beautyrest Black L-Class	73	\$2,100	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	6	●	●	4		●		
✓	Bedgear M3 1.0 Medium Firm	73	\$1,950	—	—	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	5	●	●	0		●	●	
✓	Saatva Flagship Luxury Firm Eurotop	73	\$1,100	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	3	●	●	4		●		
✓	Purple 3	73	\$2,200	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	3	●	●	3		●		
✓	Purple 2 Hybrid Firm	73	\$1,600	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	3	●	●	0		●	●	
✓	Serta Perfect Sleeper Elite Trelleburg II 11.5" Firm Mattress	73	\$800	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	5	●		4		●		



Brand + Model		Overall Score	Price	Survey Results		Test Results								Features							
<div></div>				Comfort	Owner satisfaction	Petite side sleeper	Average side sleeper	Large/tall side sleeper	Petite back sleeper	Average back sleeper	Large/tall back sleeper	Durability	Stabilization	Firmness rating	Resists bounce	Eases movement	Grips	Retains warmth	Adjustable frame	Mattress in a box	
FOAM																					
✓	Essentia Stratami	82	\$3,000	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	6	●	●	0		NA	●	
💰	Sleep on Latex Pure Green Firm	81	\$795	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	7	●	●	0	●	●	●	
✓	Casper The Casper Original All-Foam 2019	81	\$1,095	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	5	●		0		●	●	
✓	Reverie Dream Supreme II Hybrid Sleep System Firm	80	\$3,600	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	4	●	●	8		●		
✓	Tuft & Needle Mint	78	\$995	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	4	●	●	0		●	●	
✓	BedInABox Tranquillum	78	\$1,200	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	6	●	●	0		●	●	
✓	Lull The Lull	77	\$800	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	6	●		0		●	●	
✓	GhostBed The GhostBed	76	\$895	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	7	●	●	0		●	●	
✓	Nest Bedding Love & Sleep	76	\$700	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	4	●	●	0	●	●	●	
💰	Novaform 10" SoFresh Responsive Foam	76	\$500	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	5	●		0		●	●	
✓	Purple The Purple Mattress	76	\$1,000	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	3	●	●	0		●	●	
✓	GhostBed Luxe	76	\$1,362	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	4	●	●	0		●	●	
✓	Sealy Essentials 12"	75	\$800	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	2	●		0	●	●		
💰	Signature Sleep Gold Inspire	74	\$305	—	—	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	6	●		0	●		●	
💰	Tuft & Needle T&N Original Mattress	74	\$535	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	5	●	●	0		●	●	
✓	Saatva Zenhaven Latex	74	\$2,200	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	3	●	●	4		●		
✓	Sleepy's 10" Medium Quilted Foam Mattress mfi130999	74	\$550	—	—	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	6	●	●	0		●	●	
✓	Sleepy's Curve 12" Plush Memory Foam mfi133560	74	\$900	—	—	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	4	●	●	0		●	●	
✓	Serta SleepToGo	74	\$500	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	5	●		0	●		●	
💰	Spa Sensations by Zinus 12" Theratouch M-FMS-1200Q	74	\$330	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	5	●		0	●		●	
✓	Serta iComfort CF3000	74	\$2,000	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	4	●		0		●		
✓	Tempur-Pedic Tempur-ProAdapt Firm	73	\$3,000	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	7	●		4		●		
✓	My Pillow 10" Mattress	73	\$900	—	—	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	6	●	●	0	●	NA	●	
✓	Rivet M-MAT-10000-QN-WHT	73	\$510	—	—	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	4	●		0	●	●	●	
✓	Reverie Dream Supreme II Hybrid Sleep System Medium	73	\$3,600	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	3	●	●	8		●		
✓	Serta iComfort Blue 100CT Gentle Firm	73	\$1,200	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	5	●	●	0		●		
✓	Nectar The Nectar	73	\$795	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	6	●		0		●	●	


HOW WE TEST MATTRESSES: The Overall Score for mattresses is based primarily on member feedback on Comfort and Owner satisfaction as well as our tests of side- and back-sleeper support, durability, and stabilization. Comfort and


Owner satisfaction ratings are based on recent surveys on CR members' experiences with more than 74,000 mattresses purchased within the past decade. In cases where we have insufficient survey data to provide a

brand-level rating, indicated by a gray dash (—), we give the model weighted average scores for comfort and satisfaction. Support for side sleepers is the ability of a mattress to keep a side sleeper's spine relatively horizontal.

Support for back sleepers is the ability of a mattress to maintain the natural curve of the sleeper's spine. In our support tests, we use a woman 4 feet, 11½ inches to 5 feet, 1½ inches tall, and 110 to 127.5 pounds for the petite sleeper scores, and

Brand + Model		Overall Score	Price	Survey Results		Test Results								Features				
				Comfort	Owner satisfaction	Petite side sleeper	Average side sleeper	Large/tall side sleeper	Petite back sleeper	Average back sleeper	Large/tall back sleeper	Durability	Stabilization	Firmness rating	Resists bounce	Eases movement	Grips	Adjustable frame
ADJUSTABLE AIR																		
✓	Sleep Number 360 p6 Smart Bed	80	\$2,400	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	4	●	●	0	●
💰	Sleep Number 360 c2 Smart Bed	80	\$1,000	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	7	●	●	0	
✓	Personal Comfort H10 Bed	78	\$2,500	—	—	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	6	●	●	0	●
✓	Saatva Solaire	78	\$2,700	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	⬆	4	●	●	0	●

Brand + Model	Overall Score	Price	Test Results					Features				
			Side support	Back support	Resilience	Use and preference	Breathability	Washable	Memory foam	Cooling properties	Type	Retains warmth
✓ Coop Home Goods Premium Adjustable Loft	84	\$60	⬆	⬆	⬆	⬆	⬆	●	●		Memory foam and microfiber	●
✓ Tempur-Pedic Breeze Dual Cooling	72	\$170	⬆	⬆	⬆	⬆	⬆	Cover only, not the actual pillow	●	●	Visco elastic polyurethane (memory foam) and gel	
✓ Sealy Memory Foam Gel	71	\$60	⬆	⬆	⬆	⬆	⬆	Cover only, not the actual pillow	●	●	Polyurethane foam pad	
My Pillow Premium	68	\$80	⬆	⬆	⬆	⬆	⬆	●			Shredded polyurethane foam	●
Beckham Luxury Linens Hotel Collection	67	\$39	⬆	⬆	⬆	⬆	⬆	●	●	●	Polyester gel-fiber	●

Brand + Model	Overall Score	Price	Test Results				Features				
			Fit	Wrinkling	Strength	Shrinkage	Softness	Fits 10-inch mattress	Fits 14-inch mattress	Fits 18-inch mattress	Indicates installation direction
✓ Matouk Sierra	79	\$336	⬆	⬆	⬆	⬆	Soft	●	●	●	
💰 L.L.Bean Pima Cotton Percale (280TC)	74	\$149	⬆	⬆	⬆	⬆	Soft	●	●		●
✓ Brooklinen Luxe Core	61	\$159	⬆	⬆	⬆	⬆	Softer	●	●		●
Wamsutta Dream Zone 1000TC Pima Cotton	40	\$200	⬆	⬆	⬆	⬆	Soft		●		●
Casper Cool Supima	28	\$140	⬆	⬆	⬆	⬆	Softer				●

a man 6 feet, 2 inches to 6 feet, 4 inches tall, and 220 to 242 pounds for the large/tall sleeper scores. The average sleeper is an average of those two sizes. Durability indicates a mattress's ability to keep its original shape, height, firmness, and

support after a simulated eight to 10 years of use. A high Stabilization score indicates little or no bouncing or vibration transfer. We also note ease of changing position on the mattress. Firmness is rated on a 1 to 10 scale, with 10 being

firmest. Price is approximate retail for a queen-size mattress without a box spring. For pillows, the Overall Score is based on how well they support back and side sleepers, whether they maintain their shape over time, user preference

data, and whether they allow moisture to dissipate. For sheets, the Overall Score is based on our tests for fit, shrinkage, strength, and wrinkling. Digital or All Access members can go to [CR.org](https://www.cro.org) for further testing details.

# READ THIS BEFORE YOU BUY A GENETIC TESTING KIT

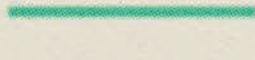
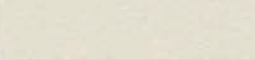
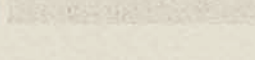
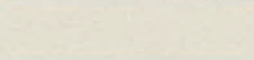
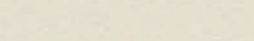
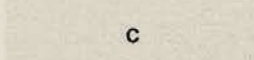
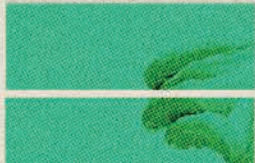
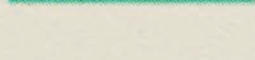
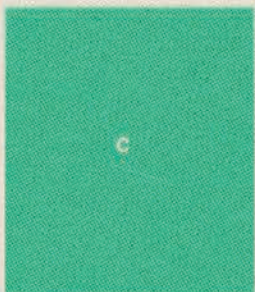
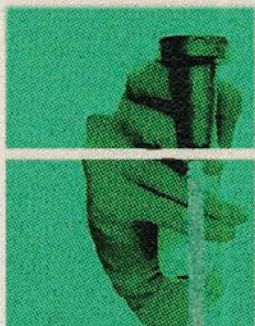
These products are widely accessible, are a snap to use, and promise answers to pressing questions about your family, your health, and your origins. But while at-home DNA testing is a scientific marvel, it can also offer an incomplete picture of your risk of various diseases, reveal unwelcome truths about relatives, get your ancestry wrong, and compromise your privacy.

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BY CATHERINE ROBERTS ■ ILLUSTRATIONS BY BEN SHMULEVITCH



stryDNA

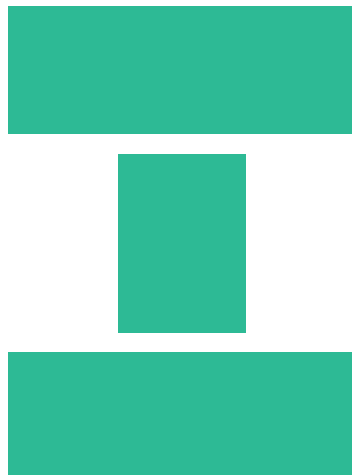


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**IN SPRING 2003**, excitement about the future of genetic science and its potential to dramatically advance the course of disease prevention and treatment was running high.

That April, the National Institutes of Health (NIH) announced that researchers had completed the first full sequence of the human genome—the biological instructions for building the human body, decoded from 3 billion twisted strands of DNA.

The hope was that pinpointing the identity and location of every gene in the body would lead to an understanding of the inherited risks for diseases such as cancer, improve care for conditions like diabetes, and help scientists develop targeted therapies for disorders such as Alzheimer's, which had eluded effective treatment for years.

It was a “historic moment,” Francis Collins, MD, director of the NIH, told a congressional subcommittee at the time. “It is our sincere belief that the newly created discipline of genomics will make a profound difference to the health and well-being of all the people of this world,” he said.

Almost two decades later, genomics has led to critical progress in medical science, particularly in identifying

individuals' genetic predispositions to diseases such as breast cancer.

This knowledge, however, is also being used toward somewhat less profound ends. An endeavor that originally involved billions of government dollars and collaboration among thousands of scientists around the globe has yielded not just medical progress but also a slew of consumer products in the form of at-home genetic tests.

### **The Rise of DIY Gene Testing**

For a relatively modest fee, anyone can purchase a direct-to-consumer (DTC) genetic test kit. Users spit into a tube or swab the inside of their mouth to obtain DNA (molecules that form the building blocks of genes), mail the sample off, and receive an analysis a few weeks later.

The kits are wildly popular: About 1 in 5 Americans has taken a DTC genetic test, according to an October 2020 Consumer Reports nationally representative survey of 2,000 U.S. adults. And brands such as 23andMe and Ancestry are household names.

Manufacturers offer a variety of possibilities, including matching you with unknown relatives, telling you which country your ancestors came from, revealing your risk of certain illnesses, and even determining which diet is best for you.

But while these tests may offer potentially valuable genealogical or medical insights, experts say results may be easy to misinterpret or could be based on a misapplication of the science. “If you go in there thinking that this test is going to tell you who you are, you're going to be wrong,” says Wendy Roth, PhD, an associate professor of sociology at the University of Pennsylvania in Philadelphia.

A genetic test can also leave you with information you'd prefer not to have about your family or about your risk for an incurable disease. And once data about your genes is shared, it can be sold

or even potentially used to discriminate against you (see “The Privacy Risks of Genetic Tests,” on page 38).

### **DIY Tests vs. Doctor Tests**

We all have small differences in our DNA code, known as variants, which genetic testing can reveal. Some variants are benign, some are linked to certain traits or illnesses, and many others are largely a mystery, their significance unknown.

When a doctor recommends genetic testing as part of your care, they're usually aiming to answer a specific question about your health, says Kyle Brothers, MD, an associate professor in the department of pediatrics at the University of Louisville in Kentucky. He says they will typically order tests focused only on that particular question, such as your inherited risk of cancer. If you send away your saliva for DTC genetic testing, however, the lab will look at a whole range of variants that have been linked—sometimes quite loosely—to a number of traits, some not related to your health at all.

Think of it this way: When your doctor orders genetic testing, it's akin to fishing for a particular fish, in a part of the ocean where it's known to live. A DTC test is more like throwing a net into the ocean and seeing what comes back.

Here are four common claims from the manufacturers of these products, whether they deliver, and what to know about their potential pitfalls.

CLAIM

**1**

**THE TESTS  
CAN FIND FAR-FLUNG  
RELATIVES**

**HOW IT WORKS** To determine whether you might be related to another person in its customer database, a DTC testing company considers how many identical





segments of DNA you have in common and the length of those segments. The closer the relative, the more large DNA segments you'll share.

"For close relationships, those predictions can be made very accurately," says Debbie Kennett, a genetic genealogist in the U.K. who helps people construct family trees using DTC testing and traditional methods, such as digging into historical records.

For instance, "relative matching" tests will always work with a parent or full sibling, she says. The further away a relative is on the family tree, however, the less certain the results. "If you share, say, 25 percent of your DNA, then there's a wider range of possible relationships," Kennett says.

**THE DRAWBACKS** While a test might unearth a previously unknown cousin

who becomes your new best friend, you could also learn something negative or even shocking about a family member or relationship. In CR's survey, 9 percent of respondents who used these tests said their reports contained unsettling information, such as news that someone thought to be a biological relative—like a father—isn't genetically related.

An unexpected discovery about a relative is one of the most frequent surprises for users of DTC genetic tests, says Anita DeLongis, PhD, a professor in the department of psychology at the University of British Columbia in Vancouver, who is studying the effects these products have had on people's lives. Many of her study subjects, she says, "had not anticipated learning a family secret."

## CLAIM 2 TESTING CAN UNCOVER WHERE YOUR ANCESTORS ARE FROM

**HOW IT WORKS** Companies such as Ancestry and 23andMe say they can tell you the regions—and sometimes even the countries—where your ancestors originated, based on your DNA. In CR's survey, curiosity about ancestry was the most common reason for taking a DTC genetic test, listed by about two-thirds of respondents.

Finding relatives involves comparing your DNA directly with other people's in a database, but estimating your genetic ancestry is more roundabout. One common strategy looks for variations in your genetic code that have been found to be statistically more likely in people from certain regions. The testing company then gives you an estimate of the percentage of your DNA that comes from such areas. For example, your result might show that 40 percent of your DNA comes from Europe and 60 percent comes from Asia.

**THE DRAWBACKS** It's hard for testing to pin down genetic ancestry accurately for several reasons. Different test makers may rely on different sets of data, including, often, some from their own customers—which can skew findings. Also, the fewer samples a company has from a certain region, the more limited its ability to tell you whether you have ancestors from that area. On the flip side, as more people take one company's test, its pool of information should become larger and better. That can cause the strange phenomenon of having your genetic ancestry test results change over time as a manufacturer widens its "reference database."

Another concern: The databases often have genetic details on people whose families came from a particular region in the recent past. But ancestry



stretches back much further than, say, our grandparents. “It’s not always clear that the population you’re being compared to is the same one that was in that location several hundred or thousand years ago,” says the University of Pennsylvania’s Wendy Roth.

It’s important to remember, too, that although a given gene variant may be more common among one group of people, it can also appear in others. So finding a particular variation in your genetic code doesn’t definitively place you in any one regional, ethnic, or

racial group. What all this means for consumers, according to Mwenza Blell, PhD, a biosocial medical anthropologist at Newcastle University in the U.K., is that genetic ancestry tests are closer to palm reading than science.

This testing also has an unintended social consequence, experts say. Because country-of-origin labels closely overlap with commonly used ethnic and racial labels, the test can reinforce the mistaken idea that your ethnicity or race is encoded in your genes.

In reality, the mapping of the human genome demonstrated that all people

are more than 99 percent the same genetically, regardless of race or ethnicity. This finding represented a major milestone for scientists and historians who had been working to dismantle the idea that racial categories—an invention of modern history—were biological rather than social.

The emergence of DTC genetic testing and its focus on genetic ancestry has proved to be a major and unexpected setback to this work, Blell says, by reinscribing notions of biological differences among races.

A 23andMe representative told CR that

## THE PRIVACY RISKS OF GENETIC TESTS

**WHAT HAPPENS TO YOUR** genetic data after you mail your sample to a private company for analysis? We don’t exactly know, because few laws regulate how companies can use your information and what they must do to keep it private and secure, according to Consumer Reports’ privacy experts. “An individual’s most personal information is being bought, sold, and traded without clear understanding or consent,” says Justin Brookman, CR’s director of privacy and technology policy.

Federal protection is limited. The Genetic Information Nondiscrimination Act prevents employer discrimination based on genetic information—meaning you can’t be fired because of,

for instance, a genetic problem that predisposes you to cancer. But that covers only genetic conditions that aren’t yet symptomatic.

The Affordable Care Act bars health insurers from refusing applicants or charging more based on a preexisting condition—which includes any illness discovered as the result of genetic testing, says Ellen Clayton, MD, a professor of pediatrics, law, and health policy at Vanderbilt University Medical Center in Nashville, Tenn. A handful of states have also enacted laws protecting some aspects of genetic privacy.

### THE GAPS IN THE LAW

Even with existing laws, DTC genetic testing companies have substantial flexibility in controlling what happens to your data once they receive it, Brookman says.

That can be problematic. Unlike your credit card number, your genetic data can’t be changed if it’s stolen or if it’s shared without your consent.

Law enforcement agencies have already used services that allow people to publicly post their genetic data—in an effort to find relatives—to help solve high-profile cold cases. This is a controversial practice among privacy experts and consumers, who might not want to unwittingly help put a relative behind bars.

Also concerning is that genetic data could, at least theoretically, be used in determining your rate for life, long-term-care, or disability insurance in almost every state. And if you seek damages for a work-related injury, your employer or its insurer could try to use your

genomic data to challenge your claim for compensation.

Another possibility is that mortgage lenders might require a genetic test before deciding whether to approve a mortgage, says Mark Rothstein, a lawyer and a professor at the University of Louisville School of Medicine in Kentucky, in order to weed out applicants who, for instance, have an inherited risk of Alzheimer’s disease.

### THE PROTECTIONS WE NEED

With a few exceptions, when it comes to your privacy, DTC genetic test makers have to abide only by the data privacy rules in their own privacy policies, which they can change at will. CR believes lawmakers should pass regulations to make results from all genetic testing private by default. These laws should also require strict safeguards to prevent data theft and the potential reidentification of anonymized data, Brookman says.

it has worked to dispel these notions, “including noting in our reports the results are based on recent ancestor locations.” Ancestry did not provide a comment on this by press time.

### CLAIM 3 GENETIC TESTS CAN REVEAL YOUR RISK FOR CERTAIN DISEASES

**HOW IT WORKS** Some manufacturers say that their tests, using research about variants associated with various conditions, can help assess whether you are more likely to develop a disease such as breast cancer or Alzheimer’s.

The company 23andMe does this using technology for which it has received approval from the Food and Drug Administration, allowing the firm to sell the test directly to you. Others use what’s known as physician-mediated tests. Once you purchase such a kit, the company enlists a doctor—generally one who is associated with the test maker and does not meet with you directly. This lets the manufacturer offer the test without FDA approval, as long as it is analyzed in a federally certified lab, says Katie Stoll, executive director of the Genetic Support Foundation, a nonprofit that provides genetic counseling services.

**THE DRAWBACKS** The picture of your disease risk that you get from a DTC genetic kit might be less complete than that of a test you get as part of your regular medical care.

In contrast to at-home testing, your own healthcare providers will generally work with you closely to determine whether you need certain tests, based on your health history and your family’s. They’ll also pair you with licensed genetic counselors, who can help ensure that you’re tested for all potentially relevant genetic variants and that your testing will be covered by insurance.

And DTC disease-risk tests might not include a wide range of important gene variations. Take, for instance, 23andMe’s test for variants of the BRCA1 and BRCA2 genes, which have been linked to a higher risk of breast and ovarian cancer. The company’s test looks for three specific variants that have been well-studied and are most common among people of Ashkenazi Jewish descent. But thousands of additional variants of these same genes are also known to cause breast and ovarian cancer, including certain variations that occur more frequently in other populations, according to genetic counselor Kelly Ormond, a professor in the department of genetics at Stanford University School of Medicine in California.

What this means: A negative result may provide a false sense of relief because it doesn’t look at all the variants, Ormond says. Also, while DTC test makers often offer genetic counseling, a company counselor will be less familiar with your medical history than a counselor your doctor refers you to, Brothers says.

AncestryHealth, which takes the physician-mediated approach for health tests, told CR it helps customers understand their results, in part, by partnering with “an independent group of physicians and genetic counselors.” And 23andMe says it clearly explains test limitations to users, noting prominently on its website that its BRCA1 and BRCA2 results, for example, test for only three variants of those genes.

### CLAIM 4 THESE TESTS CAN TELL WHAT DIET IS BEST FOR YOU

**HOW IT WORKS** A number of DTC testing companies currently offer personalized diet recommendations based on your genetics. Some draw their advice from existing studies, such as those on how,

for instance, a specific genetic variation may be linked to a better response to a certain diet or exercise program.

**THE DRAWBACKS** The prospect of incorporating genetic information into dietary advice is exciting because it could allow dietitians to better tailor advice to individuals’ needs, says Amy Ellis, PhD, an associate professor in the department of human nutrition at the University of Alabama in Tuscaloosa.

But far more and better evidence is needed. Right now, the dietary advice from DTC companies may be based on incomplete evidence or could yield misleading conclusions, according to recent research. When a 2020 study in the journal *Nutrients* evaluated 45 DTC services offering personalized nutritional advice, it found a number of worrisome practices. For example, the authors say that more than 900 genetic variants may contribute to a person’s risk of obesity. Yet companies often provide weight-loss advice based on just a handful of variants.

What’s more, much of the research about gene variants and diet is observational and hasn’t been adequately replicated in other studies, says George Hindy, PhD, assistant professor of population medicine at Qatar University in Doha. Such research can suggest an association only between a variant and an outcome such as faster weight loss, not a cause-and-effect relationship. When it comes to a good diet, “genes ... are not a definitive answer,” says Yi Sherry Zhang, PhD, the founder of GenoPalate, which provides dietary advice based on genetic testing. “We need a holistic approach.”

**SO, WHAT SHOULD YOU DO?** In the end, DTC genetic tests can provide certain insights, but it’s important to be aware of their limitations. And keep in mind that your genetics are only one element of your overall well-being: Your environment, healthcare access, and behavior are also important, says James E. Rogers, PhD, CR’s director of food safety research and testing.

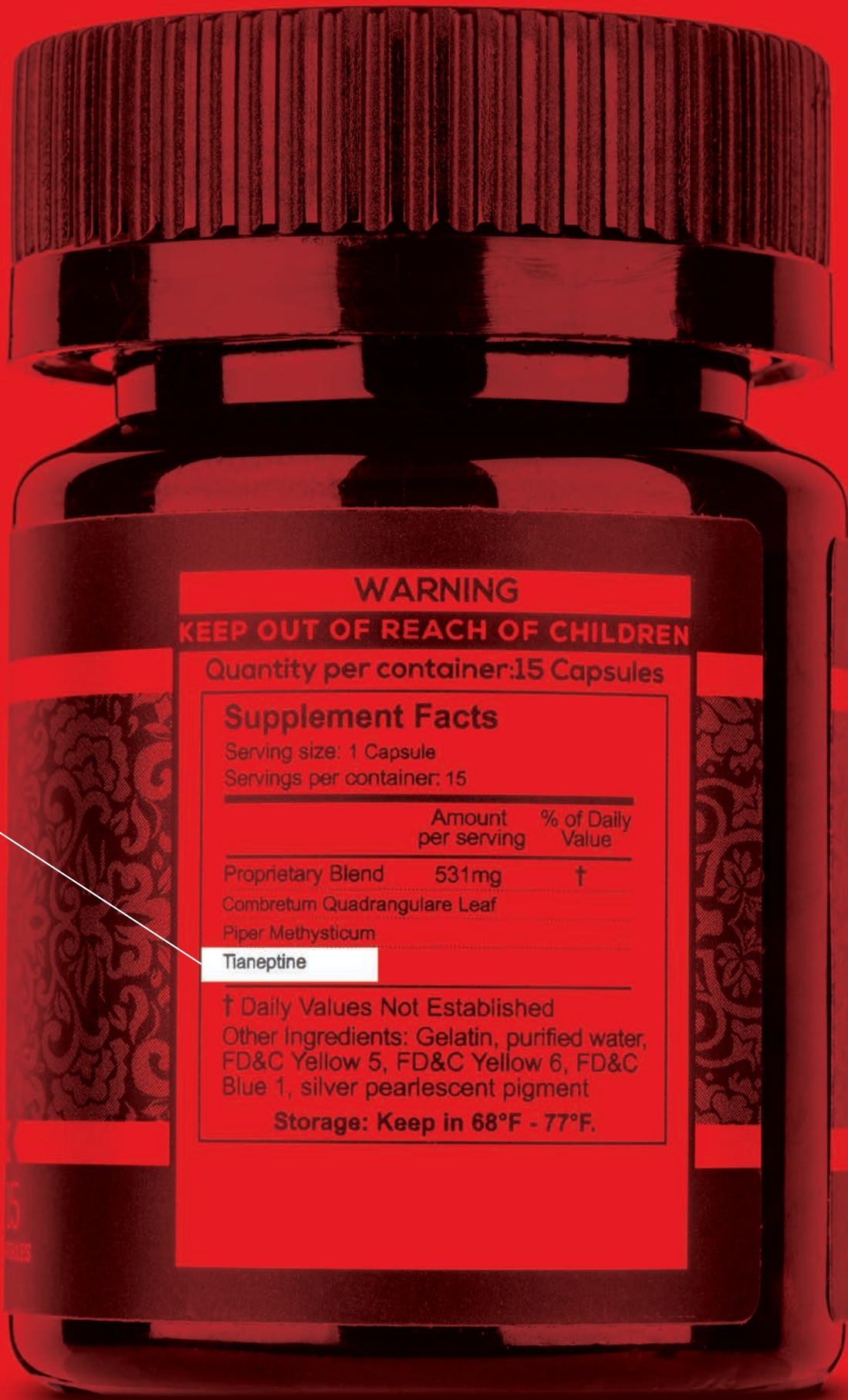
SPECIAL REPORT

# An Illegal Dietary Supplement Is Being Sold to Americans—and the FDA Knows It

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Tianeptine, a drug not approved for use in the U.S., has been linked to hundreds of reports of harm, including overdoses and deaths. **by Ryan Felton**





## WARNING

**KEEP OUT OF REACH OF CHILDREN**

Quantity per container: 15 Capsules

### Supplement Facts

Serving size: 1 Capsule

Servings per container: 15

	Amount per serving	% of Daily Value
Proprietary Blend	531mg	†
Combretum Quadrangulare Leaf		
Piper Methysticum		
Tianeptine		

† Daily Values Not Established

Other Ingredients: Gelatin, purified water,  
FD&C Yellow 5, FD&C Yellow 6, FD&C  
Blue 1, silver pearlescent pigment

**Storage: Keep in 68°F - 77°F.**

# William Morrone, an addiction treatment specialist in Michigan, first heard about tianeptine in 2016.

He was treating patients across central Michigan, when he learned of a problem at a local drug court, a program that focuses on rehabilitating people charged with nonviolent drug crimes. Some defendants were showing up glassy-eyed and slurring words, despite having passed drug tests.

People in treatment told him what was going on. Tianeptine, a drug not approved in the U.S. and known to have a potential for abuse, was being bought in bulk online, then resold on the street. Research has found that its effects are similar to those of opioids, dulling pain and, at high doses, causing euphoria.

But as the opioid crisis has prompted crackdowns on black market sales and on inappropriate prescribing of drugs such as fentanyl and oxycodone, tianeptine has become an alternative that's cheap and easy to come by—even though the Food and Drug Administration, which regulates drugs and supplements, has made clear that those sales are illegal.

Tianeptine helped fill a void, just as kratom, an ingredient in supplements that produces opioidlike effects and has been linked to multiple deaths, has done. And as with kratom, tianeptine has its share of proponents who say it helps people with certain medical

needs. Some U.S. companies are even planning to seek FDA approval for tianeptine as a prescription drug to treat depression. It is already approved for that use in Europe and elsewhere.

Yet as companies investigate the potential of tianeptine as a legal drug, illegal supplements containing it are already widely available. The FDA has taken some steps to stop manufacturers and warn consumers. But an investigation by Consumer Reports found that the FDA's enforcement efforts have significant shortcomings.

For one thing, tianeptine-related calls to poison control centers have skyrocketed. There have been at least 883 since 2015, up from 27 the decade before. At least four people have died after using the drug, and almost two dozen have reported hospitalization and other adverse effects, according to an analysis of FDA data, scientific case reports, and documents obtained through the Freedom of Information Act. Because many adverse events are never reported, the number is probably much higher. And that's just in the U.S. Records show that the FDA is aware of dozens more deaths and adverse events outside the country.

"This is a terrible example of the FDA being absolutely behind on

ensuring the safety of supplements," says Pieter Cohen, MD, a Harvard Medical School associate professor who studies dietary supplements.

Tianeptine's emergence illustrates serious problems with how the FDA regulates the \$46 billion dietary supplement industry. Unlike prescription drugs, supplements generally don't need FDA approval to be introduced for sale.

Courtney Rhodes, an FDA spokesperson, declined to answer CR's questions about tianeptine manufacturers. But she says the agency has "no systematic way of knowing what dietary supplement products are on the market" or what ingredients they contain. "Because we cannot put an investigator in every store in every state, and we do not have a constantly updating window into every retail corner of the internet, stakeholders become our eyes and ears, and we are left trying to play catch-up," she says.

Chuck Bell, who has advocated for safer supplements for more than 20 years at CR, says the "flagrant sale" of an illegal drug such as tianeptine as a supplement is unacceptable. "These manufacturers are intentionally skirting the law, as they know tianeptine is an unregistered pharmaceutical drug, which by definition cannot be a dietary ingredient in the U.S.," he says.

## Abuse and Addiction

After being developed in the 1960s in France, tianeptine's potential for abuse eventually led some countries, such as Russia, to classify it as a controlled substance, limiting access to it.

Tonix Pharmaceuticals, a drugmaker planning to seek FDA approval for tianeptine, recognizes that risk, at high doses. "That's a liability," says Gregory Sullivan, MD, the chief medical officer of Tonix, which is based in New Jersey. To counter that danger, the company proposes adding a small amount of

naloxone, a drug used to treat opioid overdoses, into its tianeptine pill.

Some experts attribute tianeptine's rise in popularity in the U.S. in part to a 2014 study in the journal *Translational Psychiatry*, which found that the drug can have effects similar to those of opioids. As early as 2015, FDA records show, companies were importing tianeptine into the U.S. Soon after, tianeptine supplements emerged under brand names such as Tianaa and Za Za. Gas stations became common sellers.

Some tianeptine users also obtain it in bulk from online vendors that sell it with an apparent wink and a nod as “for research purposes only.”

Brandon Lackey, executive administrator of a network of drug recovery centers in Alabama, says he has found patients treated for opioid addiction turning to tianeptine instead, only to find themselves then addicted to that substance. “The law does not allow a timely enough response to keep emerging health threats from becoming health crises,” he says.

On the social media site Reddit, many self-reported tianeptine users have gathered on forums such as *Quitting Tianeptine* and shared reasons for taking it, including its potential medicinal benefits.

Indeed, William Rushton, MD,

medical director of the Alabama Poison Information Center, says, “Very few of the patients I have encountered are starting tianeptine to get a recreational high but rather are truly trying to help themselves under a mistaken concept of its safety.”

The outcomes of use can be severe. In October 2019, a 25-year-old Illinois man with a history of depression died in a local hospital after taking tianeptine, according to a report obtained by CR. (The man's family didn't respond to a request for comment.)

It's unclear why Colby Brennan turned to tianeptine, but according to a lawsuit later filed by his family, the decision proved to be fatal. The 28-year-old Texas resident purchased the substance in July 2015 from Powder City, a company that sells supplements online, according to the lawsuit. After receiving his order and ingesting the substance, he died from what investigators concluded were the “toxic effects of tianeptine.”

Powder City did not respond to a request for comment. Steve Couch, an attorney who represented the Brennan family, declined to comment, citing a confidentiality agreement reached as part of a settlement. In March 2016, Powder City apparently stopped selling tianeptine. The reason, according to the lawsuit: People were misusing it.

## 'Worse Than Heroin'

Around that time, more than 1,300 miles to the north in Michigan, Alyssa Wood was introduced to tianeptine.

It was spring 2016, and Wood was a few years into recovery from opioid abuse. But friends said tianeptine was safe. Soon she was using it, eventually even injecting it. “I was surprised how easy it was to get,” she says. Her friends would order it online and within a few days it would come by mail. “Withdrawal and detox was 10 times more severe than any opiate withdrawal,” she says.

In 2017, when Michigan law enforcement opened an investigation into tianeptine, it came to a similar conclusion. Many users described it as “worse than heroin,” says Shannon Banner, a state police spokesperson.

In early 2018, Wood provided testimony to the Michigan state legislature. It was considering a bill that would list tianeptine as a Schedule II controlled substance, meaning that if the FDA were to approve it as a prescription drug, it would be regulated the same as opioids. She described how daily injections left her arms with abscesses that required surgery. She spent a week in the hospital, “terrified about all the open sores and cuts on my body,” Wood told the lawmakers.

Michigan passed the bill, and soon after, some local tianeptine dealers “went out of business,” says Morrone, the recovery services director. “They knew that the law was now specific enough to show that they were [committing] a crime,” he says.

But outside of Michigan, business was continuing largely unhindered.

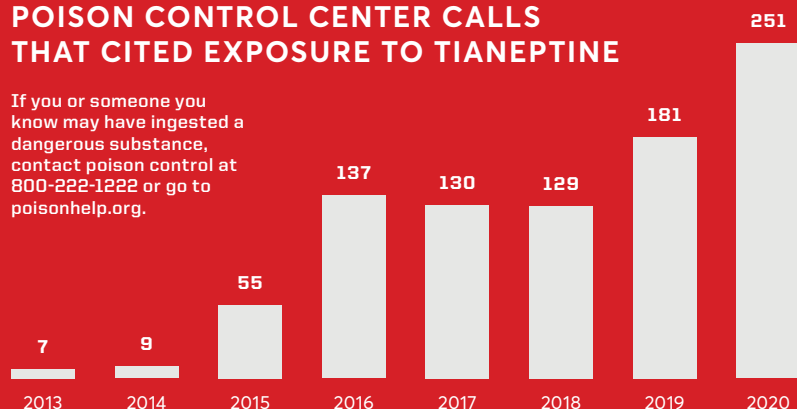
## 'Scratch That Opioid Itch'

In Alabama, for example, tianeptine arrived “like a flood,” Lackey says. “It wasn't a question of whether or not this was going to be a problem. It was a problem from the beginning.”

As word about tianeptine got around,

## POISON CONTROL CENTER CALLS THAT CITED EXPOSURE TO TIANEPTINE

If you or someone you know may have ingested a dangerous substance, contact poison control at 800-222-1222 or go to [poisonhelp.org](https://poisonhelp.org).





Lackey says, use skyrocketed. A resident of Lackey's rehab program smuggled it in, and he and his cabinmates would go to therapy "high as a kite."

"It's a way to scratch that opioid itch without getting caught," Lackey says, referring to the fact that drug blood tests don't screen for tianeptine. "They think that because it's sold over the counter that it's legal, that it's okay, it's safe. But it's not. Once you scratch that opioid itch, it doesn't go away."

Lackey spent two years pushing Alabama lawmakers to ban tianeptine. In mid-2020, the Alabama Department of Public Health (ADPH) announced a new rule listing it as a Schedule II substance.

The rule was supposed to go into effect in November—until the maker of Tianaa filed suit. In that lawsuit, the company, Premier Manufacturing Products, argued that Alabama

businesses would suffer financially if they were unable to keep selling it.

Premier also argued that tianeptine could legally be sold as a supplement because the government had yet to schedule it as a controlled substance—a claim contradicted by federal law as well as the FDA's stated position that it's illegal to sell supplements that include tianeptine as an ingredient. The FDA declined to answer questions about Premier's claim, saying it can't comment on potential or ongoing investigations.

James Morrisette, a Premier executive, asserted in a letter sent to the ADPH in 2020 that listing tianeptine as a Schedule II drug could hurt supplement manufacturers.

But industry groups say companies like Premier give supplements a bad rep. "Any company selling a product containing tianeptine as a supplement ...

is putting consumers' health at risk," says Steve Mister, president of the Council for Responsible Nutrition.

Yet Morrisette's legal maneuver worked. In November, the ADPH withdrew its proposed rule on tianeptine until it produced a report detailing how a ban on it would affect companies selling it in the state, says ADPH spokesperson Arrol Sheehan. That has effectively allowed the sale of an illegal supplement to continue while the state sorts out how much money businesses make on it.

J. David Martin, an attorney representing Premier, declined to comment. A spokesperson for Premier acknowledged CR's request for comment but had not provided answers at press time.

Even if Alabama's ban ultimately goes into effect, Rushton, at the state's poison control center, worries that users may just go across state lines to buy it.

Morrisette, in fact, has reportedly advocated against discussions in neighboring Florida to classify tianeptine as a Schedule II drug. In an interview with a Florida CBS station, he said many of his customers use tianeptine for pain and anxiety. But, perhaps unwittingly, he also conceded that tianeptine is used for other reasons: "A solid percentage of them are using it for opiate sensation," he said.

## Stronger Enforcement Needed

As Alabama's tianeptine problem was ballooning in 2018, the FDA issued a press release warning that supplements containing the drug were highly addictive. And over the past year, at least two individuals have been indicted by the federal government for attempting to sell tianeptine in the U.S.

But industry groups and dietary supplement watchdogs alike say the FDA could be doing more.

"They just need more enforcement resources and more enforcement tools in the toolbox," says Laura MacCleery, policy director for the Center for



### Hiding in Plain Sight

Manufacturers selling tianeptine often aren't shy about listing it on product labels, even though the FDA says it's illegal in dietary supplements.



## OTHER DIETARY SUPPLEMENTS WITH RISKY INGREDIENTS

Tianeptine isn't the only ingredient in some dietary supplements that the FDA has said should not be in those products. CR found a number of supplements for sale in December 2020 that contained at least one such ingredient, including these 10, listed with their manufacturers.

### **FASTIN-XR, HI-TECH PHARMACEUTICALS:**

Contained **methysynephrine**, a stimulant used to improve oxygen exchange.

### **NEUROPILL, COGNITIVE NUTRITION:**

Contained **piracetam**, purported to improve cognitive function.

### **NOÖCAMILON, LIFELINK:**

Contained **picamilon**, a drug prescribed in other countries for neurological conditions.

### **GREEN STINGER, SCHWARTZ LABORATORIES:**

Contained **acacia rigidula**, a plant used in some weight-loss supplements.

### **FRICTION, VPX/BANG ENERGY:**

Contained **isopropyl octopamine**, a stimulant also known as deterenol.

### **ANESTHETIZED, BLACKSTONE LABS:**

Contained **phenibut**, used in Russia as an anti-anxiety medication.

### **pH BALANCER PLUS, AMERICAN**

**NUTRICEUTICALS:** Contained **cesium chloride**, a substance promoted as an alternative cancer treatment.

### **MILLETTOV-X, MILLECOR:**

Contained **DMHA**, a stimulant marketed for weight loss and athletic performance.

### **THERMOSCUPT ORIGINAL, DESIGNED BY**

**DEAN:** Contained **BMPEA**, a synthetic substitute for amphetamine.

### **ADIPROPEN ULTRA, 8 WEEKS OUT:**

Contained **DMAA**, an amphetamine derivative.

LifeLink and Bang Energy say they no longer sell the products listed above. Hi-Tech says the FDA's position, which it disputes, is not final. Other companies could not be reached or did not respond to requests for comment.

Science in the Public Interest (CSPI), a consumer advocacy group.

Daniel Fabricant, PhD, president of the Natural Products Association, a supplements industry group, and a former director of the FDA's supplements division, says the agency needs to more aggressively use the tools it has. He says that it could issue an import alert, which would stop tianeptine shipments at the border. The FDA could also ask courts to issue injunctions against companies marketing tianeptine and could seize products it finds being sold. Clearly, though, Fabricant says, the FDA's actions on tianeptine to date "haven't been a big enough deterrent."

For example, in late 2018 the agency sent warning letters to two companies selling tianeptine supplements, essentially calling on them to clean up their act or risk legal action. While such letters are among the strongest tools available to the agency, recipients sometimes treat them like traffic tickets, and the FDA doesn't always follow up.

That's what happened when the FDA warned JackBGoods Outlet, an online retailer that sold Tianaa, to stop selling the supplement, especially while making claims that it was "an unparalleled solution to cravings for opiates." Yet JackBGoods appears to continue to sell tianeptine, and there is no indication in agency records reviewed by CR of additional enforcement action taken by the FDA.

JackBGoods did not respond to a request for comment.

## Seeking Solutions

MacCleery, along with CR advocates, says tianeptine's continued availability underscores the need for a supplement registry. That would require companies to submit to the FDA a product's name, its ingredients, and contact information when taking a supplement to market.

If a company submits a product with an illegal ingredient, the FDA could say from the outset that it may not be sold.

And if the agency finds an unregistered supplement, it could quickly start enforcement action and notify retailers to pull it off shelves.

The FDA says that it supports a registry but that it lacks the authority to create one. Federal lawmakers have proposed legislation to give the FDA that power at least twice since 2011, but those bills have not been acted on.

Fabricant doesn't think a registry is needed, believing that the FDA already has the resources it needs. "This is something where the agency has to uphold the laws," he says.

CR's Bell says the registry would help but is not enough. "With over 80,000 supplements in the marketplace, Congress needs to enhance the FDA's authority," he says. "If we want the FDA to act quickly to remove unsafe products, it will need more funding and staff."

The CSPI and Lackey, the Alabama recovery services director, called on the FDA in August to take additional action against tianeptine. The agency is reviewing the letter, says FDA spokesperson Rhodes.

One option would be for the FDA to approve tianeptine as a prescription drug. If it does, steps taken by Michigan, as well as Minnesota and Oklahoma, to list tianeptine as a controlled substance would sharply restrict access to the ingredient.

Morrone, the Michigan addiction treatment specialist, says the state's legislative efforts have helped rein in tianeptine sales. "We wanted to make sure that it wasn't going to enter into the mainstream of drugs."

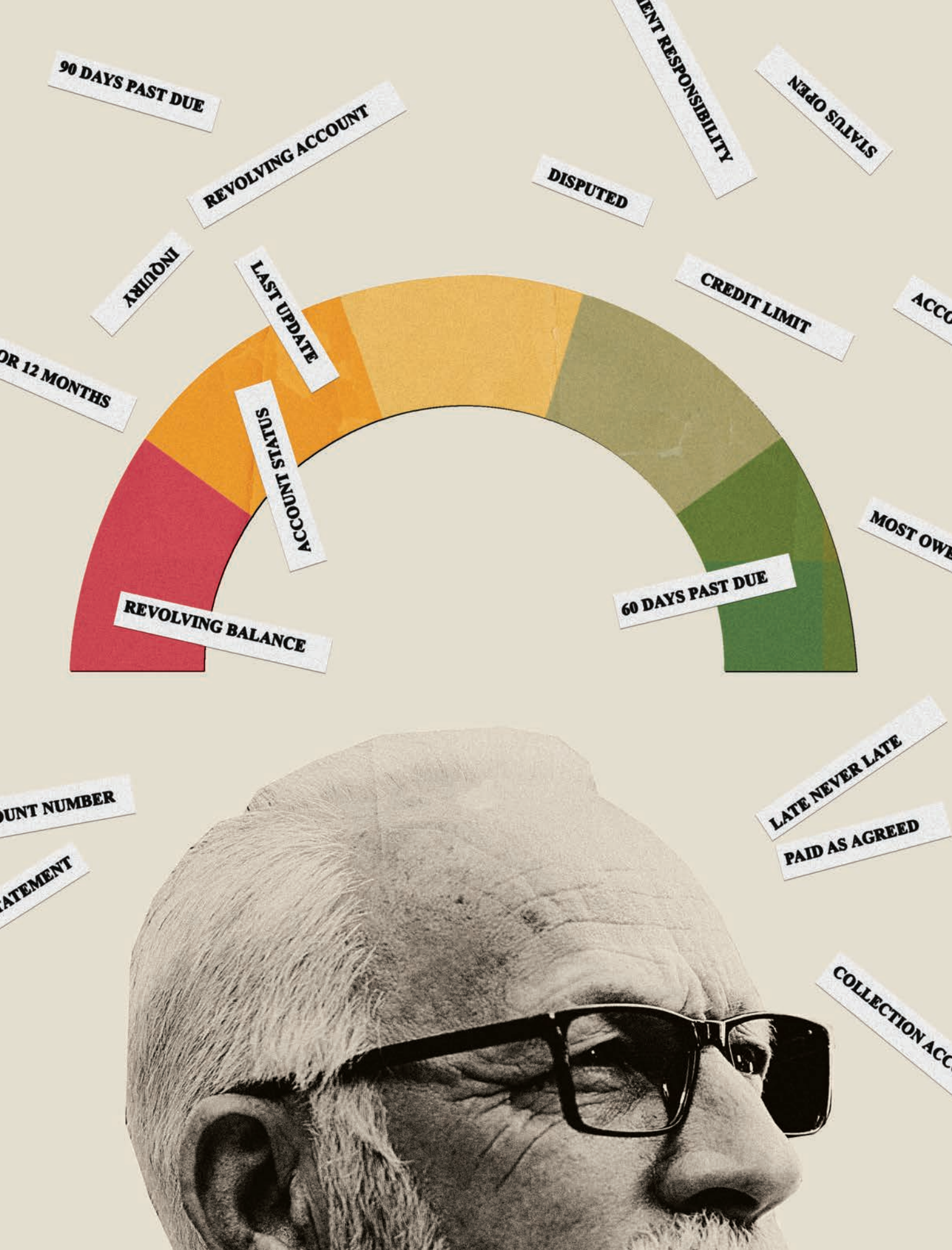
While Michigan may have found success, people can still find tianeptine in a matter of seconds online. In early December, one eBay seller noted on their website that they had made dozens of Za Za supplement sales to consumers and were even offering buyers a deal: a discount for purchasing multiple bottles, with free shipping.

# PROTECT YOUR CREDIT SCORE

( Especially in  
the Pandemic )

Reporting errors are piling up and consumers are being **wrongfully penalized**. To keep your credit healthy, here's what you must do.

BY LISA L. GILL / ILLUSTRATION BY LINCOLN AGNEW



90 DAYS PAST DUE

REVOLVING ACCOUNT

DISPUTED

STATUS OPEN

ACCOUNT RESPONSIBILITY

INQUIRY

LAST UPDATE

CREDIT LIMIT

ACCO

OR 12 MONTHS

ACCOUNT STATUS

MOST OWL

60 DAYS PAST DUE

REVOLVING BALANCE

ACCOUNT NUMBER

STATEMENT

LATE NEVER LATE

PAID AS AGREED

COLLECTION ACC



J

**JOSH THOMAS**, a self-employed computer programmer in Port Orchard, Wash., was worried about his job prospects after nearly three months in lockdown because of COVID-19. So last May he signed up online for an offer from his credit card company, Barclays Bank, to defer his monthly payments for up to three months.

But three months later, Thomas discovered that his credit score had dropped after checking his credit reports. Those detailed credit histories produced by the big credit bureaus—Experian, Equifax, and TransUnion—are used by companies like FICO and VantageScore to calculate a three-digit credit score. And that score is used by lenders when deciding whether to offer credit cards and auto, home, and student loans to consumers, and what interest rates to charge.

Thomas saw that Barclays had erroneously reported he missed a credit card payment in July, during his deferral period. He filed dispute claims with each credit bureau to correct the error but was unsuccessful. He finally sued Barclays in September as part of a class-action lawsuit in an effort to remove the late payment from his reports. The case is still pending.

Having a lower credit score meant that Thomas had to delay starting a nonprofit business he hoped to get off the ground, says Chris Rosfjord, his attorney.

As a growing number of Americans face job losses and economic

insecurity during the pandemic, more people than ever are reporting errors on their credit reports, making an already precarious financial situation even more so. Complaints to the Consumer Financial Protection Bureau about credit report errors have reached record levels, according to the U.S. Public Interest Research Group, a consumer advocacy and policy organization.

These errors have long posed a problem for consumers. The best and biggest study on the issue, done by the Federal Trade Commission in 2012, found that 1 in 4 consumers had at least one error in their reports. But the COVID-19 crisis has worsened the situation, says Syed Ejaz, a financial policy analyst at Consumer Reports.

“This is a problem that existed long before the pandemic,” he says, “but it’s made more harmful and urgent because it limits access to affordable credit and financing to people who have been financially impacted by COVID-19.”

Part of the problem stems unintentionally from the CARES Act, which was passed by Congress last March as a way to help people struggling during the pandemic, says Chi Chi Wu, senior policy counsel at the National Consumer Law Center (NCLC), a nonprofit group based in Boston. The law requires certain

companies that provide federally backed mortgages and student loans to offer deferred payments—but report them as current—to ease financial pressure on consumers. Other businesses, like credit card companies and auto lenders, have voluntarily offered deferrals. But some companies have erroneously reported those deferred payments as late. And in some cases, loans that have been granted forbearance—which is a different kind of temporary pause on payments—have also been reported as late.

Alia Hafez of Rahway, N.J., qualified for six months of delayed payments on her student loan under the CARES Act. But according to a class-action lawsuit filed last July, the company that services her loan, Navient, erroneously reported to the credit bureaus that her payments—as well as those for thousands of other people—were late, even though the CARES Act required Navient to report them as up to date. The error resulted in a 97-point drop in Hafez’s credit score.

Another problem, Wu says, is that credit bureaus don’t have to respond as quickly to consumer disputes as they used to. Pre-COVID-19, the law stated that bureaus had a 30-day window. In April 2020 the CFPB relaxed the rule but provided no alternative time frame, saying only that a company had to make a good-faith effort.

Consumer complaints about slow response times have increased significantly, Wu points out. “Consumers lodged over 13,000 complaints just in the past six months, saying that their disputes were not addressed within 30 days,” she says. That compares with just 2,000 similar complaints in 2019—a 550 percent increase.

“The victims of this pandemic are not the companies the CFPB is loosening the reins on,” says Ed Mierzewski, senior director for federal consumer programs at U.S. PIRG, who has

**JOSH THOMAS’  
CREDIT SCORE  
DROPPED  
WHEN HIS BANK  
WRONGLY SAID  
HE MISSED A  
PAYMENT DURING  
THE PANDEMIC.**



# HOW TO FIX CREDIT REPORT ERRORS

**Prepare dispute materials for each credit bureau.** The three major credit bureaus—Experian, Equifax, and TransUnion—don't communicate with one another, so it's smart to contact each one. And filing with the individual credit bureaus, as opposed to your lender or bank, offers protections as far as how quickly your dispute must be handled. It also provides a legal pathway to sue the credit bureaus and creditors, if necessary.

**Gather evidence.** With debt that's reported incorrectly, include account statements or payment records. Credit bureaus can dismiss claims without enough backup information as "frivolous." And resubmitted claims can be denied if they're considered similar to previous ones.

**Create a paper trail.** Write a letter explaining the problem. Avoid using standardized online forms provided by the credit bureaus, which might oversimplify your dispute by requiring you to choose among predetermined check boxes, says Andy Milz, a consumer protection attorney in Philadelphia. Plus, by submitting

your dispute online, you could unwittingly waive your right to sue as an individual or in a class action, he says.

**Send all materials by certified mail.** And keep copies for yourself. This makes it easier to confirm that the credit bureaus follow the lawful timelines.

They have five days to get disputed information to the financial institution, for example. If the lender doesn't investigate and respond to the dispute in time, and you take the issue to court, the credit bureaus are legally required to delete the information. In addition, that makes it more likely that "the consumer will win and the defendant will pay the consumer's legal fees," says Edward Y. Kroub, of Consumer Attorneys in Brooklyn, N.Y.

## IF YOU WIN YOUR DISPUTE

**Ask for corrections.** At your request, the bureaus must send an updated report to anyone who's checked your credit in the past six months.

**Guard against recurring errors.** Sometimes errors that have been fixed can wind up

back on your report, Kroub says. If this happens, you'll need to dispute the error again.

## IF YOU LOSE YOUR DISPUTE

**Consider working with an experienced attorney.** You can sue a credit bureau or financial institution over credit reporting errors. If a company is found in violation, your legal fees will be automatically covered, Kroub says, also noting that most law firms won't require payment up front to review your case. Find an attorney through the National Association of

Consumer Advocates, at [consumeradvocates.org](http://consumeradvocates.org). In cases of identity theft you have additional rights, including the right to obtain detailed documentation about accounts improperly opened in your name. **Add a personal statement to your report.** It can provide context and explain the corrective steps you tried, says Bruce McClary at the National Foundation for Credit Counseling. **File a complaint with the Consumer Financial Protection Bureau,** at [consumerfinance.gov](http://consumerfinance.gov) if you think the outcome of your dispute was unfair.



studied CFPB consumer complaints. "They are real people who face the risk of getting sick at the same time as they are having trouble paying their bills."

The agency says that for 2020, complaints about consumer credit reports accounted for more than 50 percent of all complaints, "many of which focus on incorrect information on credit reports," says a spokesperson for the agency. "The second most common issue is 'problems with a credit reporting company's investigation into an existing problem.'"

Credit bureaus and financial institutions "remain responsible for conducting reasonable investigations of consumer disputes in a timely fashion," the CFPB spokesperson added, "and the Bureau expects [them] to make good-faith efforts to investigate disputes as quickly as possible."

## Far-Reaching Consequences

Credit reporting agencies work behind the scenes, but they know a lot about you. Banks, credit card and mortgage

companies, auto lenders, and others send the agencies data about the payment and borrowing activity of millions of consumers every day. Whether you pay a loan or debt on time, you've sought to open a new line of credit, even information about old credit card accounts—all of this gets captured under rules governed by the Fair Credit Reporting Act of 1970.

Given the volume of data, some errors are bound to happen, according to CR's Ejaz. But the huge number of mistakes is unacceptable, he says,

especially now when so many people are on the brink of financial disaster.

The problem isn't just errors stemming from COVID-19-related deferred payments. Other common errors, such as accounts or loans that have been paid off but still appear as unpaid, individual loans reported multiple times, or debt that's listed as in collections but has been paid off, can pose hurdles if you need a loan or a line of credit, says Andy Milz, a consumer protection attorney with the law firm Flitter Milz in Philadelphia.

Even a wrong address can get you in trouble. For example, Alex Ozols, a San Diego attorney, had superb credit. But in April 2020, as he was applying for a mortgage, a routine check revealed that his score had dropped nearly 80 points, potentially affecting the mortgage terms. The culprit: a 2-year-old unpaid ticket Ozols received when driving a rental car. A collections agency had sent notices to him at an old address still listed in the rental company's system. Fortunately, Ozols was able to quickly fix the problem and get favorable terms on the mortgage.

Other kinds of mistakes can be more serious. Situations involving "mixed files"—when information from someone with a similar name or Social Security number is reported as yours—or if you've been the victim of identity theft and had accounts fraudulently opened in your name, can be particularly difficult to untangle. Meanwhile, you could be prevented from getting any kind of loan or credit card.

Your credit score matters even if you aren't seeking a loan. Potential landlords, cell phone and cable companies, and employers might view that information, says Edward Y. Kroub at Consumer Attorneys in Brooklyn, N.Y., which specializes in finance litigation. That information can be used to decide how much to charge you, how much of a

## JANE ATKINSON ALMOST MISSED THE DEADLINE FOR A MORTGAGE BECAUSE OF A SMALL ERROR IN A CREDIT REPORT.

deposit to require, or even whether you'll be hired for a job, he says.

Even seemingly minor errors can have a big impact on a credit score. When Jane Atkinson and her husband, Alex, went to purchase a home in Skokie, Ill., in March 2020, she knew that their bank would need to access their credit reports, which they had frozen years before, to approve a mortgage. As the clock ticked, Jane spent days scrambling to get her husband's report unfrozen, to no avail.

Finally, they discovered the source of the problem: Her husband's birth date was off by a single digit in the report. It was corrected, but Atkinson says, "It shouldn't be this hard."

### Are Fixes Coming?

When the increase in credit reporting problems due to the pandemic became clear, some states took steps to solve the problem. Last April, attorneys general in 21 states plus Washington, D.C., and Puerto Rico wrote a letter to the CFPB urging it to reconsider its relaxed 30-day policy for credit bureau disputes, saying that those states would enforce the 30-day period on their own.

But according to Francis Creighton,

president and CEO of the Consumer Data Industry Association, which represents the credit bureaus, the credit reporting industry has been meeting the 30-day deadline.

Multiple bills in Congress could relieve consumers' pain. Two of them address credit report accuracy and consumer protections. The one introduced by Rep. Josh Gottheimer (D-N.J.) and passed in the House in June requires that a full Social Security number match what's on a creditor's claim and a person's credit report. The current standard practice is to match just seven of the nine digits, which can lead to file mix-ups.

The second bill, introduced by Ayanna Pressley (D-Mass.) and passed in the House last January, would formalize the right of consumers to appeal a dispute decision, provide credit restoration for victims of fraud, and create an ombudsperson at the CFPB to handle persistent errors.

For now, the surest way to quickly catch bad information on your report is to check it frequently, especially if you've made any special arrangements with lenders or credit card companies, says Bruce McClary, senior vice president of communications at the National Foundation for Credit Counseling. To do that, go to [annualcreditreport.com](https://annualcreditreport.com) to request a free credit report from each of the three major credit bureaus. The agencies are providing free weekly online reports until April 2021.

Another option is to use a free credit report monitoring app like Credit Karma that alerts you to changes in your score. That's how Andy Cunningham of Chicago discovered that a hospital had checked his credit report multiple times in error when he was setting up a payment plan to settle a bill, dinging his score. Because he detected a change in his report almost immediately, Cunningham says he was able to address the problem quickly.



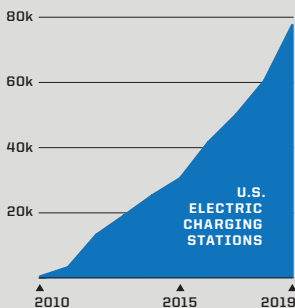
NEWS & EXPERT  
ADVICE TO  
KEEP YOU  
AHEAD OF  
THE CURVE™

# ROAD REPORT

## TREND

### EV Charging Options Are on the Rise

The number of EV charging stations has more than doubled since 2015. "EV owners who charge at home will stop as few as six times at a public charging station every year," says Chris Harto, CR's senior transportation analyst. "But a more robust network of fast charging stations could help calm U.S. consumers' range anxiety and make EVs an option for those who lack access to home charging."



Source: Alternative Fuels Data Center.

## AHEAD OF THE CURVE

### Making Pedestrians Safer at Night



Pedestrian detection systems offer **great potential for preventing collisions with people** or reducing their severity. Even so, more than 6,000 pedestrians were killed and 76,000 of them injured by vehicles in 2019. Many of these collisions with people occurred at night. Thermal imaging cameras, which can identify pedestrians by detecting their body heat, **may offer a critical advantage in protecting people in the dark.** "Available on some 2021 model year vehicles, thermal imaging could help improve the effectiveness of these systems," says Jennifer Stockburger, director of operations at CR's test track.

## THE VITAL STATISTIC

# \$38,521

Average cost of a new car in October 2020, a \$1,780 increase over 2019, according to the National Automobile Dealers Association.

## RECALL



### Chevy, GMC

GM is recalling more than 624,000 Chevrolet and GMC SUVs and pickups with split-bench front seats from model years 2019-2021. The front center seat belt may fail in a crash, causing injury or death. **What to do:** Call GMC at 800-462-8782 or Chevrolet at 800-222-1020 to find out if your vehicle is affected and where to go for a free repair to fix the problem. Don't use the front center seat position if you own an affected vehicle.



## MONEY SAVER

### Best Tire Values

Replacing worn-out tires can be costly but is key to safe driving. These tires performed well in our testing and cost less per mile than the best in class, based on the price we

paid and the predicted tread life. You can often save even more by checking the tire maker's website for rebates. For more value choices, go to [CR.org/tirevalues0321](https://www.crd.org/tirevalues0321).

#### ALL-SEASON

##### Falken Sincera SN201 A/S

Cost per 100 miles 9.9 cents

OVERALL SCORE	66
DRY BRAKING	↑
HANDLING	↓
HYDROPLANING RESISTANCE	↑

#### ALL-SEASON SUV

##### Sentury Crossover

Cost per 100 miles 16 cents

OVERALL SCORE	63
DRY BRAKING	↑
HANDLING	↑
HYDROPLANING RESISTANCE	↑

#### ALL-SEASON TRUCK

##### Continental TerrainContact H/T

Cost per 100 miles 17.5 cents

OVERALL SCORE	69
DRY BRAKING	↑
HANDLING	↑
HYDROPLANING RESISTANCE	↓



Tesla Model 3



Ford EcoSport



# The Most Satisfying Cars on the Market

We asked CR members how they feel about their cars. The survey results offer shoppers important insights as they search for their perfect vehicle match.

by **Christopher Kirkpatrick**

**K** NOWING HOW MUCH you might like—or even love—your next vehicle would be a pretty valuable insight as you go about researching your next car purchase.

Enter CR's predicted owner satisfaction scores. Every year we ask our members, in our Annual Auto Surveys, whether they'd buy their same car again if given the chance.

The survey also queries owners about their satisfaction with several specific aspects of their car ownership experience, such as comfort, driving, and ease of use





Kia Telluride



Infiniti Q50



when it comes to in-car electronics.

Based on the responses, we calculate a predicted owner satisfaction score each year for new models. We believe our findings—based on the experiences of actual car owners with 1- to 3-year-old vehicles—offer invaluable insight to help you make a successful match with your next new car.

“You want to know how owners like living with a car,” says Jake Fisher, senior director of auto testing at CR, “and how they feel about qualities and features after the initial excitement of a new car wears off.”

The following pages contain the results of our most recent survey, including the 2021 models predicted to be the most and least satisfying overall, as well as results in six key areas. You’ll also find brand-level satisfaction scores, some of which might surprise you.

Two additional notes: We contacted automakers about our findings, and you can find their comments at [CR.org/satisfaction0321](https://www.consumerreports.org/satisfaction0321). And for more details on how we derived scores, see page 57.

Now, on to the highlights.

## MOST & LEAST SATISFYING OVERALL

91	Tesla Model 3	52	Mazda CX-3
91	Kia Telluride	52	Nissan Kicks
89	Tesla Model S	51	Infiniti QX60
89	Tesla Model Y	49	Infiniti QX50
88	Mazda MX-5 Miata	48	Jeep Compass
84	Lincoln Aviator	47	Nissan Pathfinder
83	Lincoln Corsair	46	Chevrolet Trax
83	Toyota Prius	44	Infiniti Q50
83	Jeep Gladiator	39	Ford EcoSport
82	Tesla Model X	34	Toyota C-HR

**IN-CAR ELECTRONICS** Slow-responding, glitchy, and overly complex infotainment systems continue to be a bugaboo for owners of some traditionally beloved and high-performance luxury vehicles and brands. When CR members were asked how satisfied they were with the ease of use of their infotainment systems, two models from Lexus, two

from Infiniti, and one from Acura took the bottom five spots in the category. **THREE-ROW SUVs** The battle among automakers to make the best version of these family haulers has been especially intense in recent years. But when it comes to interior comfort, CR members told us they were slightly more satisfied with models in the less expensive “non-luxury” category, such as the Kia

Telluride, than with those considered to be “luxury,” such as the Volvo XC90. All three-row SUVs scored average or above for comfort, but buyers should consider whether it’s really worth spending the extra money—an average of about \$20,000—for not much gain. **MOST SATISFYING BRANDS** With historic reliability concerns but an intensely loyal following, Tesla took the top spot for

## WHAT QUALITIES IN A CAR MATTER MOST TO YOU?

A high overall owner satisfaction score—based on whether owners said they would buy the same car over again—is a good indication that a car does a lot right in the eyes of its owners. But you may give certain factors more weight than others. Maybe looks are especially important to you. Or perhaps you care about value above all else. It may be worth giving an extra-close look to cars that satisfy in ways that matter most to you.



### VALUE

Jetta owners spoke of the “reasonable price, fairly good number of features.” A G70 owner summed up many member comments: “Great value for the money, with maximum safety and convenience features included.” But multiple 3 Series owners reported being unhappy with the price of their vehicle.



### COMFORT

Mazda3 owners told us their car was “comfortable and quiet” and “fun (and the) right size.” Similarly, Legacy owners noted “the comfort (and) the room” of their cars. Many Bolt owners noted “the front-seat comfort could be improved” and “terrible front seats.”

#### MOST SATISFYING

##### COMPACT CAR

▲ Volkswagen Jetta

##### LUXURY COMPACT CAR

▲ Genesis G70

##### SPORTY CAR

▲ Dodge Challenger

##### COMPACT SUV

▲ Mitsubishi Outlander

#### MOST SATISFYING

##### COMPACT CAR

▲ Mazda3

##### MIDSIZE/LARGE CAR

▲ Subaru Legacy

##### COMPACT SUV

▲ Mitsubishi Outlander

##### MIDSIZE TWO-ROW SUV

▲ Nissan Murano

##### THREE-ROW SUV

▲ Kia Telluride

#### LEAST SATISFYING

##### COMPACT CAR

▼ Toyota C-HR

##### LUXURY COMPACT CAR

▼ BMW 3 Series

##### SPORTY CAR

▼ Porsche 718 Boxster/Cayman

##### COMPACT SUV

▼ Jeep Compass

#### LEAST SATISFYING

##### COMPACT HYBRID/ELECTRIC CAR

▼ Chevrolet Bolt

##### MIDSIZE/LARGE CAR

▼ Nissan Maxima

##### COMPACT SUV

▼ Jeep Compass

##### MIDSIZE TWO-ROW SUV

▼ Jeep Wrangler

##### THREE-ROW SUV

● Nissan Pathfinder

overall owner satisfaction among the 27 brands mentioned in survey responses.

Lincoln, Ram, and Chrysler rounded out the top four. These domestic names beat the likes of Porsche, Lexus, and other luxury brands when owners were asked whether they would buy their same vehicle again. But, like Tesla, they have tended to have reliability problems on newer models.

Keep in mind, however, that new-car satisfaction is based on the first three years of ownership, when the cars are still under warranty and often before more serious issues crop up.

**INFINITI** Though Infiniti is often considered an interloper in luxury groupings, it really laid an egg in this year's survey. It finished at or near the bottom across numerous factors, including Value

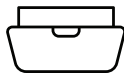
and when owners were asked whether they "would buy" their vehicle again.

**FORD ECOSPORT** This subcompact crossover SUV, with its distinctive tall stance, finished second-to-last when owners were asked whether they "would buy" their vehicle again, and it scored near the bottom among all new models in the specific categories of Comfort, Driving, and Styling.



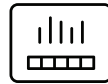
## DRIVING

Blazer owners noted the "overall driving experience and handling" and "when I need to accelerate rapidly ... [it] gets up and goes, without hesitation." One Wrangler owner said the vehicle "wanders on the (highway) to the degree that it is fatiguing and requires almost constant corrections."



## CABIN STORAGE

Model Y owners praised the storage. Conversely, a Q5 owner told us it "needs more storage space front and rear." Another respondent elaborated further, noting that they would like more "storage around driver's seat. More cup holders, storage compartments."



## IN-CAR ELECTRONICS

Multiple Palisade owners praised the "touch screen," with one saying that it's "easy to learn display features." QX50 owners lambasted the system, with one owner saying "the navigation system is so user UNFRIENDLY, I routinely navigate using Google Maps on my iPhone."



## STYLING

Many owners of the CX-5 and CX-30 listed "the styling" or "looks" as the first attribute they liked about their SUVs, as did owners of the Telluride. One Bolt owner asked for a "better, more stylish design," and another noted "it's cute but not very sexy."

### MOST SATISFYING

#### COMPACT CAR

👍 Mini Cooper/Clubman

#### MIDSIZE/LARGE CAR

👍 Chrysler 300

#### COMPACT SUV

👍 Mazda CX-5

#### MIDSIZE TWO-ROW SUV

👍 Chevrolet Blazer

#### THREE-ROW SUV

👍 Ford Expedition

### LEAST SATISFYING

#### COMPACT CAR

👎 Nissan Kicks

#### MIDSIZE/LARGE CAR

👎 Honda Clarity

#### COMPACT SUV

👎 Jeep Compass

#### MIDSIZE TWO-ROW SUV

👎 Jeep Wrangler

#### THREE-ROW SUV

👎 Volkswagen Atlas

### MOST SATISFYING

#### COMPACT SUV

👍 Volkswagen Tiguan

#### MIDSIZE/LARGE CAR

👍 Chrysler 300

#### THREE-ROW SUV

👍 Toyota Sequoia

#### LUXURY COMPACT SUV

👍 Tesla Model Y

#### LUXURY THREE-ROW SUV

👍 Lincoln Navigator

### LEAST SATISFYING

#### COMPACT SUV

👎 Jeep Compass

#### MIDSIZE/LARGE CAR

👎 Chevrolet Malibu

#### THREE-ROW SUV

👎 GMC Acadia

#### LUXURY COMPACT SUV

👎 Audi Q5

#### LUXURY THREE-ROW SUV

👎 Lexus GX

### MOST SATISFYING

#### MIDSIZE/LARGE CAR

👍 Dodge Charger

#### LUXURY MIDSIZE/LARGE CAR

👍 Tesla Model S

#### THREE-ROW SUV

👍 Hyundai Palisade

#### LUXURY COMPACT SUV

👍 Lincoln Corsair

#### COMPACT PICKUP

👍 Jeep Gladiator

### LEAST SATISFYING

#### MIDSIZE/LARGE CAR

👎 Honda Clarity

#### LUXURY MIDSIZE/LARGE CAR

👎 Lexus LS

#### THREE-ROW SUV

👎 Honda Pilot

#### LUXURY COMPACT SUV

👎 Infiniti QX50

#### COMPACT PICKUP

👎 Honda Ridgeline

### MOST SATISFYING

#### COMPACT HYBRID/ELECTRIC CAR

👍 Honda Insight

#### SUBCOMPACT SUV

👍 Mazda CX-30

#### COMPACT SUV

👍 Mazda CX-5

#### THREE-ROW SUV

👍 Kia Telluride

#### LUXURY THREE-ROW SUV

👍 Lincoln Navigator

### LEAST SATISFYING

#### COMPACT HYBRID/ELECTRIC CAR

👎 Chevrolet Bolt

#### SUBCOMPACT SUV

👎 Ford EcoSport

#### COMPACT SUV

👎 Mitsubishi Outlander

#### THREE-ROW SUV

👎 Nissan Pathfinder

#### LUXURY THREE-ROW SUV

👎 Infiniti QX60



## THE MOST AND LEAST LIKED BRANDS

**IT'S GREAT NEWS** for car shoppers when an individual model stands out for high owner satisfaction. It's even better when an automaker manages to carry that magic across an entire brand lineup.

We asked owners whether they'd buy their same car again if given the chance. Then we sorted those responses by vehicle brand, and we present them here by overall brand average. The results show which brands' models are most and least

satisfying to owners. Car shoppers can use this information to make more informed choices when deciding which 2021 models to consider. (Note that some brands, such as Toyota, offer many models, and others, such as Chrysler and Ram, have just a couple.)

Tesla once again tops the list, joined by Lincoln, truck-only brand Ram, Chrysler, and Subaru in the top five. Genesis, one of our top-rated brands last year, did not have enough models with sufficient sample size to be counted this time.

For all brands, most owners said they would buy their vehicle again. But owner satisfaction is just one factor that goes into Consumer Reports' Overall Score for each tested model we rate, along with safety, reliability, and road-test score.

Some of the brands that score high for owner satisfaction don't rate well on other measures. For example, Tesla and Lincoln are near the top for owner satisfaction but at the bottom of our reliability ratings. The reverse is true for brands such as Buick, which has models that are reliable but relatively unsatisfying to their owners. And a few brands—such as Cadillac and Mercedes-Benz—are toward the bottom for both.

Keep in mind that the least satisfying models or brands aren't necessarily the worst on the market. Rather, they didn't match the customers' expectations.

To the right is a chart of the brands offering vehicles that most satisfied owners, and a few that didn't get as much love.



Brand	Would Buy Again	Model Count	Owner Satisfaction Factors				
			Driving	Comfort	In-car electronics	Cabin storage	Value
Tesla	88	4	⬆️	⬆️	⬆️	⬇️	⬇️
Lincoln	79	4	⬆️	⬆️	⬇️	⬆️	⬇️
Ram	76	2	⬆️	⬆️	⬇️	⬆️	⬇️
Chrysler	76	2	⬆️	⬆️	⬇️	⬆️	⬇️
Subaru	75	6	⬆️	⬆️	⬇️	⬇️	⬇️
Hyundai	75	5	⬆️	⬇️	⬇️	⬇️	⬇️
Porsche	74	3	⬆️	⬆️	⬇️	⬇️	⬇️
Dodge	74	3	⬆️	⬆️	⬇️	⬆️	⬇️
Mazda	72	7	⬆️	⬇️	⬇️	⬇️	⬇️
Toyota	71	13	⬆️	⬇️	⬇️	⬇️	⬇️
Kia	71	8	⬆️	⬇️	⬇️	⬇️	⬇️
Mini	70	2	⬆️	⬇️	⬇️	⬇️	⬇️
BMW	70	6	⬆️	⬆️	⬇️	⬇️	⬇️
Ford	70	9	⬆️	⬇️	⬇️	⬇️	⬇️
Audi	70	7	⬆️	⬆️	⬇️	⬇️	⬇️
Honda	69	10	⬇️	⬇️	⬇️	⬇️	⬇️
Volvo	69	5	⬆️	⬆️	⬇️	⬇️	⬇️
Volkswagen	68	5	⬆️	⬆️	⬇️	⬇️	⬇️
Lexus	67	6	⬆️	⬆️	⬇️	⬇️	⬇️
Jeep	66	5	⬇️	⬇️	⬇️	⬇️	⬇️
GMC	65	5	⬆️	⬇️	⬇️	⬇️	⬇️
Chevrolet	65	9	⬆️	⬇️	⬇️	⬇️	⬇️
Mercedes-Benz	64	4	⬆️	⬆️	⬇️	⬇️	⬇️
Buick	61	2	⬇️	⬆️	⬇️	⬇️	⬇️
Cadillac	59	2	⬆️	⬆️	⬇️	⬇️	⬇️
Nissan	58	7	⬇️	⬇️	⬇️	⬇️	⬇️
Infiniti	48	3	⬇️	⬇️	⬇️	⬇️	⬇️

#### HOW WE RATE SATISFACTION

Results are from the 2020 Annual Auto Surveys on 369,000 vehicles. Data from the 2018-2020 model years (plus a few 2021 models) were used, provided a vehicle wasn't significantly changed over that time. Some ratings might be based on a single model

year. The **Would Buy Again** score is based on the percentage of owners who responded "definitely yes" to the question of whether they would buy the same vehicle if they had it to do all over again (considering price, performance, reliability, comfort, enjoyment, etc.). Factor ratings were determined based

on the percentage of owners who said they were "very satisfied." **Driving** reflects acceleration and handling; **Comfort** includes seats, noise, and ride; **Value** determines whether owners felt they got what they wanted relative to the purchase price; **In-car electronics** refers to the ease of using the

infotainment systems and Bluetooth; **Cabin storage** is storage spaces between seats, cup holders, dashboard, and other storage, not including trunk space. For more information, go to [CR.org/reliability](https://www.cars.com/reliability).



## ENJOY THE CAR BUT NOT THE INFOTAINMENT? WE CAN HELP.

“GET RID OF the #%\$! touchpad,” one Lexus owner told us when asked how she liked her car. Heated leather seats, supple suspension, silky smooth acceleration—none of it mattered, because the system she used every day to control audio,

navigation, and phone connectivity proved so frustrating to use.

Despite selling some vehicles with high ratings in other categories, Audi, Honda, Infiniti, Mazda, Mercedes-Benz, Mini, Subaru, and Toyota all joined Lexus at the bottom of our satisfaction ratings when it came to ease of use for in-car electronics.

So what’s an unhappy owner to do? **START BY ASKING FOR HELP.** Some dealerships have dedicated experts who can walk owners through their cars’ menus and screens. Many automakers and dealers put tutorial videos online that show tips and tricks for how to use a car’s controls. The owner’s manual

is a handy reference, too.

Kelly Funkhouser, program manager for vehicle interface testing at Consumer Reports, recommends practicing before heading out on the road. “With so many features buried in menus, it’s best to take some time while parked to find all of the settings,” she says.

**LET YOUR PHONE DO MOST OF THE WORK, IF YOU CAN.** Android Auto and Apple CarPlay put familiar audio, voice recognition, and navigation apps on your vehicle’s screen so that you can completely avoid clunky built-in setups if you want to.

**TRY BEFORE YOU BUY.** Spend time testing the infotainment system before committing. Many of the systems that scored poorly in our survey used laptoplike touchpads or rotary controllers, and our members preferred simpler systems with touch screens. And many luxury brands score poorly because of systems that are more complex than they need to be.

“Luxury and expense don’t equal easy to use,” Funkhouser says.

**LEARN THE SHORTCUTS.** Most infotainment systems have multiple ways to perform functions. Find the ones that work for you. It may be some combination of steering wheel controls, voice recognition, and physical buttons. You can often arrange the touch-screen display to show your favorite features. Many cars also allow you to use a radio channel preset button to program a custom shortcut. “Setting presets and favorites, even for your climate system, can save you time and headaches in the future,” Funkhouser says.



## OWNERS LOVE THESE CARS, DESPITE THE FLAWS

**OVER THE MANY YEARS** that CR has assessed cars and conducted surveys about them, we've observed some fairly clear patterns. For one, owners are almost always delighted with cars that make a distinct promise, such as stellar fuel economy, and then consistently deliver on it. (Toyota Prius is a good example.) Another is that owner satisfaction usually mirrors CR's own testing and our reliability survey results. People generally like cars that perform well, in other words, and don't like cars that come with headaches. Pretty intuitive stuff.

But a handful of models buck these trends and simply don't line up as you'd expect. We sometimes come across owners who say they're very satisfied with their vehicle even while telling us about

the significant reliability problems they've experienced. You might say some of these models have cultlike followings—owners who find some unique feature or quality compelling enough that they're willing to overlook the vehicle's subpar reliability or other concerns.

The Jeep Wrangler, for example, has below-average reliability in our most recent Annual Auto Surveys. In our tests, we've found that it has a stiff, uncomfortable ride and isn't very agile. Owners are equally dissatisfied with those qualities in other Jeep models. Yet they tell us time and again that they love the Jeep "experience" so much that they would buy the Wrangler (and some other Jeeps) again—even if they have to put up with the headaches and shortcomings.

The entire Tesla lineup falls firmly into this category. The Model S, Model Y, and Model X register among the highest owner satisfaction scores, despite being among the least-reliable models in our survey. Tesla owners point to the quick acceleration, nimble handling, and pure-electric drive to explain their passion and justify putting up with unreliable doors (Model X) and improperly applied paint (Model Y), among other

problems across the lineup.

Of course, we understand the impulse: Some of CR's own testers own unreliable vehicles because they feel passionate about their other qualities, such as acceleration or handling.

Still, based on our testing and reliability surveys, we advise shoppers to carefully consider whether they should purchase these vehicles, particularly if they are going to rely on them for primary transportation.

"While owners of these vehicles may be satisfied with their purchases, it doesn't always mean you will be happy with the car, too," says Jake Fisher, senior director of auto testing for Consumer Reports. "This is especially true if they bought it primarily for a specific quality or feature that might not be very important to you."

It's also important to keep in mind that the models that fall into this category are still under warranty when we ask owners each year about their satisfaction—so they're generally not paying out of pocket for repairs. Even so, we've found that this intense owner allegiance can extend to used-car versions, owners of which often continue to pay for maintenance and repairs long after the warranty has expired.



## ROAD TEST

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



LUXURY COMPACT CARS

### Acura TLX

Skippy on Luxury and Sportiness

56

OVERALL SCORE

ROAD-TEST SCORE 67

**HIGHS** Acceleration, transmission, front-seat comfort

**LOWS** Infotainment system, engine and road noise, access, rear seat

**POWERTRAIN** 272-hp, 2.0-liter 4-cylinder turbocharged engine; 10-speed automatic transmission; all-wheel drive

**FUEL** 23 mpg on premium fuel

**PRICE**  
\$37,500-\$48,300 base price range  
\$45,025 as tested

**THE REDESIGNED TLX** has a perky powertrain and a comfortable ride. But the loud cabin, confounding infotainment touchpad, and below-average fuel economy result in a road-test score that's lower than most of the luxury sports sedans we've tested.

The standard turbocharged four-cylinder engine feels energetic, delivering quick acceleration on our test track and in regular driving. But the all-wheel-drive model we tested registered a disappointing 23 mpg overall in our assessment, several mpg below the most efficient cars in the class.

Our drivers appreciated the TLX's mostly supple, well-controlled ride. But despite its new, more advanced front suspension setup, we were unimpressed by the car's handling. The steering is quick but feels overly light and lacks the precise, direct feedback that makes a car

fun to drive on a twisty road.

The cabin isn't as quiet as competing models, either, with too much road noise and a tinny-sounding engine.

The front seats are comfortable and supportive, and the driver benefits from well-placed armrests and a center console cutout for the right knee. Although the TLX is longer and wider than most rivals, its rear seat is tight on knee room and foot space underneath the front seats.

The ultimate deal-breaker, however, is Acura's touchpad-based infotainment system. Drivers must press the pad in a specific place that corresponds with the dashboard screen. It's tricky to hit the right spot on the first try, requiring drivers to look away from the road.

All TLXs come with FCW, AEB with pedestrian detection, LDW, and LKA.



FIRST DRIVE

COMPACT CARS

### Hyundai Elantra

A More Mature, High-Tech Sedan

IN TEST

**WE LIKE** Controls, transmission, handling

**WE DON'T LIKE** Access, noisy engine when pushed, low dashboard vents

**POWERTRAIN** 147-hp, 2.0-liter 4-cylinder engine; continuously variable transmission; front-wheel drive

**FUEL** 35 mpg on regular fuel (EPA)

**PRICE**  
\$19,650-\$28,100 base price range  
\$23,000 purchase price

**BEFORE WE PUT** any vehicle we buy through the 50-plus tests at our Auto Test Center, we drive it for more than 2,000 "break-in" miles. This allows us to produce a First Drive, which Digital or All Access members can see in full at [CR.org/cars](https://www.consumerreports.org/cars). Because of the coronavirus pandemic, some new models have been delayed, causing speed bumps in our testing schedule. Here we offer some of our First Drive impressions of the Hyundai Elantra SEL.

The Elantra has grown slightly larger and more high-tech for 2021, notably getting a more sophisticated infotainment system. Overall, it has gained refinement through the redesign. The 147-hp, four-cylinder engine, though noisy when pushed, gets off the line smoothly and delivers sufficient power. We're particularly impressed by the continuously variable

transmission, which nearly mimics the shifts and operation of a traditional automatic.

Handling is nimble thanks to responsive steering and a taut suspension. The ride is reasonably comfortable for a compact sedan, though it doesn't absorb bumps as well as the Subaru Impreza or Toyota Corolla.

The driver has decent room, but we found that the seat loses support on longer trips. Buyers can add an optional Convenience package, which includes heated front seats, a digital instrument panel display, and adaptive cruise control—desirable features that bring the price to \$23,000. All trims come standard with FCW, AEB with pedestrian detection, BSW, RCTW, LDW, and LKA.

Check with us online and in a later issue of Consumer Reports to see the full results from our road test.

PHOTOS: JOHN POWERS/CONSUMER REPORTS



**Ratings** ➤ **Sleek Sedans** The Acura TLX trails its competitors, but the Hyundai Elantra looks promising in our "First Drive" evaluation. We also provide ratings for their peers.

Make + Model	Overall Score	Survey Results	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 0-60 mph, sec.	Dry braking 60-0 mph, ft.	Suitcases + duffels	FCW	AEB, city	AEB, pedestrian	AEB, highway	BSW

SEDANS \$35,000–\$55,000

✓ Audi A4 2.0T	87	⬆	⬆	88	27	⬆ / ⬆	⬆	⬆	⬆	⬆	⬆	53.5	6.3	135	2+2	S	S	S	0	0
✓ Infiniti Q50 3.0T	85	⬆	⬇	85	22	⬆ / ⬆	⬆	⬆	⬆	⬆	⬆	56.0	5.7	126	2+1	S	S	–	S	0
✓ BMW 330i 2.0T	83	⬆	⬆	86	29	⬆ / ⬆	⬆	⬆	⬆	⬆	⬆	54.0	6.4	129	2+2	S	S	S	0	0
✓ Mercedes-Benz C300 2.0T	83	⬆	⬆	85	26	⬆ / ⬆	⬇	⬆	⬆	⬆	⬆	55.5	6.8	136	2+1	S	S	S	S	S
✓ Volkswagen Arteon 2.0T	81	⬆	⬆	91	24	⬆ / ⬆	⬆	⬆	⬆	⬆	⬆	53.5	7.9	125	4+1	S	S	S	S	S
✓ Tesla Model 3 E	78	⬆	⬆	82	130 mi	⬆ / ⬇	⬇	⬆	⬇	⬆	⬆	55.0	5.3	133	2+2	S	S	S	S	–
✓ Volvo S60 2.0T	75	⬆	⬆	71	26	⬆ / ⬆	⬇	⬆	⬆	⬆	⬆	53.5	7.3	125	2+1	S	S	S	S	S
✓ BMW 228i Gran Coupe 2.0T	72	⬆	⬆	75	27	⬆ / ⬇	⬆	⬆	⬆	⬆	⬆	51.0	7.2	132	2+2	S	S	S	0	S
✓ Kia Stinger 2.0T	68	⬆	⬆	75	23	⬆ / ⬆	⬆	⬆	⬆	⬆	⬆	53.5	7.5	132	3+0	0	0	0	0	S
Cadillac CT4 2.0T	65	⬇	⬆	78	25	⬆ / ⬇	⬆	⬆	⬆	⬆	⬆	55.0	7.4	129	2+1	S	S	S	0	0
Cadillac CT5 2.0T	65	⬇	⬆	78	24	⬆ / ⬆	⬆	⬆	⬆	⬆	⬆	54.0	7.7	127	2+1	S	S	S	0	0
Genesis G70 2.0T	64	⬇	⬆	74	23	⬆ / ⬇	⬆	⬆	⬆	⬆	⬆	56.5	7.8	137	2+0	S	S	S	S	S
Acura TLX 2.0T	56	⬇	⬆	67	23	⬆ / ⬆	⬇	⬆	⬆	⬆	⬆	54.0	6.5	136	2+2	S	S	S	S	0
Alfa Romeo Giulia 2.0T	43	⬇	⬆	70	27	⬆ / ⬆	⬇	⬆	⬆	⬆	⬆	53.0	6.7	136	1+2	S	S	S	S	0

SEDANS UNDER \$25,000

✓ Honda Insight 1.5H	79	⬆	⬆	73	54	⬆ / ⬆	⬆	⬆	⬆	⬆	⬆	54.0	8.7	136	3+1	S	S	S	S	0
✓ Nissan Sentra 2.0L	77	⬆	⬆	81	32	⬆ / ⬆	⬆	⬆	⬆	⬆	⬆	55.5	8.5	129	3+2	S	S	S	S	S
✓ Toyota Corolla 1.8L	77	⬆	⬆	68	33	⬆ / ⬆	⬆	⬆	⬆	⬆	⬆	53.0	10.4	134	3+1	S	S	S	S	0
✓ Subaru Impreza 2.0L	75	⬆	⬆	85	30	⬆ / ⬆	⬆	⬆	⬆	⬆	⬆	56.0	9.5	124	2+2	0	0	0	0	0
✓ Mazda3 2.5L	75	⬆	⬆	75	30	⬆ / ⬆	⬆	⬆	⬆	⬆	⬆	54.0	7.7	125	3+1	S	S	S	S	0
✓ Honda Civic 1.5T	74	⬆	⬆	75	31	⬆ / ⬆	⬆	⬆	⬆	⬆	⬆	54.5	7.1	129	3+1	S	S	S	S	–
Volkswagen Jetta 1.4T	50	⬇	⬆	78	34	⬆ / ⬆	⬆	⬆	⬆	⬆	⬆	52.0	9.0	135	3+2	0	0	–	0	0
Kia Forte 2.0L	43	⬇	⬆	67	34	⬆ / ⬆	⬆	⬇	⬇	⬆	⬆	53.0	8.3	131	3+1	S	S	0	S	0

➤ Digital and All Access members can find the latest, complete ratings at [CR.org/cars](https://www.cars.com). 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 crash-test results and the availability of crash-prevention features, such as forward collision warning, automatic emergency braking, pedestrian detection, and blind spot warning. – means no such safety system is offered; 0 means that it's available but not as standard equipment; S means that the feature is standard on all trims. We deduct points if a model's gear selector lacks fail-safes to prevent the vehicle from rolling away.

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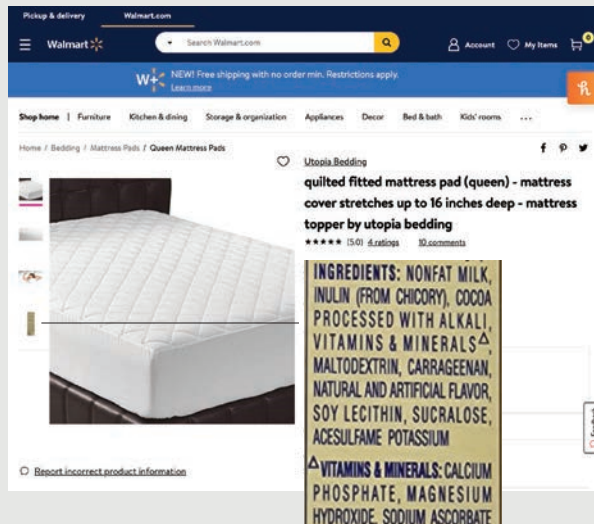
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# Don't Lose Sleep on These Deals

They're definitely not the stuff dreams are made of

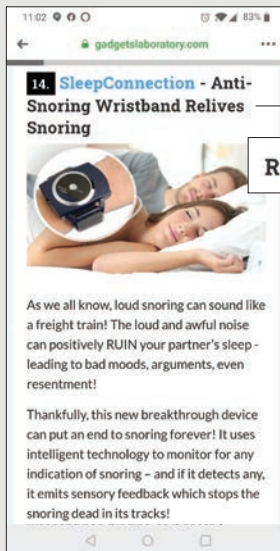
## Milk in Your Mattress?

This mattress pad seems to be made of quilted material combined with nonfat milk. Submitted by Ellen Williams, Greenville, SC



## Attention, Sleepwalkers!

Here's the perfect thing to wear on your nightly excursions. Submitted by Tom Cooney, Brookville, IN



Relives Snoring

## Once Is Enough

Listening to a snoring partner is bad enough the first time around. Submitted by Curt Freeman, via email

## Eyes Wide Open

This mattress pad promises to keep you tossing and turning. Submitted by Laurie Coles, via email



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