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SUPPLEMENTS

A COMPLETE GUIDE TO SAFETY

- 15 dangerous ingredients to avoid
- The truth about health claims
- Superfoods to eat instead



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A COMPLETE GUIDE TO SAFETY

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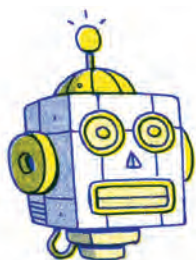


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What's in Your Supplement?

THE VITAMIN that boosts your energy. The herbal supplement that wards off a cold. The pill that helps you to lose weight, or sharpen your memory, or gain important nutrients ... chances are, you've tried one or more of those without a second thought. If you're one of the 68 percent of Americans who regularly take at least one supplement, you may be surprised to learn just how unreliable the products can be when it comes to health, effectiveness, and truth in advertising. A 2014 Gallup Poll shows that 94 percent of 200 surveyed physicians recommend supplements to their patients—an understandable figure, given that vitamins and minerals are widely regarded as more “natural” than prescription drugs. This month, Consumer Reports is challenging that assumption to reveal what's really going on in the marketplace.

While prescription medications available in the U.S. are regulated by the Food and Drug Administration before they reach the consumer marketplace, dietary supplements land on your drug-store shelf without the benefit of that regulation. The companies that produce and aggressively market these products as ways to improve your health are not required to prove that their contents match what's on the label—to say nothing of being asked to transparently demonstrate their



Marta L. Tellado,
President and CEO
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effectiveness or safety. Basic but essential information, including whether a supplement might react negatively when used alongside prescription drugs, is not widely disclosed to consumers, who in turn will often presume that a product is safe absent warnings to the contrary. Without baseline rules of safety, some of the same supplements you might see in your local pharmacy or hospital have been found to contain contaminants and illegal substances. As this troubled market continues to grow, Consumer Reports will be working to inject it with transparency and commonsense safety standards. Until then, you can count on the information in this month's issue to learn about specific ingredients to avoid at all costs, discover superfoods that can sub in for supplements, and get guidance on what the promises on supplements' labels really mean.

JOIN THE CONSUMER REPORTS BOARD Consumer Reports is seeking dynamic, dedicated candidates with a desire to advance our mission and improve the lives of consumers by serving on our Board of Directors. Ideal candidates will bring creativity, diversity of background and thought, experience in leadership, and a passion for empowering consumers and working to create a fairer, safer, healthier marketplace. Applications should be submitted online at ConsumerReports.org/boardapplication by Sept. 15, 2016. A committee of the Board will review applications, conduct interviews, and recommend a slate to stand for election to a three-year term of board service beginning in October 2017. Board members are required to attend three meetings per year and participate in Board business by phone and email on an ongoing basis. No compensation is provided, but travel expenses are covered.

YOUR FEEDBACK

READERS' COMMENTS ABOUT OUR CONTENT, IN EMAIL AND SOCIAL MEDIA



A Truly Healthy Future

In the July 2016 issue, we continued our series of essays by thought leaders with the second installment, “A New Vision of True Health” by Leana S. Wen, M.D., commissioner of health in Baltimore. The points she made generated passionate reader response. Go to ConsumerReports.org/health/new-vision-of-true-health/ to see more comments and to add your own.

KUDOS TO Dr. Wen for her vision of a better tomorrow and for her courage to speak out! Our current ‘healthcare’ system is an illness industry that focuses on neither health nor caring. As the daughter of a rural primary care physician, I know how this system fails both the patients and the physicians across most of this country. As a professor at a major medical school, every year I watch 160 of our brightest and most compassionate young people enter a system that strips away their ideals, enslaves them with mountains of debt, and judges their worth by how many expensive procedures they can perform in a day. My father often said that most of his job was listening to his patients, questioning them so that they could discover for themselves what was going on with their health. There is no billing code for that in our system today. But that is where health and healing begin.

—Joan Hooper, Denver, via ConsumerReports.org

ABSOLUTELY FANTASTIC ARTICLE. Consumer Reports is ahead of our time, laying out a visionary road map. We will reach this point someday as we grow, develop, and improve our ways and systems.

—David Ferreira, via ConsumerReports.org

I THOUGHT this was an excellent article that connects the dots to so many things that currently are viewed separately and distinctly. A truly holistic approach to overall healthfulness is a goal worth striving toward.

—Stefanie Mendell, via ConsumerReports.org

THE VISION OF some Central Authority creating this cheerful, obedient, responsive, and efficient system free to all is fantasy. The advances in medicine since 1966 have been, almost exclusively, the result of market forces, with caring but competent medical professionals acting in their own best interest.

—Scott Cannon, via ConsumerReports.org

A FANTASTIC ARTICLE by Dr. Wen. I truly hope that some of what she advocates can be realized in the future. It truly presents a very positive future. I say, GO FOR IT!

—Maureen Foley, Albany College of Pharmacy and Health Sciences, via ConsumerReports.org

THE ARTICLE HAD much good information on current trends in healthcare and much of value to impart to your community of readers.

However, what is arguably the fastest-moving aspect of healthcare received barely a mention, namely, the influence of nursing in theory and practice. The laudable shift, seen in the article, from talking about “medicine” to talking about health and wholeness is a direct result of the fact that nursing has insisted for decades on the broader scope of wholeness in dealing with human suffering. The same goes, for instance, for the promotion of community perspectives on health and education. As for specialists visiting the homes of sufferers, they are far more likely to be nurse practitioners than doctors.

—David A. Dorman, Ph.D., School of Nursing, Azusa Pacific University, Glendora, CA

Should We Vote Online?

Many of you wrote in with strong opinions about “Democracy in the Digital Age” (July 2016).

VOTING IS A privilege and a right for all citizens, and we have a responsibility to do our civic duty. If it takes a little extra effort to show up at a polling place and physically cast a ballot, so be it! This is the very least we, as citizens, can do for our country. If we want to get more people to vote, we should have voting take place on a weekend in November for two days, from 9 a.m. to 9 p.m. each day. We the people must be serious about voting and civic-minded in our duty if we the people care about our government.

—Edward Handley, Louisville, KY

SINCE WHEN HAS a citizen’s most important responsibility—VOTING—supposed to be easy? Should voting for representatives, from the president on down to a school-board member, become comparable with casting a vote for your favorite couple on “Dancing With the Stars”? I, for one, pray that it never does.

—Robert Richardson, Las Vegas

THE IMPORTANT THING for elections is accuracy, not speed. There is no overriding need to know who won minutes after the polls close. Common-sense changes that could make voting easier would be to move it to Saturday and Sunday, and allow more absentee voting.

—Art Layton, via ConsumerReports.org

AS A PERSON who works at a polling site, I feel those two folks in your story (the person walking with a cane and the one in a wheelchair going to several voting places in Arizona for the primary) didn’t use any common sense. All states have provisions for accommodations like curbside voting for the handicapped, including

ANNUAL MEETING AND BALLOT FOR BOARD OF DIRECTORS ELECTION The Board is elected at the annual meeting, which will be held on Oct. 13, 2016 at 5 p.m. in New York City. Please go to ConsumerReports.org/annualmeeting for details. And watch your email for this year’s ballot. If you haven’t provided your email address, you can do so before Aug. 18 by calling us at 800-666-5261 or by going to ConsumerReports.org/myaccount. For a paper ballot, call the above number or send a written request to Consumer Reports, Attn: Ballot Requests, 101 Truman Avenue, Yonkers, NY 10703 so that we receive it by Aug. 18.

Arizona. In places with curbside voting, persons requiring assistance need only inform polling place personnel and they will bring a ballot to them in the car. Also, Arizona, like most states, affords early voting to prevent issues like this.

—Fred Shane, Spotsylvania, VA

And the Band Played On

Our article “Breaking Up the Band” (July 2016) discussed the flaws we found with fitness-tracker straps. When we posted the article online, many of you were quick to share your own stories about shoddy products.

GOT MY FIRST Jawbone UP24 in May 2014. I’m on my sixth replacement, now using the UP2 thin strap, which was a warranty replacement for the first UP2. The software is amazing but the hardware is crap.

—Jody Watts, via ConsumerReports.org

I WORE A Fitbit Flex for two years and had trouble with the band wearing out after the first four months. Fitbit replaced my band and reminded me of the suggestions for washing and drying it. I found a great selection of good-quality replacement bands on Amazon at low prices. I swapped the band out once or twice a week and washed and dried each one. This solved all of my problems with wear and irritation. I just upgraded to an Alta and intend to do the same thing.

—Betty Hunnicutt, via ConsumerReports.org



Great Moments in Grilling

Senior home editor Dan DiClerico’s video “All Things Grill” really heated up our Facebook page on June 16. (Check it out at bit.ly/AllThingsGrill.) He shared expert insights on many things viewers wanted to know, including grill selection, care and cleaning, and exciting new features. (Our social-media team is still answering questions as they’re posted.) At press time, the video had drawn 322 comments and questions, and 635 “likes.” Here’s what some consumers had to say:

f Gas grills are no different from cooking in a kitchen on a stove. If you want real grilled food, get a wood grill and good wood to cook with.

—Gordon Gaines, via Facebook

f Thank you, Consumer Reports! Enjoyed your FB video on barbecue grills. Very informative. My Thermos grill is 10 years old. Maintenance and cleaning after cooking are the key, especially after using acidic marinades.

—Julie Tourangeau, via Facebook

f There is no better sound than a steak hitting a hot grill. It’s awesome.

—Lee Temple Sr., via Facebook

Too Close for Comfort?

AT THE BEGINNING of your article on outdoor grills, “Put Some Sizzle in Your Summer” (July 2016), there is a very large photo of a grill with hot dogs cooking that is sitting on a wooden deck. In every jurisdiction with which I am familiar, it is illegal to use a grill on your deck, balcony, or patio if you live in a multifamily dwelling because it’s a serious fire hazard that not only endangers your own home but those of innocent others. In most jurisdictions, if you live in a single-family house, they often allow you to be foolish and put your own house and your own family at risk of fire and death but recommend that you keep the grill at least 30 feet away from your house and any flammable materials such as the wood in the deck shown. I would have thought that Consumer Reports would have shown a correctly and safely situated grill and included at least a paragraph on fire and personal safety using any grill.

—James Hester, LAUREL, MD

EDITOR’S NOTE: You make some great points about grill safety. Except where prohibited by building and fire codes or association rules (such as those for townhouses and condos), grills can be used on decks and patios. However, the grill should be placed away from your house, deck railings, eaves, awnings, and overhanging branches. Consult the user’s guide that came with the grill for the minimum clearance required for combustible materials. (It’s usually on the order of a few feet.) Consumer Reports also advises establishing a safety perimeter to keep kids well away, because grill exteriors are very hot.

CLARIFICATION In the article “Add Some Thrills to Your Grill” (July 2016), we wrote that the temperature of an Oregon Scientific Wireless BBQ/Oven AW131 digital meat thermometer could be read on a smartphone from more than 100 feet away. In fact, the temperature can be read only on the wireless unit that comes with the thermometer, not on a smartphone.

CORRECTION In “The Coolest Refrigerators” (August 2016), the numbers in the columns for total usable capacity and energy cost per year were reversed for top-freezers in the Ratings.

WATCH OUR STORIES LEAP OFF THE PAGE

In this issue, you’ll have the chance to see some of our articles in another dimension with the Blippar app. Blippar brings bonus Consumer Reports features to your smartphone or tablet, allowing you to shop for the products we recommend and view videos and other highlights that will enhance your experience with the magazine.

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WHERE TO “BLIPP”

SOME OF THE PAGES ...

- page 16** for our guide to buying flooring.
- page 20** to receive our free Health Alert email newsletter.
- page 34** to shop for featured TVs.
- page 52** for our guide to choosing the refrigerator that’s right for you.
- page 66** to watch videos of this month’s cars on our test track.



WRITE

Go to ConsumerReports.org/lettertoeditor to share your comments for publication.

BUILDING A BETTER WORLD, TOGETHER

JOIN WITH US TO MAKE A SAFER, HEALTHIER MARKETPLACE



THE FIGHT FOR FUEL ECONOMY

NEW CARS AND TRUCKS continue to notch up better gas mileage than their predecessors, but that progress hasn't stopped the car industry from trying to weaken forthcoming government fuel-efficiency rules.

Enacted by Congress, the Corporate Average Fuel Economy (CAFE) standards are meant to keep energy consumption in check. And according to a new report published by Consumers Union, the policy and advocacy arm of Consumer Reports, an added benefit is significant savings for buyers of new vehicles that meet the forthcoming 2025 standard. It raises the average automotive fuel economy to 40 mpg (from the current 25.5 mpg) and will begin to be phased in starting with the 2017 model year.

Factoring in the costs of the technology required to

enhance a vehicle's fuel efficiency, drivers will probably save at least \$3,000 per car and \$4,200 per truck over the life of the automobile. Should prices at the pumps rise to around \$4.50 per gallon, the savings would climb to \$5,600 per car and \$7,300 per truck.

"We're already seeing automakers beating today's standards," said Shannon Baker-Branstetter, energy policy counsel for Consumers Union. "With existing and emerging technologies in this field, we believe there is great potential for even more progress in this space, even if gas prices remain low."

Our report comes at a critical time when federal regulators review whether to maintain the 2025 goal.

We've long supported increased fuel economy standards, filing comments and testifying in favor of the upcoming standards at public hearings. We'll continue to push back against industry pressure to weaken the rules. Go to ConsumersUnion.org/topic/energy to read our full report.

REMOVING DANGEROUS FURNITURE

AFTER THREE separate fatalities within two years caused by Ikea dressers tipping over onto toddlers in their homes, the Consumer Product Safety Commission and the retailer announced the jointly agreed-upon recall of 29 million chests and dressers. Ikea also pledged to sell only furniture that meets the most up-to-date industry safety standards.

Since the first incident, in 2014, Consumer Reports and other safety groups have called on the CPSC and Ikea to take strong action to protect children from those tip-over hazards.

The deaths linked to the recall are tragic reminders of how urgent it is for consumers with those products to immediately return them to the store or ask Ikea to repair them. For more information, go to cpsc.gov.

A VICTORY FOR NET NEUTRALITY

CONSUMER REPORTS believes in Net neutrality—the idea that internet providers shouldn't be able to play favorites with websites, apps, and streaming video services, allowing some faster internet speeds for a price while blocking or slowing down others.

That's also the Federal Communications Commission's position, and in 2015 it approved rules to ensure that providers treat all legal online content equally. During the rule-making process we met with the FCC to voice our support (as did other advocacy organizations), and millions of people wrote to the agency in favor of the final rules.

However, no good rule goes unchallenged. Communications companies—including AT&T—and several major trade-industry groups filed lawsuits against the FCC, arguing that it lacked the authority to implement those measures. When a federal court took up the case, Consumer Reports was one of many groups that filed legal briefs supporting Net neutrality and the FCC's jurisdiction.

In June, after months of consideration, the court ruled in favor of the FCC, allowing the rules to remain in effect. FCC Chairman Tom Wheeler called the decision "a victory for consumers and innovators who deserve unfettered access to the entire web, and it ensures that the internet remains a platform for unparalleled innovation, free expression, and economic growth."

We agree. And though we know that some companies will keep fighting to overturn Net neutrality, Consumer Reports will continue working to help make sure that the internet remains fair for everyone.

INSIGHTS

NOTABLE NEWS & SMART SOLUTIONS

BUBBLE VISION

Waiting for water to boil doesn't have to be tea-dious with the dazzling yet practical Capresso H2O Plus.

Some Like It Hot

More Americans are taking their tea steaming. We test electric kettles to see whether they're a better way to boil.

by *Kimberly Janeway*

THE BRITS KNOW a thing or two about tea. And they have been gaga for electric kettles for decades. The kettles are a British staple, outselling all other small kitchen appliances, according to Mintel, a market research firm. Some are said to heat water faster than the staid stovetop models or microwaves we Yanks tend to use. Plus they're said to be safer than kettles you heat on a burner because they're supposed to shut off when the water comes to a boil. And you can use them anywhere there's an outlet—no kitchen required. In fact, the bottom of an electric kettle's carafe stays cool, so you can even place it directly on your desk, countertop, or table.

Now these hot-water heaters are finally making

headway on our side of the pond, with sales outpacing those of regular kettles, according to The NPD Group, which also tracks markets. To find out whether the American versions might be your cup of tea, we tested six popular models costing \$20 to \$180.

All six brought a liter of water to a rolling boil faster than a microwave, the speediest saving just over 2 minutes. But most took around 4½ minutes, about the same as an electric coil-top range and only slightly faster than a gas range (a little more than 5 minutes).

As for the safety claims, all of our kettles did shut off when the water reached a boil. And three even had multiple temperature settings below boiling for more delicate types of tea.

The \$70 Capresso H2O Plus and the \$20 Hamilton Beach 40998 were the fastest, scoring Very Good overall. The Capresso holds 6 cups of water; the Hamilton Beach, 4. The \$180 KitchenAid KEK1522 took the longest, needing more than 5 minutes to reach a full boil. It holds 6 cups and has a sliding temperature control in Celsius. (The external thermometer shows Fahrenheit, too.) Overall, it scored Good.

Will an electric kettle transform your tea-party timing? Not by more than a minute or 2 per liter. But it will let you take tea almost anywhere you like—and look terrific on your table.

For more on tea kettles, go to [ConsumerReports.org/appliances/best-electric-tea-kettles](https://www.consumerreports.org/appliances/best-electric-tea-kettles).

Speakers of the House

Amazon's Echo speaker and its virtual assistant, Alexa, won't do the laundry. But they will play music, shop, and even dim the lights on command. Discover what a voice-activated assistant could do for you in your home.

by **Mike Gikas**

YOU'RE ALONE in the kitchen, preparing chicken Kiev, hands slathered to the wrist in eggs and butter, when you mutter to yourself, "What's the next step?" Then, a soft, reassuring voice coming from somewhere in the direction of your toaster tells you: "Dip each chicken piece in the beaten egg; roll in breadcrumbs, coating evenly...."

No, this isn't a spectral visit from Julia Child. It's Alexa, the virtual assistant that, like a genie in a bottle, inhabits the Amazon Echo speaker, a 9.25-inch-tall, internet-connected black cylinder sitting on the counter nearby.

The Echo is the ears and mouth of Amazon's virtual assistant, who "wakes" to take commands whenever you speak her name. Alexa can respond to questions and requests as varied as "Alexa, what's the weekend forecast?" "Alexa, how did the New York Mets do last night?" "Alexa, shuffle Chill Music playlist." "Alexa, order 'Silver Linings Playbook' on Blu-ray." Even, "Alexa, dim the lights 30 percent and lower the thermostat to 68 degrees."

Alexa responds to questions almost as quickly as a human would and seems better than other virtual assistants at responding to imprecise language. "What's going on?" will elicit a personalized update on your calendar and on the

news and weather. "Shut up" is another command she follows (without taking any noticeable offense). She can even answer from across a moderately noisy room. When stumped, Alexa politely asks you to repeat your question or admits that she doesn't know how to respond.

Virtual digital assistants aren't new, of course: iPhone's Siri and the nameless assistant in Android phones have been placing our telephone calls,

1,400

The number of skills Alexa can perform at last count, from giving weather forecasts to telling jokes to leading you through a workout.

finding us directions, and responding to other spoken commands for years.

Amazon's first virtual assistant appeared in 2014 as a feature of its short-lived Fire phone. The more capable Alexa made her debut later that same year, when Amazon launched the Echo speaker. She quickly caught on as an unflappable domestic aide—able to control lights, play music, and order a pizza or paper towels. Her

popularity has helped Amazon sell about 3 million Alexa-controlled speakers, which include the Echo; a portable, battery-powered version called the Tap; and a hockey puck-sized disc called the Echo Dot that will bring Alexa's interactive magic to most any speaker.

Alexa has given Amazon a long head start in the race to bring personal assistants into the home, but competition is coming soon from Google (and very likely from Apple) that could leave Alexa struggling to keep up.

Google, for instance, could leverage the information it gleans from users' Android smartphones, Google calendars, contact lists, and Gmail accounts to make its Google Home speaker an omniscient personal assistant easily capable of tasks currently beyond Alexa. Executed well, a Google home assistant could help you make a dinner reservation, send a calendar invitation to your guests, and prompt you to leave early for the restaurant if there's traffic along the route from your home.

Just like the best human assistants, Alexa and her ilk can learn new skills quickly. In fact, at last count she had more than 1,400 skills and counting—up from a little more than the 100 she could do early on. All it takes is a software update beamed across the internet.





ECHO SYSTEM

Amazon's three Alexa-driven speakers differ in portability and how they connect to other devices. But the voice-activation capability performs the same in each, fetching information from the internet, ordering a pizza, or finding your favorite tunes. Here's a rundown on how they work:

ECHO

PRICE \$180

WHAT IT IS The original—and best-sounding—speaker in Amazon's Echo family: It earned a Good score in our tests for its sound quality. Interaction with Alexa is conveniently hands-free.

WHO IT'S FOR Most Alexa users. Once you set this speaker up, you'll never have to touch it again. In addition to providing Alexa's assistance, the Echo is a decent speaker for enjoying music from Amazon, Spotify, and other streaming services.

TAP

PRICE \$130

WHAT IT IS The most mobile Echo speaker, thanks to a built-in rechargeable battery that Amazon says provides up to 9 hours of service. The Tap lets you switch from WiFi to Bluetooth and use your smartphone's data connection to reach Alexa if you're spending the day at the beach. But sound quality is only Fair in CR's tests, and you have to press a button to engage with Alexa.

WHO IT'S FOR Outdoor types who want a portable Bluetooth speaker.

ECHO DOT

PRICE \$90

WHAT IT IS A puck-sized device that can be paired with any speaker or audio system via Bluetooth or a stereo jack. The Echo Dot is also a speaker, but it sounds tinny and is meant for providing verbal responses to your questions, not for playing music.

WHO IT'S FOR Alexa fans who'd rather hear music through their own audio gear rather than through the Echo. Because of its tiny size, the Dot could also be used in a space unable to accommodate its taller siblings.



ALEXA IN ACTION

The Alexa virtual assistant is already handy to have around the house, and new 'skills' are added to her repertoire almost every day. Here's just a sampling of some of the many things she can do.



ORGANIZATION

THE GOOD You can use Alexa to set timers and provide verbal calendar reminders for events such as birthdays and dental appointments. You can also dictate lists and later review them on the Alexa app on your smartphone. Alexa links to products such as a Fitbit, so she can tell you how many steps you've walked before you decide on dessert.

THE BAD Alexa does not have access to your phone's contacts, and you can't use her to make a speaker phone call. Texting with Alexa is too cumbersome to be practical.

NEWS

THE GOOD It's easy to set up your daily news briefings from sources including the BBC, NPR, the Washington Post, and more. Alexa will even recite your local weather forecast.

THE BAD Because she's basically playing a string of podcasts from various news organizations, the briefings really aren't all that brief.

RECIPES

THE GOOD Alexa can recite step-by-step recipe instructions from apps such as Recipe Buddy and can walk you through how to make any of 12,000 cocktails with an app called The Bartender. You can get her to pause and to repeat each step, and she'll send a copy of the recipe to your phone.

THE BAD You can have Alexa repeat steps ad nauseam, but some cooks might find it challenging to perform complex steps without consulting written instructions and illustrations.

MORE HIGH-TECH HELPERS

Alexa accomplishes plenty around the house, but products from Google and Apple might do even more—because they know so much about us

AMAZON'S ECHO TRIPLETS (see the facing page) may be the first speaker-based virtual assistants, but they certainly won't be the last. Google has already begun promoting its talking speaker, called Google Home, which is due to arrive by the end of this year. Google says it will feature Google Assistant, a smarter, more conversational version of the one already available to Android smartphone users.

Talk to the Home speaker, which vaguely resembles a giant air freshener, and Google Assistant will deliver weather reports, stock quotes, and other info gleaned from Web searches and apps linked to your Google account (such as the places you've visited using Google Maps). Like Alexa, Google Assistant will be able to control automated lights, thermostats, and more.

But Google's speaker promises one critical advantage over Amazon's Echo: It will work in conjunction with your Android smartphone. According to Google, if you ask the speaker to tell you about traffic on the way to the airport, it will not only answer you verbally but also queue the directions up in the Google Maps app on your phone.

Google says its Home speaker will be

able to communicate with a Chromecast streaming media device plugged into a TV—essentially giving you voice control for playing movies, YouTube videos, and other content. It will also work with Google Play Music and other music streaming services.

Apple hasn't yet announced a talking speaker, but the operating-system updates it is planning for iOS 10, due this fall, include a smarter, more conversational Siri.



That assistant will be liberated from the iPhone to work on Apple devices such as Apple TV and laptops. Siri could become more like Alexa or Google Assistant, with more control over third-party apps for everything from giving directions to making shopping lists.

What's more, you'll be able to use Siri to turn on and adjust lights and appliances through a new mobile app called Home. A number of companies already sell products that will work with Home; right now they are controlled through separate apps on the iPhone, Apple Watch, and other Apple devices. You can set things up so that if someone rings your doorbell, a door camera sends his or her image to your iPhone or Apple TV. You can also have the system turn on the living room lights and adjust the thermostat by the time your car pulls into the driveway. Once iOS 10 is here, you'll be able to control those functions with voice commands.

Those tricks may be easy for Google or Apple, but some of them would be tough for Amazon, which has no significant presence on people's phones. By this time next year, Alexa could be busy playing catch-up to some fierce, futuristic competition.

SHOPPING

THE GOOD Alexa is tied to your Amazon account and can capably reorder certain things you've purchased in the past. Just say, "Alexa, reorder paper towels" and she'll fetch another package of Bounty just like the one in your order history.

THE BAD She can order only Prime-eligible items, and they can't be apparel, shoes, jewelry, or watches. Also out are items from Amazon Fresh, Prime Pantry, and Prime Now. If you're not reordering an item, you're better off just using your smartphone, tablet, or laptop.

ENTERTAINMENT

THE GOOD You can ask Alexa to play a wide selection of music, much of it free, from Amazon's Prime music library and from partners such as Pandora and Spotify. You can play your own music if you've uploaded it to Amazon's cloud storage. Alexa plays recorded books from the \$15-per-month Audible service; she can also read Kindle e-books in her own voice.

THE BAD Alexa's Kindle-book orations sound like a robot reading a random string of words. Stick to the Audible books, which have professional narrators.

JOKES

THE GOOD When you're bored, Alexa can come up with some jokes on the fly, such as this one: "What's worse than finding a worm in an apple? Answer: finding half a worm."

THE BAD We're pretty sure we remember that worm joke from a Bazooka Joe bubble gum comic strip in the 1970s, and it was ancient then. (Note: You can find Alexa new material via third-party apps, such as Stupid Musician Jokes.)

ORDERING FOOD

THE GOOD Alexa can order you a pizza from Domino's, saving you the inconvenience of having to put down the remote to pick up your phone.

THE BAD She can order only dishes you've saved as an "Easy Order" in your Domino's website account—there's no deciding you want extra cheese on your order, or even a bottle of soda.

HOME CONTROL

THE GOOD Say the word and Alexa will adjust your thermostat, open and close your drapes, lock your doors, turn down the lights, and turn up the ceiling fan while you stay comfortably glued to the couch.

THE BAD You could go broke replacing or modifying things in your home to make them Alexa-compliant. For instance, smart light-bulbs and electrical receptacles start around \$15 and rise sharply; thermostats range from \$115 to \$250; ceiling fans can cost \$500. For certain items, installation adds more to the bill.



ASK OUR EXPERTS

My child has lice. Which treatments are safe and effective?

RESEARCH NOW SHOWS that the vast majority of lice in the U.S. are probably resistant to the insecticides in popular over-the-counter products such as Nix and Rid.

In a study published in the *Journal of Medical Entomology* this past March, researchers collected lice from 138 communities in 48 states and found that in 132 of them the lice tested were resistant to permethrin, the active ingredient in Nix, a creme rinse. The findings would almost certainly be similar for Rid, a shampoo that

contains the related compound pyrethrum, says J. Marshall Clark, Ph.D., professor of environmental toxicology and chemistry at the University of Massachusetts Amherst and the study's principal investigator.

Some prescription lice treatments may also pose problems, says Michael Hansen, Ph.D., a senior scientist at Consumer Reports. Particularly worrisome: shampoos containing lindane. Consumer Reports petitioned the Food and Drug Administration to outlaw that neurotoxic pesticide as a lice treatment as early as 1981, and wrote the agency again in 2015, after lindane was found to be carcinogenic to humans by the World Health Organization. But despite reports of seizures and even deaths from improper use of topical products containing lindane, it's still on the market as a prescription drug for lice.

Wet combing is the best way to

get rid of the pests, Hansen says. Coat your child's hair and scalp with conditioner or a lubricant (olive oil can work), then use a wide-tooth comb to separate hair into sections. Follow with a metal nit or flea comb, concentrating on the area close to the scalp. After each comb-through, wipe the comb on a paper towel and inspect for lice. Repeat every day until no live lice are seen, then every few days for about a month.

I've gotten emails from my bank that I suspect are fraudulent, but I'm nervous about ignoring them. What should I do?

FIRST, CHECK the sender's email address for misspellings. Fraudsters trying to lure you with a "phishing" scam may use an address that's similar to a company's official one, but not exactly the same. It's not a foolproof tactic, though, because some crooks can completely "spoof" an email address. But you can be certain that a U.S.-based organization's email address won't include a domain extension from a

different country (like .ru for Russia or .br for Brazil). Many phishing attempts originate abroad, often from non-native English speakers, so poor spelling and awkward sentence structure in the body of the email may be another telltale clue. Hovering your cursor over links in the email's text will reveal a code showing where the link really leads. If it doesn't include the company's web domain name before the first forward slash (/), don't click on it. And last, if the email asks you to verify or provide personal information such as credit card and bank account numbers, Social Security numbers, or passwords, it's definitely a fraud, says the Federal Trade Commission. If you're still in any doubt about whether the email is legit, reach your bank directly through contacts on its website.

I'm looking to buy a mattress. Is the price set in stone or can I negotiate, as with a car purchase?

NOT ONLY IS negotiation possible, it's recommended. Our recent survey of almost 20,000 subscribers found that 64 percent of mattress shoppers don't even try to negotiate a lower price. But among subscribers who did, 60 percent reduced their bill, saving a median of \$205. And though online shoppers are much less likely to haggle, those who tried to negotiate with a website were almost as successful as their in-store counterparts. Be ready when a rep asks through a chat window whether you have questions.



LEARN

We have more than 140 in-house experts who research, test, and compare—so you don't have to! Send your questions to: [ConsumerReports.org/askourexperts](https://www.consumerreports.org/askourexperts) ... and watch this space for the answers.

PRODUCT UPDATES

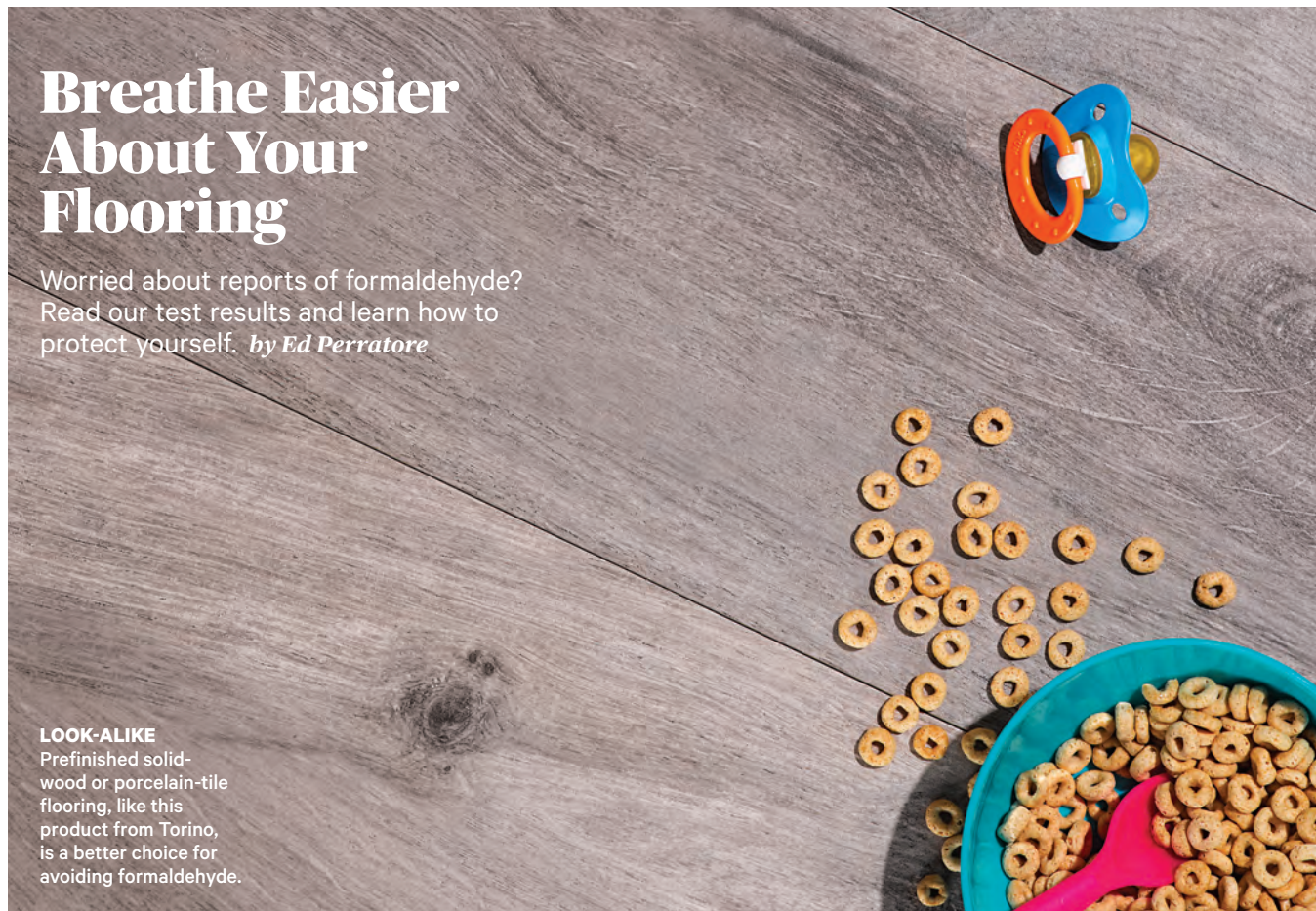
THE LATEST RATINGS FROM OUR LABS

Breathe Easier About Your Flooring

Worried about reports of formaldehyde? Read our test results and learn how to protect yourself. *by Ed Perratore*

LOOK-ALIKE

Prefinished solid-wood or porcelain-tile flooring, like this product from Torino, is a better choice for avoiding formaldehyde.



FORMALDEHYDE is an ever-present, colorless gas that can give off a pickle-like smell. It has been commonly used in home products for decades, in everything from certain types of wood flooring to detergents, paint, fabric, and even wallpaper.

And although formaldehyde occurs naturally in the world, that doesn't mean it is safe, or always dangerous. Its status is more complicated than that.

Here's where the trouble starts. At even

low levels, formaldehyde can irritate eyes, nose, throat, and skin, or trigger an attack in asthma sufferers. And worker exposure to very high levels over many years has been linked to rare nose and throat cancer, and leukemia. The youngest and oldest, and particularly those suffering from respiratory problems, are most vulnerable.

The World Health Organization's International Agency for Research on Cancer

considers the gas a human carcinogen. So reducing your formaldehyde exposure when possible is better for your health.

Lately formaldehyde has also been ever-present in the news cycle after a "60 Minutes" report last year that said laminate flooring from Lumber Liquidators—produced in China and sold in the U.S.—had been found to emit formaldehyde at levels several times higher than California regulations allow.

In June, Lumber Liquidators reached a settlement with the Consumer Product Safety Commission, agreeing to continue free testing of some of the laminate floors for consumers who purchased them.

Consumer Reports decided to do some testing of its own on a variety of wood flooring products, including two laminates currently on the market. In the limited study conducted over the past year, we sought to determine whether any wood-based flooring could pose a formaldehyde hazard and, if so, how much of a hazard.

The results were striking for what became clear and what remained fuzzy. The prefinished solid-wood flooring we tested had consistently lower formaldehyde emissions—near or lower than what we think it should be—than the engineered wood and laminate. It's likely that the glues and resins those products are made with emit formaldehyde. That said, formaldehyde levels varied widely among products and even within samples from the same engineered-wood or laminate plank.

Keep in mind that testing within homes, under less controlled conditions, becomes even more difficult given that many sources can emit formaldehyde. When overall readings are high, it can be very difficult to isolate the cause.

What Homeowners Should Do

We've prepared this Q&A to help inform your decisions about what kind of flooring to install, and what to do about existing materials and products in your homes. We have also published Ratings of prefinished solid-wood, vinyl, and tile floors; all are better choices when it comes to formaldehyde emissions.

Is there a safe level of formaldehyde?

Only California has standards that limit how much formaldehyde flooring and other pressed-wood products sold there can emit. No federal limits exist for formaldehyde exposure from composite wood flooring.

Consumer Reports agrees with the Centers for Disease Control and Prevention's cancer risk estimate, which is based on the CPSC's testing of laminate flooring.

6 SAFETY STEPS

Here are some ways to lower formaldehyde levels in your home:

1. Open windows each day to let in fresh air.

2. Set indoor temperature and humidity levels to the lowest comfortable levels. Higher temps and humidity levels increase off-gassing.

3. Ban indoor smoking.

4. Forget about using your air purifier.

It probably won't lower formaldehyde levels. Nor will putting a rug over your floor.

5. Choose products with little or no formaldehyde.

That includes wood products (such as furniture and flooring) made without urea-formaldehyde (UF) glues. Pressed-wood products should meet "ultra-low-emitting formaldehyde" or "no-added formaldehyde" requirements. Use no-VOC (volatile organic compounds) or low-VOC paints, stains, and other products. And insulation should have no UF foam.

6. Deal with formaldehyde in new products.

Before using permanent-press clothing or curtains, wash them. And consider keeping new engineered-wood or laminate flooring, furniture made with pressed wood, and other sources of formaldehyde outside living spaces—at least until you cannot smell chemicals.

But we believe that there should be a federal standard for wood flooring and that the formaldehyde emission rate should be established at 2 micrograms per square meter per hour. At that level, the formaldehyde emitted by flooring would not significantly raise the background level of formaldehyde in a home or increase cancer risk to adults.

Should I avoid engineered-wood and laminate flooring altogether?

Prefinished solid-wood flooring seems to be a better choice than engineered wood or laminate, according to our small test sample. The prefinished solid-wood flooring had consistently lower formaldehyde emissions—near or less than our level of concern—than the widely variable levels we found from the engineered-wood and laminate flooring we tested.

Ratings of top-scoring prefinished solid-wood flooring, as well as vinyl and porcelain-tile flooring that look like wood, are on the facing page.

Do product certifications matter?

When it comes to formaldehyde, not as much as you might expect. Certification labels Greenguard Gold and FloorScore use formaldehyde levels of 9 micrograms per cubic meter (modeled in office settings) as their threshold. Based on our estimates, that's almost 10 times as high as what we think it should be.

I just had one of these types of floors put in. What should I do?

Formaldehyde is a volatile chemical and will off-gas over time, but our tests show that those rates are variable, too. There are ways to reduce formaldehyde exposure if you have new floors or any other new composite wood product (see "6 Safety Steps," at left).

How do I get the flooring I bought at Lumber Liquidators tested?

Lumber Liquidators' recall-to-test program involves only laminate flooring the company sourced from China and sold between February 2012 and May 2015, when the company stopped selling it.

PRODUCT UPDATES

If you have that flooring, call 800-366-4204 or go to lumberliquidators.com/ll/testkit to request a free testing kit. Emissions of 0.080 parts per million or higher, based on WHO guidelines, will trigger more plank testing and, if necessary, an in-home exam by a certified industrial hygienist paid for by Lumber Liquidators. According to the company, and confirmed by the CPSC, more than 17,000 air tests have already been performed, leading to 1,300 planks being tested. None have come back above the WHO standard.

I've had one of these floors in my home for years. Do I still need to worry about this?

Probably not. According to a recent report cited by the Consumer Product Safety Commission, "If the flooring was installed several years ago, the levels of formaldehyde may have returned to what is typically found in homes—so there may be no reason to remove it." We looked at formaldehyde decay levels in a few samples over the course of eight to nine months. Some emission levels dropped considerably over that time; others didn't.

At what point should I consider home testing?

If chemical odors are strong, you have trouble breathing, or you experience irritation only when at home, consider getting your home tested. Just be aware that results are rarely clear-cut. Do-it-yourself test kits are available, but the Environmental Protection Agency has neither tested nor verified their accuracy. Even a highly precise in-home test could give misleading results—from false positives to even missing an existing problem—warns the American Industrial Hygiene Association.

And experts say that even expensive and extensive testing might not identify specific sources of formaldehyde.

What does the industry advise consumers to do about these types of floors if they're already installed?

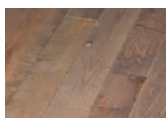
The National Wood Flooring Association and the North American Laminate

Flooring Association say consumers should research the brand and model of existing flooring to make sure they comply with California Air Resources Board standards. (NALFA-certified laminate floors pass that test.) A flooring professional should be able to help do the research.

And if someone in your household tends to be sicker at home than when away, consider hiring a pro to analyze the overall indoor air, not just the formaldehyde. Mold or other allergens could be the cause.

Which types of products emit formaldehyde?

In addition to some flooring, sources of formaldehyde can include permanent-press fabrics, wallpaper, plywood, medium-density fiberboard, particleboard, and other pressed-wood products that some furniture, cabinets, and paneling are made of. Glues, paint, caulk, pesticides, cosmetics, detergents, and some insulation give off formaldehyde. And smoke from tobacco, gas stoves, and fireplaces also releases it.



Lumber Liquidators
Casa de Colour Select
Pewter Maple 10032461

Ratings: Flooring

Prefinished solid-wood, vinyl, and tile flooring are better choices when it comes to formaldehyde emissions. Just be sure to use glues that don't contain the gas when installing those materials. Engineered-wood and laminate flooring products are made with glues and resins that can emit formaldehyde. For full Ratings, available to online subscribers, go to ConsumerReports.org

☒ CR Best Buy ☒ Recommended

● Excellent ● Very Good ○ Good ● Fair ● Poor

Rec.	Rank	BRAND & MODEL	PRICE	SCORE	Square Feet Per Box	RESISTS					Installation
						Foot Traffic	Scratches	Stains	Dents	Sunlight (UV)	

A. PREFINISHED SOLID-WOOD FLOORING

<input checked="" type="checkbox"/>	1	Lumber Liquidators Casa de Colour Select Pewter Maple 10032461	\$4.20	76	20	●	●	●	●	●	Nail Down, Staple, Glue, or Floating
<input checked="" type="checkbox"/>	2	EcoTimber Woven Honey WBH061	\$6.00	71	23	○	●	●	●	○	Nail Down or Glue
<input checked="" type="checkbox"/>	3	Teragren Portfolio Naturals Wheat TPF-PORTTG-WHT	\$7.50	69	20	○	●	●	●	●	Floating

B. VINYL FLOORING

<input checked="" type="checkbox"/>	1	Congoleum DuraCeramic Sierra Slate SI-74 Golden Greige	\$5.00	94	17	●	●	●	○	●	Glue Down
<input checked="" type="checkbox"/>	2	Armstrong Luxe Plank Timber Bay Barnyard Gray A6861	\$5.50	93	24	●	●	●	●	●	Floating
<input checked="" type="checkbox"/>	3	Tarkett Nafco PermaStone Collection Natural Slate Sand Stone NS660	\$4.70	92	27	●	●	●	●	●	Glue Down
<input checked="" type="checkbox"/>	4	Armstrong Alterna Mesa Stone Canyon Sun D4112	\$5.50	86	25	●	●	○	●	●	Glue Down

C. PORCELAIN-TILE FLOORING

<input checked="" type="checkbox"/>	1	Lumber Liquidators Avella Brazilian Cherry 10039367	\$3.60	97	14	●	●	●	●	●	Thinset
<input checked="" type="checkbox"/>	2	SnapStone Beige 11-001-02-01	\$8.00	95	5	●	●	●	○	●	Floating
<input checked="" type="checkbox"/>	3	Style Selections Natural Timber Ash 553878 (Lowe's)	\$4.00	91	10	●	●	●	●	●	Thinset
<input checked="" type="checkbox"/>	4	Torino Rustic Sequoia Sierra Gray 10109111	\$7.00	81	10	○	●	●	●	●	Floating or Thinset
<input checked="" type="checkbox"/>	5	Dal-Tile Forest Park Timberland FP97	\$7.00	80	13	○	●	●	●	●	Thinset

HARD CURRENCY

Prepaid cards can be useful, but not all deserve a place in your wallet.



A Smart Way to Pay With Plastic

Prepaid cards let you say bye-bye to banking and credit card fees

IF A \$100 BILL had a love child with a credit card, their progeny could very well be a prepaid card—a money tool that combines the ease and versatility of plastic with the freedom from fees of cash.

Not that long ago, prepaid cards were a fee-laden payment method of last resort for people without credit cards or bank accounts. In fact, in 2010, we did not recommend them because of their high fees and inadequate consumer protections. But now, thanks in part to advocacy work by Consumer Reports and other consumer groups, many of the cards have affordable fees (or none at all) and voluntarily offer the same consumer protections as debit cards, including Federal Deposit

Insurance Corp. coverage on balances and no liability if they're lost or stolen.

In simplest terms, a prepaid card is like a debit card that is not tied to your bank account: You preload it with funds and add more as needed. You can purchase one for a few dollars in most supermarkets and drugstores and at many retailers, and begin using it as soon as you give a cashier the amount of money you want loaded onto it. (You should also register the card online or by phone, in case it's lost.) They can also be purchased online.

You can use the cards anywhere credit or debit cards are accepted. More than 12 million merchants accept prepaid cards with the MasterCard or Visa logo;

3.4 million take American Express-brand cards. The Bluebird and Green Dot cards provide fee-free cash withdrawals at more than 24,000 MoneyPass ATMs, and Liquid cards allow no-fee withdrawals at 15,500 Chase ATMs.

You generally can't spend more than you've put on the card, but if you do, there is usually no overdraft fee. (None of our top-rated cards charge that penalty.) Prepaid cards will also help you to:

- **Stick to a budget.** To impose some fiscal discipline on yourself, open separate card accounts for various categories of expenses, such as groceries, clothing, and holiday gifts, each loaded with the amount you budget for that category. (You can monitor your spending online or with the card's mobile app.) Look for those that don't charge a monthly fee (Bluebird and the H&R Block Emerald cards are options).
- **Do away with debt.** Prepaid cards don't provide credit, so they keep you from spending money you don't have.

- **Control kids' spending.** Parents can give teens or college students prepaid cards instead of credit or debit cards to keep them from breaking the bank. If they lose the card, you're exposed to less risk because it's not tied to your bank account. The Bluebird and American Express Serve cards allow the primary cardholder to create up to four subaccounts—each of which gets its own card and balance—at no extra cost.

- **Protect seniors from scams.** Fraudsters steal an estimated \$30 billion each year from unsuspecting consumers, including the elderly. Seniors can guard against that by using a prepaid card. Or adult children or other caregivers can give a senior family member a prepaid card, which offers him or her the dignity of control over spending while allowing a responsible party to keep an eye on things. Certain cards, including Serve, allow you to limit transaction amounts, permit or prevent online purchases, and block purchases from international merchants to thwart scam artists overseas. The True Link Prepaid Visa, which we did not rate and which has a \$10 monthly fee, is designed specifically to protect

seniors from fraud. It allows you to block certain purchases, such as over-the-phone sales from scammers.

● **Give a better gift card.** The problem with most gift cards is that they're good at only one retailer. But prepaid cards can be used anywhere that American Express, MasterCard, or Visa is accepted—whether in a physical store or online—and they come with more protections than gift cards, in case they're lost or stolen.

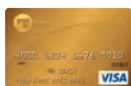
● **Avoid ATM and other banking fees.** Many prepaid cards give you access to a nationwide network of thousands of fee-free ATMs and the ability to monitor transactions online or by mobile app, to load more money free of charge via direct deposit, and to pay bills online. With some, you can even write paper checks.

Caveats and Cautions

But for all of their advantages, prepaid cards are not without drawbacks. You won't earn interest on the money you keep on the card, and unlike a credit card, a prepaid card won't help build your credit history. Certain prepaid cards, including RushCard and Walmart MoneyCard, have experienced short-term technical failures that prevented users from accessing their money or account info.

Car rental companies including Avis and Hertz don't accept prepaid cards as security, so you'll still need a credit or debit card to drive off the lot. (You can pay for the rental with your prepaid card once you return the car.) Similarly, gas stations can put a hefty hold on the card for several days if you swipe at the pump—but you can avoid that by paying inside before you fill up. Certain hotels and other merchants also impose holds.

New regulations expected later this year from the Consumer Financial Protection Bureau are likely to extend consumer protections to all prepaid cards. But until those rules are in place, stick with the top-rated cards on our list. They all provide FDIC insurance and don't hold customers liable for errors such as inaccurate debit entries and unauthorized charges due to fraud.



Green Dot
Prepaid Visa

Ratings: How the Prepaid Cards Stack Up

☑ Recommended ● Excellent ● Very Good ○ Good ● Fair ● Poor

Recommended	Rank	CARD	SCORE	TEST RESULTS			
				Value	Fee Accessibility and Clarity	Convenience	Safety
☑	1	Bluebird (American Express and Walmart)	79	●	●	●	●
☑	2	Chase Liquid (Visa)	77	○	●	●	●
☑	3	Green Dot Prepaid Visa (issued by Green Dot Bank)	75	○	●	●	●
☑	4	Halogen Reloadable Prepaid Card (MasterCard, Kmart, issued by Green Dot Bank)*	75	○	●	●	●
☑	5	American Express Serve	74	●	●	●	●
☑	6	H&R Block Emerald Prepaid MasterCard (issued by BofI Federal Bank)	73	●	●	●	●
☑	7	Fifth Third Bank Access 360° (MasterCard)	67	●	●	●	●
	8	Prepaid Visa RushCard, RushUnlimited Plan (issued by MetaBank)	67	●	●	●	●
☑	9	BB&T MoneyAccount Card (Visa)	65	●	●	●	●
☑	10	Regions Now Card (Visa)	64	●	●	●	●
☑	11	Walmart MoneyCard MasterCard (issued by Green Dot Bank)	61	○	●	●	●
	12	Prepaid Visa RushCard Pay As You Go Plan (issued by MetaBank)	60	●	●	●	●
	13	UPside Visa Prepaid Card (issued by MetaBank)	56	○	●	●	●
	14	PNC SmartAccess Prepaid Visa Card	53	○	●	●	●
	15	PayPower Visa Prepaid Card (issued by MetaBank)	52	●	●	●	●
	16	NetSpend Prepaid Visa Premier FeeAdvantage Plan (issued by MetaBank)	45	●	●	●	●
	17	Univision MasterCard Prepaid Card (issued by MetaBank)	45	●	●	●	●
	18	AccountNow Gold Visa Prepaid Card (issued by MetaBank)	43	●	●	●	●
	19	NetSpend Prepaid Visa Pay-As-You-Go Plan (issued by MetaBank)	37	●	●	●	●

*The Halogen card is no longer available to new customers.

Guide to the Ratings. Prepaid cards are ranked in order of Overall Score, which reflects our evaluation of key criteria in the four categories below. Category weights are based on research showing the features consumers want most in a prepaid card and the consumer protections that are most important. This year's Ratings are not directly comparable to our previous years' Ratings because of refinements we've made to the criteria and category weights. **VALUE** is calculated by applying the card's fee structure based on a spending pattern typical when a prepaid card is used as an adjunct to a checking or other bank account. **FEE ACCESSIBILITY AND CLARITY** measures the ease of finding and understanding information and disclosures about the fees. **CONVENIENCE** evaluates the essential features of the prepaid card, including how widely the payment network brand on the card is accepted. **SAFETY** is based on whether funds are covered by FDIC insurance. All of the cards on our list include FDIC insurance, voluntary zero liability for errors and unauthorized debits, and replacement of lost or stolen cards.

SUPPLI

A COMPLETE



*Pills and capsules make promises they can't keep in
Learn what ingredients to avoid, what labels mean (and don't), and*

ELEMENTS

GUIDE TO SAFETY



*a marketplace with a profound lack of oversight.
why the right food and exercise are a far better bet.* BY JENEEN INTERLANDI

C

CALVIN JIMMY LEE-WHITE was tiny. He was born on Oct. 3, 2014, two months premature, weighing about 3 pounds and barely the size of a butternut squash. There are standards of care for treating infants that fragile, and as an attorney for the baby's family later acknowledged, doctors at Yale-New Haven Hospital in Connecticut followed them. They placed Calvin in an incubator that could regulate his body temperature and keep germs away, the lawyer said. And they administered surfactant drugs, which help promote crucial lung development in premature infants. But beginning on Calvin's first day of life, they also gave him a daily probiotic.

Probiotics are powders, liquids, or pills made up of live bacteria thought to help maintain the body's natural balance of gut microorganisms. Some neonatal intensive care units (NICUs) have been giving them to preemies in recent years based on evidence that they can help ward off deadly intestinal disease.

Some doctors are concerned about that trend. Because probiotics can be classified as dietary supplements, they don't have to be held to the same regulatory standards as prescription or even over-the-counter drugs. Manufacturers don't have to secure Food and Drug Administration approval to sell their products, and their facilities aren't policed the same way as pharmaceutical companies.

But the NICU at Yale-New Haven chose what looked to be a safe product. It was made by a large, seemingly reputable company, marketed specifically for infants and children, and available at drugstores across the country.

Calvin struggled anyway. His abdomen developed bulges, and surgery revealed that his intestines were overrun by a rare fungus. The infection spread quickly from his gut to his blood vessels, where it caused multiple blockages, and then into his aorta, where it caused a clot.

On Oct. 11, at just 8 days old, baby Calvin died. Government officials then launched a mournful investigation. Where did the fungus come from? And how did it get into this premature baby's tiny body?

Unproven Treatments

The answer is that the probiotic was contaminated. The FDA tested unopened containers from the same batch of probiotic given to Calvin and discovered the same fungus that had infected his intestines. Certain lots of the product—ABC Dophilus Powder, made by the supplement manufacturer Solgar—were recalled from pharmacies and drugstores across the U.S.

The Lee-White family filed a lawsuit against both Solgar and Yale-New Haven Hospital, claiming that their baby had been repeatedly poisoned and that no

one had warned them about the risks associated with probiotics.

"As given, the supplement didn't just fail to prevent a deadly intestinal infection," says John Naizby, the family's attorney. "The supplement actually caused a deadly intestinal infection." Solgar told Consumer Reports via email that it conducted a thorough investigation in cooperation with the FDA and the Centers for Disease Control and Prevention (CDC) and found no contaminants at any point in its own supply chain. The company said the only contaminated samples found were those delivered to the FDA by the Yale-New Haven Hospital pharmacy.

The hospital declined to comment for this article. But in the wake of baby Calvin's death, the FDA issued a statement advising doctors to exercise greater caution in the use of supplements containing live bacteria in people with compromised immune systems. Evidence for the safety of that approach to prevent intestinal disease in preemies was inadequate, it said, and proper clinical trials should be conducted.

The problem stretches well beyond one tainted probiotic. Dietary supplements—vitamins, minerals, herbs, botanicals, and a growing list of other "natural" substances—have migrated from the vitamin aisle into the mainstream medical establishment. Hospitals are not only including supplements in their formularies (their lists of approved medication), they're also opening their own specialty supplement shops on-site and online. Some doctors are doing the same. According to a Gallup survey of 200 physicians, 94 percent now recommend vitamins or minerals to some of their patients; 45 percent have recommended herbal supplements as well. And 7 percent are not only recommending supplements but actually selling them in their offices.

Consumers are buying those products in droves. According to the Nutrition Business Journal, supplement sales have increased by 81 percent in the past decade. The uptick is easy to understand: Supplements are easier to get than prescription

drugs, and they carry the aura of being more natural and thus safer. Their labels often promise to address health issues for which there are few easy solutions. Want a smaller waistline? There's garcinia cambogia for that. Bigger muscles? Try creatine. Better sex? Yohimbe. How about giving your brain a boost? Omega-3 fatty acids. Or your energy level? Ginseng.

It's tough to say what portion of those products pose a risk to consumers. A 2013 report from the Government Accountability Office (GAO) found that from 2008 through 2011, the FDA received 6,307 reports of health problems from dietary supplements, including 92 deaths, hundreds of life-threatening conditions, and more than 1,000 serious injuries or illnesses. The GAO suggests that due to underreporting, the real number of incidents may be far greater.

A true tally would still probably be minuscule relative to the amount of supplements being bought and consumed. But there's no reliable way to tell whether any given supplement is safe. And the fact remains that dietary supplements—which your doctor may recommend and may sit right alongside trusted over-the-counter medications or just across from the prescription drug counter—aren't being regulated the same way as drugs.

"Not only are the advertised ingredients of some supplements potentially dangerous," says Pieter Cohen, M.D., an assistant professor of medicine at Harvard Medical School who has studied supplements extensively and written many papers on the issue, "but because of the way they're regulated, you often have no idea what you're actually ingesting."

Consumers Are in the Dark

Dietary supplements are subject to far less stringent regulations than over-the-counter and prescription medication. The FDA classifies them differently from drugs. So the companies that make and sell them aren't required to prove that they're safe for their intended use before selling them, or that they work as advertised, or even that their packages contain what the labels say they do.

And because of those lax policies, supplements that make their way into retail stores, doctors' offices, and hospitals can pose a number of potential problems. They can be ineffective, contaminated with microbes or heavy metals, dangerously mislabeled, or intentionally spiked with illegal or prescription drugs. They can also cause harmful side effects by themselves and interact with prescription medication in ways that make those drugs less effective.

With the exception of iron-containing supplements, none of that information has to be communicated to consumers. Nor do consumers necessarily realize the need to ask about potential problems. According to a 2015 nationally representa-

those substances in products sold at some of the country's most trusted retailers, including Costco, GNC, and Whole Foods. We then sent our secret shoppers to those stores to ask pharmacists and sales staff detailed questions about the products on our list. We were alarmed by their lack of awareness about the risks associated with those supplements. Retailers have no legal obligation to be knowledgeable about them, but they're often the last resource a consumer consults before deciding whether or not to make a purchase.

A Powerful Industry Is Born

Our modern love of dietary supplements began in 1970 when Linus Pauling, the

23,000

PEOPLE PER YEAR
END UP AT THE ER
AFTER TAKING A
SUPPLEMENT.

tive Consumer Reports survey, almost half of American adults think that supplement makers test their products for efficacy, and more than half believe that manufacturers prove their products are safe before selling them.

"You see these products in drugstores or in doctors' offices, and you assume they're as tried and true as any other medication being sold at those places," says Paul Offit, M.D., an infectious disease specialist at the Children's Hospital of Philadelphia, who has written a book about the supplement industry. "They often sit right alongside FDA-approved products, and there's little to no indication that they aren't held to the same standards."

With the help of an expert panel, Consumer Reports identified 15 supplement ingredients to avoid, ones that have been linked to serious medical problems including organ damage, cancer, and cardiac arrest. We found

chemist and two-time Nobel Prize winner, declared that taking 3,000 mg of vitamin C every day could abolish the common cold. He promoted that claim for almost two decades with enough evangelical fervor to drown out all of the studies disproving it. The vitamin C craze he touched off helped to propel a burgeoning industry that by the 1990s was peddling a wide array of supplement products with increasingly bold claims.

When the FDA stepped in to regulate, the industry fought back. Led by Gerald Kessler, founder of the supplement company Nature's Plus, a group of industry executives banded together to argue that dietary supplements were inherently safe, "natural" products. They also argued that holding the products to standards created for 'unnatural' pharmaceuticals was worse than unnecessary; it would drive the cost of regulatory

Continued on page 26

15 INGREDIENTS TO ALWAYS AVOID

WITH THE HELP of an expert panel of independent doctors and dietary-supplement researchers, Consumer Reports identified 15 supplement ingredients that are potentially harmful. The risks include organ damage, cancer, and cardiac arrest. The severity of these threats often depends on such factors as pre-existing medical conditions as well as the quantity of the ingredient taken and the length of time a person has been exposed to the substance. Many of the ingredients on this list also have the potential to interact with prescription and over-the-counter medications, such as cholesterol-lowering statins and blood-thinning drugs like aspirin and warfarin (Coumadin and generic). Moreover, our experts agree that none of these supplement ingredients provide sufficient health benefits to justify the risk. Even so, we found all 15 ingredients in products available online or in major stores such as GNC, Costco, CVS, Walmart, and Whole Foods.

Aconite

ALSO CALLED: Aconiti tuber, aconitum, angustifolium, monkshood, radix aconiti, wolfsbane

CLAIMED BENEFITS: Reduces inflammation, joint pain, gout

RISKS: Nausea, vomiting, weakness, paralysis, breathing and heart problems, possibly death

Caffeine Powder

ALSO CALLED: 1,3,7-trimethylxanthine

CLAIMED BENEFITS: Improves attention, enhances athletic performance, weight loss

RISKS: Seizures, heart arrhythmia, cardiac arrest, possibly death; particularly dangerous when combined with other stimulants

Chaparral

ALSO CALLED: Creosote bush, greasewood, larrea divaricata, larrea tridentata, larrea

CLAIMED BENEFITS: Weight loss; improves

inflammation; treats colds, infections, skin rashes, cancer

RISKS: Kidney problems, liver damage, possibly death

Coltsfoot

ALSO CALLED: Coughwort, farfarae folium leaf, foals-wort, tussilago farfara

CLAIMED BENEFITS: Relieves cough, sore throat, laryngitis, bronchitis, asthma

RISKS: Liver damage, possible carcinogen

Comfrey

ALSO CALLED: Blackwort, bruisewort, slippery root, symphytum officinale

CLAIMED BENEFITS: Relieves cough, heavy menstrual periods, stomach problems, chest pain; treats cancer

RISKS: Liver damage, cancer, possibly death

Germander

ALSO CALLED: Teucrium chamaedrys, viscidum

CLAIMED BENEFITS: Weight loss; alleviates fever, arthritis, gout, stomach problems

RISKS: Liver damage, hepatitis, possibly death

Greater Celandine

ALSO CALLED: Celandine, chelidonium majus, chelidonii herba

CLAIMED BENEFIT: Alleviates stomachache

RISK: Liver damage

Green Tea Extract Powder

ALSO CALLED: Camellia sinensis

CLAIMED BENEFIT: Weight loss

RISKS: Dizziness, ringing in the ears, reduced absorption of iron; exacerbates anemia and glaucoma; elevates blood pressure and heart rate; liver damage; possibly death

Kava

ALSO CALLED: Ava pep-per, kava kava, piper

methysticum

CLAIMED BENEFITS: Reduces anxiety, improves insomnia

RISKS: Liver damage, exacerbates Parkinson's and depression, impairs driving, possibly death

Lobelia

ALSO CALLED: Asthma weed, lobelia inflata, vomit wort, wild tobacco

CLAIMED BENEFITS: Improves respiratory problems, aids smoking cessation

RISKS: Nausea, vomiting, diarrhea, tremors, rapid heartbeat, confusion, seizures, hypothermia, coma, possibly death

Methysynephrine

ALSO CALLED: Oxilofrine, p-hydroxyephedrine, oxyephedrine, 4-HMP

CLAIMED BENEFITS: Weight loss, increases energy, improves athletic performance

RISKS: Causes heart rate and rhythm abnormalities, cardiac arrest; particularly risky when taken with other stimulants

Pennyroyal Oil

ALSO CALLED: Hedeoma pulegioides, mentha pulegium

CLAIMED BENEFITS: Improves breathing problems, digestive disorders

RISKS: Liver and kidney failure, nerve damage, convulsions, possibly death

Red Yeast Rice

ALSO CALLED: Monascus purpureus

CLAIMED BENEFITS: Lowers LDL ("bad") cholesterol, prevents heart disease

RISKS: Kidney and muscle problems, liver problems, hair loss; can magnify effect of cholesterol-lowering statin drugs, increasing the risk of side effects

Usnic acid

ALSO CALLED: Beard moss, tree moss, usnea

CLAIMED BENEFITS: Weight loss, pain relief

RISKS: Liver injury

Yohimbe

ALSO CALLED: Johimbi, pausynstalia yohimbe, yohimbine, corynanthe johimbi

CLAIMED BENEFITS: Treats low libido and erectile dysfunction, depression, obesity

RISKS: Raises blood pressure; causes rapid heart rate, headaches, seizures, liver and kidney problems, heart problems, panic attacks, possibly death

Report It!

If you or someone in your family experience an adverse event after taking a dietary supplement, go to www.fda.gov/Food/DietarySupplements/default.htm and click on "Report an Adverse Event."



Scan this page using the Blippar app to sign up for our free Health Alert email newsletter (see page 7 for details).

To learn more about our experts and our ingredient selection process, go to ConsumerReports.org/ingredientstoavoid



KAVA



YOHIMBE



GREEN TEA EXTRACT POWDER



USNIC ACID



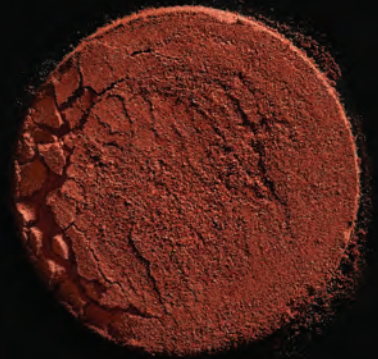
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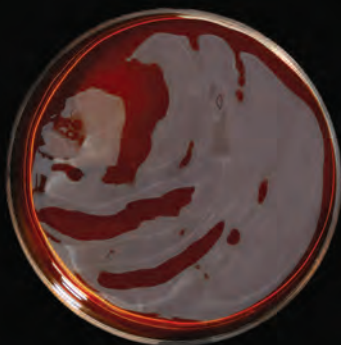
COLTSFOOT



COMFREY



RED YEAST RICE



GREATER CELANDINE



LOBELIA

compliance too high, forcing beloved products off the shelves and depriving consumers of something to which they should have unfettered access.

Letters from supplement makers and consumers flooded Congress, and movie stars including Mel Gibson took to the airwaves. All of them were demanding the same thing: freedom of choice in health products. "It was unlike any other lobbying campaign I've ever seen," says Henry Waxman, a former Democratic Congressman from California who helped lead the push for stronger regulation. "People believed what they were being told because it fed into their view that doctors, pharmaceutical companies, and the FDA wanted to block alternative medicines that could keep people healthy. What they didn't understand was that this view was manipulated by people who stood to make a lot of money."

Banking on Too Little Oversight

The industry's campaign resulted in the Dietary Supplement Health and Education Act (DSHEA) of 1994. Some doctors and regulators say it compromised consumer safety by treating dietary supplements as distinct and different

regulated based on the premise that they're 100 percent safe," Cohen says. Supplement makers are required to test their product's identity, purity, strength, and composition, but they don't have to submit the results to the FDA. They also have to notify the agency of new ingredients. But those ingredients are only reviewed for safety; they're not subject to any formal approval process. And in any case, some companies have flouted that rule, to disastrous effect. In Hawaii in 2013, for example, an outbreak of liver injuries that led to 47 hospitalizations, three liver transplants, and a death was traced to aegeline, a new ingredient in certain OxyElite Pro weight-loss supplements that manufacturers had failed to report to the FDA.

Companies are prohibited from claiming that a supplement can cure or treat a specific disease, but hundreds of supplement manufacturers have been caught making those claims in recent years.

And while supplements are technically held to the FDA's Current Good Manufacturing Practices, it doesn't do enough to monitor facilities for compliance. There are about 15,000 dietary-supplement manufacturers whose products are sold

than 90,000 today. The FDA's budget to monitor supplements hasn't grown in tandem. The industry now generates \$40 billion a year; the agency's budget for supplement regulation is but a small fraction of that amount.

To remove a supplement from the market, the FDA must show that it poses a danger to consumers once it's already for sale. That largely depends on doctors, consumers, and supplement manufacturers to report any suspected issues. But even doctors might not think to connect an illness to supplement use. And if they do, they might not think to call the FDA. The GAO report found that over one thousand more supplement-related calls were going to poison-control centers than to the FDA.

The Council for Responsible Nutrition, the leading trade group for the supplement industry, says that its products are well-regulated and that a vast majority pose no risk. "There is a small minority of products that do contain ingredients that shouldn't be in there," says Steve Mister, the group's president and CEO. "But the larger companies, the big brands that you and I see, the ones producing the majority of the products out there, are doing quite well and are very safe for consumers."

Retail Russian Roulette

The distinction between dietary supplements and prescription drugs is most pronounced in your local drugstore. Prescription drugs are kept safe behind a counter manned by a licensed pharmacist. Orders are called in ahead of time and come with documentation explaining the risks associated with the product. Supplements come with no such safeguards. You can pluck them off a drugstore shelf without thinking twice. Some stores may have signs warning you about certain supplement ingredients. But if you have specific questions, you might be out of luck. Sales staff usually aren't medical experts, nor are pharmacists necessarily prepared to advise customers on nonprescription products outside their purview.

To find out what advice customers

over **1,000** SUPPLEMENTS HAVE BEEN FOUND TO CONTAIN PRESCRIPTION OR EXPERIMENTAL DRUGS.

from prescription drugs.

Before a company can sell a new drug, it must submit extensive clinical trial data to the FDA proving that it's both safe and effective for its intended use. Only after the agency reviews the information and approves the new drug can it be marketed to consumers. The process can take years and cost upward of \$2 billion.

Under DSHEA, dietary supplements are held to a different standard. "They're

in the U.S., according to a 2015 study in the journal Drug Testing and Analysis. Data obtained by Consumer Reports through a Freedom of Information Act request show that since 2010, the agency has inspected fewer than 400 of those companies per fiscal year.

Part of the problem is a lack of resources. Since DSHEA became law, the number of supplement products has grown from about 4,000 in 1994 to more

may be getting from store employees, Consumer Reports sent 43 secret shoppers—real consumers we provide with critical information and deploy across the country to serve as our eyes and ears—to Costco, CVS, GNC, Walgreens, Whole Foods, and the Vitamin Shoppe. They went to 60 stores in 17 states, where they asked employees (mostly sales staff but also some pharmacists) about products containing several of the ingredients in “15 Ingredients to Always Avoid” (see page 24).

Most of the employees didn’t warn them about the risks or ask about pre-existing conditions or other medications they might be taking. Many gave information that was either misleading or flat-out wrong.

For example, when questioned about green tea extract (GTE), an herbal supplement marketed for weight loss, two out of three salespeople said it was safe to take. None warned that the herb has been found to alter the effectiveness of a long list of drugs, including certain antidepressants and anticlotting drugs. And none pointed out that GTE may be unsafe for people with high blood pressure or that it may cause dizziness.

Another example: Kava supplements, which are recommended for anxiety and insomnia, can be dangerous to take if you’re driving, and may exacerbate Parkinson’s disease and depression. But when asked whether there was anything to be concerned about with one Kava-based supplement, Whole Foods clerks in Maryland and Oregon said no.

Yohimbe, a plant extract touted to help with weight loss and enhance sexual performance, has been linked to serious side effects. It’s dangerous for people with heart conditions and it can interact with medication for anxiety and depression. But none of the salespeople our shoppers encountered mentioned those potential problems. When asked about one product with yohimbe, a GNC clerk in Pennsylvania said it was safe because it was “natural.”

Red yeast rice is said to lower cholesterol and mitigate the effects of heart

WHEN YOU MAY ACTUALLY NEED A SUPPLEMENT

Most people don’t, but there are times when one may be called for

A VAST MAJORITY of us can get all the vitamins, minerals, and other nutrients we need from food. A large orange provides all the vitamin C the average person requires each day, for example, and a small carrot has more than a day’s worth of vitamin A.

But research shows that there are some people who may need supplemental doses of certain nutrients, says Consumer Reports’ chief medical adviser, Marvin M. Lipman, M.D. If testing reveals that you do need a supplement, your best bet is to take the type and dosage recommended by your doctor. That may be an actual “prescription” supplement, which, unlike over-the-counter versions, must adhere to the same standards for safety and quality as other prescription drugs. In some cases, when no prescription version is readily available, Lipman advises choosing a product that bears the seal of a reputable independent testing group, such as the U.S. Pharmacopeia. (See “What Labels Mean—and Don’t,” on page 29.)

Talk with your doctor about taking these vitamin or mineral supplements if you are:

Planning on becoming pregnant within a month:

400 mcg of *folic acid* daily. Folic acid reduces the risk of brain and spinal-cord abnormalities, called neural tube birth defects, that can occur in the first month of pregnancy.

Pregnant: 400 mcg *folic acid* to help protect against neural tube defects and 800 IU of vitamin D to help prevent preeclampsia. Depending on your risk, your doctor may recommend higher doses. Prenatal vitamins contain a range of vitamins and minerals, but new research casts doubt on their necessity for women who eat a nutritious diet.

A strict vegan who consumes no meat, fish, eggs, or dairy: A daily B12 supplement.

A person who rarely gets out in the sun: A daily 800 IU *vitamin D3* supplement. (Our bodies make vitamin D from sunlight.)

Taking certain drugs: *Vitamin B12* and magnesium supplements may be needed if you regularly take heartburn drugs such as lansoprazole (Prevacid and generic) or diabetes medication such as metformin (Glucophage and generic).

Diagnosed with osteoporosis: 800 IU *vitamin D3* supplements (or a higher dosage as recommended

by your doctor), and at least 1,000 to 1,200 mg of *calcium* from calcium-rich foods such as dairy products and green leafy vegetables, to slow bone loss.

Diagnosed with age-related macular degeneration: A specific blend of *vitamins C and E*, plus *copper, lutein, zeaxanthin*, and *zinc*, known as AREDS, can slow the progression of the disease.

Diagnosed with gastrointestinal disorders, such as inflammatory bowel disease or celiac disease, or serious conditions such as cancer or HIV/AIDS: Talk with your doctor about specific nutritional supplement needs.

disease. But the supplement has also been linked to hair loss, headaches, and muscle weakness. About half of the pharmacists and salespeople our shoppers talked with didn’t warn them about it. Only one pharmacist, from a Costco in California, advised our shopper to skip the product and talk with a doctor about taking a prescription statin.

We reached out to the trade group for chain pharmacies as well as some of the

individual stores our shoppers went to, and all who responded reinforced the importance of continuing education about supplements.

The Right Role for Doctors?

Diane Van Kempen, a retired schoolteacher from Franklin Lakes, N.J., says it was her doctor who suggested she take a red yeast rice supplement to lower her

Continued on page 33

WE MADE THIS WEIGHT-LOSS SUPPLEMENT

It was easy. It was fast. And it's dangerous.



INGREDIENTS LIST

Guarana

A plant-based stimulant similar to caffeine, and a diuretic.

Citrus Aurantium

A stimulant and purported appetite suppressant.

Conjugated Linoleic Acid (CLA)

A chemical marketed for its purported ability to reduce body fat and improve body composition.

Garcinia Cambogia

A plant extract claimed to prevent fat storage and suppress appetite.

Green Tea Extract

A stimulant and diuretic (and on our list of ingredients to avoid, on page 24).

Kava

A plant root known for its capacity to relax muscles and induce sleep (also on our list of ingredients to avoid).

DIETARY SUPPLEMENTS are supposed to be made in facilities that follow guidelines set by the Food and Drug Administration, but there are some that may fly under the radar. Almost anyone can blend and package a supplement—even a product that contains potentially harmful ingredients, such as those on page 24. No special training or education is required to set up a supplement business. And the products don't need to be approved by the FDA before they're sold.

"We have found people manufacturing supplements in residential basements and in labs that were smaller than a bathroom," says Lyndsay Meyer, an FDA spokeswoman.

To demonstrate just how easy it is to order equipment and ingredients, then

package a supplement that looks just like one you might find at your local vitamin store, we decided to create our own.

We chose to make weight-loss capsules because they're among the best-selling supplements on the market. They're also some of the most dangerous supplements available. According to a study in *The New England Journal of Medicine* in 2015, they were responsible for about 25 percent of all supplement-related emergency-room visits by adults from 2004 to 2013, causing such symptoms as chest pain and a rapid heartbeat.

"Weight-loss supplements, along with those for bodybuilding and sexual enhancement, are commonly found to contain pharmaceutical drugs or illegal chemicals," says Pieter Cohen, M.D., an

assistant professor of medicine at Harvard Medical School and an expert on adulterated dietary supplements. And, he says, "weight-loss supplements are among those most likely to feature false or misleading claims on their labels."

In formulating our product, we didn't include prescription drugs or any other illegal chemicals. But we did use potentially harmful ingredients that are sold legally.

We made about 80 capsules of our supplement, which we called Thinitol. If we had intended to market our product, we would have been required to register our facility with the FDA, a simple process of filling in a form with basic information such as our company name and address. But our product never left our building.



Scan this page using the Blippar app to sign up for our free Health Alert email newsletter (see page 7 for details).

HOW WE DID IT

STEP 1 Research and Development

We selected three types of ingredients for our formula. We chose extracts and chemicals marketed for weight loss that have not been clinically proved to be effective. We also included diuretics, which cause the body to lose water weight, and stimulants, which are known to suppress the appetite and boost metabolism. Most of the ingredients we selected are commonly found in weight-loss supplements.

STEP 2 Procurement

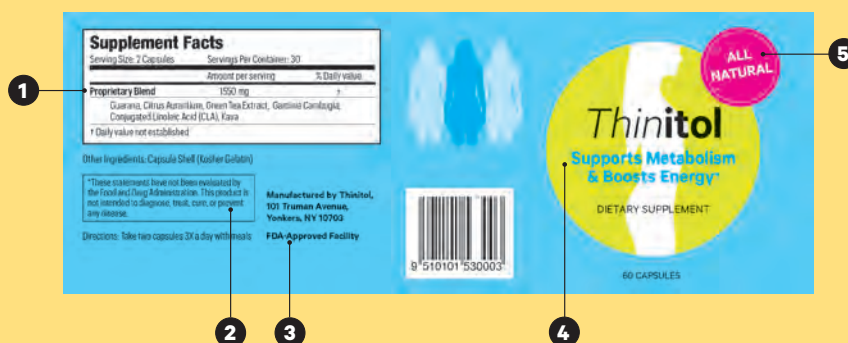
It was relatively easy to find the ingredients and manufacturing advice online. A Google search using the phrase “how to make a supplement” directed us to instructional videos on YouTube. A Google Shopping search then led us to large, online vendors that sold all of the ingredients we wanted in powdered form (including the ones that are potentially dangerous). We also found common packaging materials, including empty gelatin capsules, a Cap-M-Quik gadget that fills 50 capsules at a time, white plastic containers, and clear plastic bands to be heat-sealed over the lids to prevent tampering. We ordered all of our supplies on Amazon and eBay. The total cost, including shipping, was \$190.62. Everything arrived within 10 days.

STEP 3 Manufacturing

We made our supplements on a desk in an editor’s office—a clear violation of the FDA’s Current Good Manufacturing Practices. First we measured and mixed the ingredients, then poured them into capsules using our Cap-M-Quik device. Packaging was a simple matter of counting out the capsules and putting them into a white plastic container, attaching a laser-printed label we designed, and shrink-wrapping a tamper-proof seal with a hair dryer. The whole process took about 10 minutes.

WHAT LABELS MEAN—AND DON’T

The weight-loss product we created carries on its label several statements often found on actual supplement labels. It’s important to understand the meaning and limitations of those claims.



1 Proprietary Blend

This means that the manufacturer has mixed several ingredients into a special blend. They must be listed in order of the amount the product contains, but the manufacturer doesn’t need to state how much of each ingredient is included. As a result, blends may contain dangerously high amounts of certain ingredients. Ours, for example, has a hefty dose of guarana, a powerful stimulant.

2 “These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.”

This disclaimer is required on labels

for supplements sold with claims about how they affect the body’s “structure or function.” It means that claims on the label haven’t been approved by the FDA.

3 FDA-Approved Facility

This isn’t a meaningful claim because the FDA doesn’t “approve” facilities that make supplements. It does provide guidelines for manufacturers outlining how they should, for example, keep equipment clean and prevent contamination. But the agency inspects only a fraction of supplement manufacturers, and

there’s no official seal indicating that those rules have been followed.

4 Supports Metabolism and Boosts Energy

The FDA forbids supplement manufacturers from making claims about a product’s ability to prevent or treat disease. Only companies that make prescription and over-the-counter drugs can do that. And they have to back up those claims with clinical evidence proving their drugs are safe and effective. But supplement manufacturers don’t have to provide any evidence for claims related to a product’s ability to improve the body’s structure or function. That’s why labels for their products often have claims about the

ability to “support,” “promote,” or “boost” metabolism and energy or bone health. They rarely have claims about a product’s ability to cure or prevent colds, cancer, or heart disease.

5 All Natural

This doesn’t mean “organic,” “free of genetically modified organisms,” or “no artificial ingredients,” or that a product is safe to take. Instead, it can mean whatever a manufacturer wants it to mean—or nothing at all.

STRONG, HAPPY AND HEALTHY

Swallowing a supplement seems like an easy way to achieve perfect health. But research shows there are no shortcuts. Instead, try exercise and these superfoods.

THE CLAIM

Build Stronger Bones

THE SUPPLEMENTS

CALCIUM: Taking daily calcium pills can increase bone density in people over 50 years old by 1 to 2 percent—not enough to prevent fractures, according to recent research. “That small gain is not worth the risks, including an increased likelihood of heart disease, kidney stones, and gastrointestinal problems,” says Consumer Reports’ chief medical adviser, Marvin M. Lipman, M.D.

VITAMIN D: Taking vitamin D alone doesn’t build bone. “The key is developing strong bones early in life—before age 30, when our bones naturally start to thin,” Lipman says.

WHAT TO DO INSTEAD

Teens need at least 1,300 mg of calcium daily, according to the Institute of Medicine. That’s when bones are forming. After age 30, get at least 1,000 mg of calcium and 800 IU of vitamin D daily to slow bone loss. Calcium-rich foods include milk and yogurt. Good sources of vitamin D are mushrooms, eggs, fortified milk, soy beverages, and salmon. Weight-bearing aerobic activities, such as walking and dancing, may slow bone loss. Aim for 30 minutes per day.

THE CLAIM

Improve Memory

THE SUPPLEMENTS

VITAMIN B12: For people with cognitive impairment because of vitamin B12 deficiency—common among older adults and vegetarians—eating B12-rich foods or taking supplements can improve memory, says Orly Avitzur, M.D., a neurologist and Consumer Reports’ medical director. “But if your B12 levels are normal, getting extra won’t give you a mental boost.”

GINKGO BILOBA: Research shows that it doesn’t improve or preserve memory, Avitzur says. A study that followed more than 3,000 people for six years found that it didn’t decrease the incidence of Alzheimer’s disease or dementia.

FISH OIL: Several studies have shown a link between higher blood levels of the oil’s omega-3 fatty acids and a decreased risk of dementia. But an analysis of data from 3,536 people over age 60 who took fish-oil supplements for six to 40 months concluded that they didn’t improve cognitive function.

WHAT TO DO INSTEAD

Get active; exercise may protect against cognitive decline. Set a weekly goal of 150 minutes of moderate exercise. And consider following the brain-boosting MIND diet. It includes lots of veggies, nuts, whole grains, olive oil, some

beans, fish, and poultry, plus a daily glass of wine. It limits red meat, sweets, and fried foods.

THE CLAIM

Prevent and Cure Colds

THE SUPPLEMENTS

ECHINACEA: Supplements containing this plant vary widely in composition, making them difficult to study. There are several species, and preparations can contain flowers, roots, or leaves. That said, a number of trials have examined the plant’s effect on colds. “While a few early studies showed promise,” Lipman explains, “more recent research has failed to prove that echinacea helps fight off colds or soothe symptoms.”

VITAMIN C: Regularly getting 200 mg per day may shorten your cold by a day or so, but megadoses won’t knock out a virus once it takes hold, Lipman says.

And it isn’t risk-free: Vitamin C may increase the risk of kidney stones, and high doses can cause diarrhea.

ZINC: Research published in July found that regularly sucking zinc lozenges (totaling 80 to 90 mg per day) throughout a cold may shorten it by almost three days. But, Lipman points out, “zinc won’t ease symptoms, and its side effects, including diarrhea, nausea, and a lingering metallic taste, may add to your miseries.”

WHAT TO DO INSTEAD

Wash your hands regularly. A study found that the average hand has about 150 species of bacteria. “And avoid touching your mouth, nose, and eyes—the primary ways bacteria and viruses enter your system,” Lipman says.

THE CLAIM

Reduce Joint Pain

THE SUPPLEMENTS

FISH OIL: High doses (seven to 17 pills per day)

can modestly reduce the pain, tenderness, and stiffness of rheumatoid arthritis, research has found. But large amounts can cause side effects, including upset stomach and diarrhea. For other types of joint pain, including the more common osteoarthritis, the evidence is mixed.

GLUCOSAMINE AND CHONDROITIN: Studies of this duo have yielded mixed results. A 2010 trial of 662 people with knee osteoarthritis found that they relieved pain for some people, but over time they were no more effective than a placebo. More recently, a larger study found that the pair didn’t relieve knee pain or prevent cartilage loss any better than a placebo.

WHAT TO DO INSTEAD

Gentle, low-impact exercise such as swimming and walking can relieve dull knee pain, Lipman says. For flare-ups, try over-the-counter medication such as ibuprofen (Advil and generic).

THE CLAIM

Relieve Depression

THE SUPPLEMENTS

ST. JOHN’S WORT: It may lift your mood, according to a 2016 review by the American College of Physicians (ACP). Some studies show that it might even be as effective as antidepressants such as fluoxetine (Prozac and generic) and sertraline (Zoloft and generic). But because the Food and Drug Administration doesn’t regulate the quality or potency of St. John’s wort products, the ACP doesn’t recommend it as a treatment.

Another reason to skip it: “St. John’s wort can interact dangerously with many medications, including allergy meds, birth-control pills, and cholesterol-lowering statins,” Lipman says.

OMEGA-3 FATTY ACIDS:

This compound may help lift symptoms of depression. An analysis of data from 1,373 patients with

depression found that it worked slightly better than a placebo at boosting mood—and was more beneficial for people with major depression than for those with milder depression. But “the improvements researchers detected were extremely slight,” Lipman says.

“There is not enough evidence to recommend fish oil as a treatment for depression.”

WHAT TO DO INSTEAD

For mild to moderate depression, try talk therapy, such as cognitive behavioral therapy (CBT), and getting 20 to 30 minutes of daily exercise, preferably outdoors. For severe depression, opt for CBT or prescription antidepressants, or even better, a combination of the two, Lipman says.

THE CLAIM

Lower Cholesterol

THE SUPPLEMENT

RED YEAST RICE:

Some studies have shown that certain red yeast rice supplements can lower LDL, or “bad” cholesterol. They’re thought to be effective because they contain monacolin K, the same ingredient that’s sold as the prescription cholesterol-lowering drug lovastatin (Mevacor and generic). But red yeast rice pills aren’t FDA-regulated. So, unlike prescription statins, there’s no way to know the quantity or quality of the ingredients. “And like statins,” Lipman says, “red yeast rice can cause side effects such as muscle, liver, and kidney problems.”

WHAT TO DO INSTEAD

Eat plenty of fiber from whole grains, fruit, vegetables, and beans—and limit red meats and full-fat dairy. Losing excess weight, exercising regularly, and quitting smoking have been found to increase HDL, or “good” cholesterol, while reducing the risk of heart attack and stroke.





WHAT DOES THAT SEAL ON THE LABEL MEAN?

Some vitamins, minerals, and herbs carry these symbols of approval. Here, what they can actually tell you about the supplements inside.

Some supplement labels carry emblems featuring reassuring words like “verified,” “certified,” or “approved.” That may lead you to think that the product is effective and safe to take.

But don’t confuse those labels with Food and Drug Administration (FDA) approval for a prescription drug, which means it’s been tested for safety and efficacy. “No supplement seal guarantees the safety or effectiveness of the ingredients in the bottle,” says Sharon Akabas, Ph.D., associate

director of educational initiatives at Columbia University’s Institute of Human Nutrition.

The seals featured below are granted by organizations known for certifying products. U.S. Pharmacopeia, NSF International, and ConsumerLab.com have long histories of certifying supplements. UL, which has traditionally certified consumer products like appliances and computers, will start certifying supplements this year.

None of these organizations

guarantees that a product has therapeutic value, nor do they test every batch of supplements shipped out. But their seal is a good indication that, for example, the product contains the amount of the ingredient advertised on the label and that it isn’t contaminated with dangerous substances, such as arsenic, bacteria, or lead.

While seals from these companies don’t reflect the high standards for safety and efficacy set by the FDA for drugs, they’re still

important because the agency doesn’t routinely do that kind of testing of supplements. Manufacturers must pay to get their supplements tested and certified, which may be a reason that only a tiny fraction of the 90,000 or so dietary supplements on the market carry one of these seals. USP, for example, has verified only 139 products to date.

Although we didn’t compare specific testing procedures, here is an overview of four seals you might see.



U.S. PHARMACOPEIA (USP)



CONSUMERLAB.COM



NSF INTERNATIONAL



UL

Does it buy initial test samples in stores or are they provided by the manufacturer?

Provided by the manufacturer.

Purchased in stores.

Provided by the manufacturer.

Provided by the manufacturer.

How often does it retest or spot-check?

One to six times per year using samples purchased in stores.

Once per year using samples purchased in stores.

Once per year using samples provided by manufacturer and occasionally purchased in stores.

Twice per year using samples purchased in stores.

How much do manufacturers pay to have each product certified?

\$3,000 to \$15,000 per product plus an initial audit fee of \$15,000 and a label fee of 1 cent per bottle.

\$3,000 to \$5,000 per product.

\$3,000 to \$5,000 per product plus an audit fee of about \$13,000.

\$2,000 to \$8,000 per product plus an audit fee of \$4,000 to \$7,000.

Are there products it won’t test?

Products known to contain unsafe ingredients and those marketed for erectile dysfunction, weight loss, or sports.

Products containing ingredients known to be unsafe.

Products marketed for weight loss or sexual enhancement.

Products containing ingredients known to be unsafe or those not recognized as dietary ingredients by the FDA.

slightly elevated cholesterol. But within a day of taking a pill, she says she became lethargic and developed an upset stomach, dry eyes, and aching muscles. Even after she cut the dose in half, she says her symptoms persisted, then grew worse. Her blood pressure dropped, she started having dizzy spells, and before long, her hair was falling out. “That’s when I stopped taking the supplement,” she says.

Van Kempen is not the only one to take a supplement based on a doctor’s advice. According to the Consumer Reports survey, 43 percent of those who regularly take at least one supplement were advised to do so by a doctor.

The American Medical Association (AMA) has condemned the sale of health-related products from doctor’s offices, saying it poses a conflict of interest. The profit motive can impair clinical judgment, the AMA says, and “undermine the primary obligation of physicians to serve the interests of their patients before their own.”

Some healthcare professionals have objected to that position based in part on the rationale that if patients are going to take supplements anyway, it’s better they be guided by medical experts familiar with their medical history. “Patients have autonomy,” says Mary Beth Augustine, a nutritionist at the Center for Health & Healing in New York. “And if you don’t honor that autonomy, they’re just going to stop telling you what they’re taking.”

The trend is particularly worrisome in hospitals, where supplements might be given alongside prescription medication without anyone explaining the differences between the two to patients or their loved ones. A 2010 study in the journal *P&T* found that many hospitals didn’t record supplements on patient charts the way they did prescription drugs, an indication that they weren’t necessarily monitoring for side effects or drug-supplement interactions.

Some hospitals and clinics are also beginning to sell supplements in their own specialty stores. Supplements sold inside a healing center might seem safer, but policies for deciding which ones to stock can

vary widely from one center to another.

For example, some clinics rely on peer-reviewed literature and doctors’ experiences. “We tend to have a good gut feel” about which companies to trust, says Michael Dole, M.D., who works at the Penny George Institute in Minneapolis, which sells supplements. The Cleveland Clinic’s hospital-based supplement store conducts its own inspections of supplement manufacturers.

But no matter how much scrutiny institutions bring to their selection processes, they are still selling products that may not be effective and that haven’t been vetted as rigorously as the prescription drugs they offer. As Augustine

Pharmacists argues that most dietary supplements don’t measure up to those standards and shouldn’t be included in hospital formularies.

“The right thing to do is to tell patients the truth,” says Arthur Caplan, Ph.D., a bioethicist at NYU Langone Medical Center. “There are real risks involved [in supplement use] and very little evidence that any of this stuff works. Period.”

Ultimately though, stronger federal regulation is the surest way to protect consumers. “Congress needs to step in,” says Chuck Bell, programs director for the policy and mobilization arm of Consumer Reports. “It should require supplement manufacturers to register

4 of 5

HERBAL SUPPLEMENTS TESTED BY THE NEW YORK STATE ATTORNEY GENERAL’S OFFICE IN 2015 DIDN’T CONTAIN THE HERBS LISTED ON THE LABELS.

told an audience of healthcare professionals earlier this year, navigating this terrain requires very careful language. “I’m never going to say to a patient that [a supplement] is safe,” she said. “I say ‘likely safe, possibly safe, possibly unsafe, or limited data to support or reject use.’ Am I being overly cautious? Yes.”

Making Supplements Safer

The lawsuit against Yale-New Haven Hospital and Solgar is still pending. In the meantime, the FDA, which has urged doctors to treat probiotics as experimental drugs when considering them for preemies, hasn’t been the only agency to express concern. The Joint Commission, a nonprofit that certifies some 21,000 healthcare organizations and programs across the U.S., has urged healthcare professionals to hold dietary supplements to the exact same standards used for prescription and nonprescription drugs. And the American Society for Health-System

their products and prove they are safe before they enter the marketplace.”

Some people say that major changes are going to be a tough sell. “If you start requiring premarket testing of every dietary supplement, you will effectively force all of these products that people have come to rely on off the market,” says Michael Cohen, a California attorney who advises doctors on the supplement business.

Still, there are a few signs that change is already afoot. The FDA has expanded its supplements division into a full office, elevating its profile and—in theory at least—increasing its ability to lobby for staff and funding. And Joshua Sharfstein, M.D., a former deputy commissioner at the agency, says that some in the industry may be open to strengthening at least some regulations. “We may be just one crisis away from that,” he says.

Additional reporting by Laurie Tarkan and Rachel Rabkin Peachman

Buying a TV can mean navigating an alphabet soup of choices ... HD, OLED, HDR? Cut through the confusion and find the one that's right for you, using our six simple questions and our expert ratings.

BY JAMES K. WILLCOX



IMAGE CONSCIOUS

Smart Set

Vizio P50-C1 \$910

This 50-inch Vizio smart TV uses Google Cast, so you'll need a mobile device for streaming. A tablet comes with the set.

RATING 61

Supersized

Sony XBR-65X930D

\$3,000

This 65-inch Sony UHD TV is among the bigger—and better—sets we've tested this year.

RATING 71



W

WATCHING new TV models roll out year after year used to be about as exciting as viewing reruns: no surprises. But the snoozefest turned into a thriller over the past couple of years, as manufacturers started introducing a lineup of new technologies that can dramatically improve picture quality. Now that those high-tech features are showing up in more and more of the models lining store shelves, the only problem is that you might feel like you need an engineering degree just to shop for a new TV.

Wander into the television section of an electronics store and you'll be asked whether you're looking for a 4K (also known as Ultra HD or UHD) set, an OLED (or organic LED) set, or a good old-fashioned HD model. Oh, and would you like some high dynamic range (HDR) to go with your smart TV?

To help you navigate the new obstacle course of acronyms and other unknowns, we've pared down the decision process to just six essential questions, covering everything from screen size to internet connectivity. (In the interest of keeping things simple, we're going to assume that you're shopping for your home's main TV—one that might go in a living room or den.) Pick the answers that are right for you and you'll save time and trouble, whether you're shopping for a new TV at an electronics store or hunting for bargains online.

Once you're ready to shop, be sure to refer to our TV Ratings (on page 42). They're the ultimate indication of picture quality and will also act as a roadmap, guiding you along the surest and swiftest path to your next TV set.

IS BIGGER BETTER?

YES, IF ... You want to maximize the excitement of every big game and blockbuster movie. Sets with screens as large as 65 inches are now common in both stores and living rooms, and prices for those larger sets, once prohibitively high, have fallen: You can pay as little as \$900 for a 65-inch 1080p (or standard HD) set. If you are going for a really big TV, you should consider buying a 4K model—with a regular HD set, you may see individual pixels, especially if you're sitting close to the screen. (For more on 4K, see page 39.)

NOT IF ... You're going to be sitting close to the screen. Avoid buying a monster set if your sofa is just 6 to 8 feet away—otherwise you may have to pan your head back and forth to take in the whole scene. Besides, picture quality is the single most important characteristic of a television (well, maybe next to the price). And getting a large TV doesn't guarantee great performance—in fact, a bigger screen size might even exaggerate flaws in the picture quality.

IS A SMART TV A SMART MOVE?

YES, IF ... You want the most convenient way to watch movies from streaming services such as Netflix and Amazon. If that's the case, a smart TV, which connects to your WiFi network, is an ideal solution. You don't need to buy any additional doodads; you'll use just one remote control for doing typical TV stuff like adjusting the volume, switching from cable to streaming services, or checking out program guides. These days it's easy to find an affordable smart TV: Research firm Gap Intelligence says that about two-thirds of all sets currently being sold have internet capability.

NOT IF ... You're looking for the most flexible way to stream programming to a TV. Instead of buying a smart TV, you can simply add a streaming media player, such as an Apple TV or Roku to any set—you can even keep your current model if you like it. Prices start as low as \$35 for a smaller stick-styled player. Some streaming players offer more content and variety than you'd get from a smart TV, and the interface may be easier to navigate. Additionally, streaming players tend to get updated with new and better features more frequently than smart TV platforms do.

SHOULD I CONSIDER A CURVE?

YES, IF ... You like the way the TV looks and most viewers will be watching from the sweet spot, directly in front of the screen. Curved screens have been around for a few years, and many people find them a refreshing alternative to flat screens. (You can wall-mount a curved screen TV, but some homeowners find the look to be unappealing.) In any case, a curved screen makes sense if you like to see your television as a piece of sculpture.

NOT IF ... You're expecting it to deliver a better picture. Curved screens are often pitched as delivering a more immersive viewing experience, but our testing shows that curved screens don't actually improve image quality. In fact, we've found that they can introduce a slight geometric distortion for those viewing the set at an angle.



Ahead of the Curve

Samsung UN65KS8500

\$2,500

Yes, the curved screen is striking—but what really matters is this 65-inch TV's great performance.

RATING 77





Best of the Bunch

LG OLED55E6P

\$4,000

Our top set so far for 2016, this 55-inch 4K OLED TV has a great picture and rich sound.

RATING 84

Tasty Leftover

LG 65EF9500 \$4,500

This 65-inch 4K OLED topped our 2015 TV Ratings—but it's getting harder to find.

RATING 81



IS AN OLED TV WORTH THE HIGH PRICE?

YES, IF ... You want the best picture quality available and have the budget to indulge your fine taste. For the past two years, OLEDs have been at the top of our TV Ratings in the larger screen sizes. These 4K sets offer rich, deep blacks that make most LCD-based sets pale by comparison. Plus, unlike LCD TVs, OLEDs have virtually unlimited viewing angles. That means everyone in the room gets a great picture. So far, only a single manufacturer—LG—offers them, and prices remain high.

NOT IF ... You can't see dropping \$4,000 or more on a TV—or if you'll be placing it in a very well-lit room or one that gets a lot of natural light. LED LCD sets tend to be brighter than OLEDs, so they're easier to watch in high-glare settings.

WHAT'S AN OLED?

The pixels in OLED TVs are made of materials that glow when hit by an electric current; they can also be turned off, creating rich, deep blacks. An LCD television is illuminated by an LED backlight, making it tough to achieve really deep blacks. As a result, dark scenes often lack depth and dimension.

IS 4K A MUST-HAVE?

YES, IF ... You like the idea of a state-of-the-art TV or want to future-proof your purchase. A 4K (or UHD) television has four times as many pixels—the little dots that make up a TV's picture—as a regular HD set. When a 4K TV plays UHD video, the images will appear a bit sharper, and the edges of any object on the screen will seem smoother. That will be most apparent if you're watching a big TV—say, 65 inches or more—or sitting particularly close to a smaller set. Nowadays, most good, high-end TVs are 4K models, so if you're looking for a well-rated set with great picture quality, it will probably be a 4K.

NOT IF ... You're looking to save money or are buying a smaller set. A 4K TV can cost hundreds more than a comparable 1080p (regular HD) television, though the difference in price is narrowing. And most people don't even see the extra detail in a 4K image if they're sitting a few feet back from a 40- or 50-inch screen. There's also still not much 4K content available—though it's rapidly increasing.

Where in the World Is 4K Programming

To take full advantage of a 4K TV, you need to watch 4K shows and movies. Here's where you can find content.

No question about it: A 4K TV delivers a sharper image than regular HD, especially when it's showing 4K programming, which is still somewhat limited. For instance, you won't find it on any of the major networks, though DirecTV has three 4K channels and Dish offers some 4K programming as video-on-demand. A handful of cable providers, including Comcast's Xfinity, also offer limited 4K content.

Streaming video services have the widest selection of 4K movies and TV series, and are constantly adding to their 4K libraries. (Netflix and Amazon also have ever-expanding selections of HDR titles.) Amazon Prime members get 4K free, but for Netflix you need a \$12-per-month Premium subscription.

FandangoNow (formerly M-Go) charges an additional \$1 to \$2 to rent 4K titles, and it supports Vidity, a new 4K and HDR download service.

On Vudu, you

can find 4K "Vudu UHD" titles with Dolby Vision HDR, which cost \$10 to rent or \$30 to own. Lesser-known services include Sony Ultra, a purchase-only streaming service that charges \$30 per movie, and UltraFlix, a service specializing in 4K rentals, which we found starting at \$2.

You can also find user-generated 4K videos on YouTube.

Remember that streaming 4K requires consistent broadband speeds of about 20 Mbps for optimal picture quality.

BEYOND STREAMING

There are a few 4K Ultra HD Blu-ray players on the market now, with prices ranging from about \$400 to \$700. They are capable of the best picture quality available today. Microsoft promised to release a new Xbox One S console this summer that will have an integrated 4K Blu-ray drive and start at about \$300.



WOULD I LIKE A 3D TELEVISION?

YES, IF ... You're a fan of the 3D genre. Hollywood is still making 3D movies, and a 3D TV—plus a few sets of special glasses—can bring that in-your-face experience into your home. But only a handful of manufacturers, including LG and Sony, now offer 3D as a feature, and only in selected sets. Though there are a decent number of 3D Blu-ray movies for sale, streaming services have pared back their 3D offerings over the past few years. Still, if you buy a 3D-capable television, you'll be able to stream some 3D movies from services such as Netflix and Vudu.

NOT IF ... You're like most consumers, who think 3D has been more of a bother than a benefit. These days, 3D television is being used as a cautionary tale in the tech industry about pushing out product features that consumers don't want. When Consumer Reports recently conducted research into what consumers want in a TV, people did want to know whether a television had 3D—but only to avoid buying it in case that feature makes the price higher. Several major TV brands, including Samsung and Vizio, have dropped their 3D models because of a lack of demand. None of that means that you won't like a 3D television, but it does suggest two things: Most people don't like wearing funny 3D glasses, and they don't believe 3D adds much to the cinematic experience.

Picture Perfect?

High dynamic range, or HDR, TVs are suddenly creating a lot of buzz. Here, we separate the facts from the hype.

High dynamic range, or HDR, is one of the biggest TV buzzwords this year. That new technology is all about increasing the contrast between the lightest and the darkest images a television can produce, for richer detail in both the shadows and in a daytime sky; for more dramatic highlights, such as sunlight glinting off armor; and for more lifelike images.

HDR-enabled TVs can also display a wider, richer range of colors—much closer to what we see in real life. New programming that makes the most of those capabilities is increasingly available.

The best of those sets have the

hardware needed to present HDR imagery in all its super-bright glory. But not all “HDR-capable” TVs can deliver that experience; some simply read the HDR metadata that comes along in the video stream but don't translate it to the screen. So yes, the movie will play, but you may not see any HDR benefits. In fact, we're seeing some HDR TVs in our labs that produce noticeably more dynamic images, and others that don't look much different from standard sets.

To add to the confusion, there are two competing types of HDR technology—HDR10 and Dolby Vision. HDR10 is the most common; Dolby

Vision is positioned as HDR10 with enhancements. Vizio TVs currently support only Dolby Vision. (A promised update for HDR10 compatibility hasn't yet arrived.) We recommend buying a TV that is HDR10-compatible or one that supports both formats, such as many LG models.

We are still studying HDR and evaluating its effectiveness. For now, the best indication of whether a TV will deliver the full HDR experience is the Ultra HD Premium logo, which was adopted by an industry group recently. It's not definitive however: Some brands, including Sony and Vizio, have declined to participate.

HOW TO SHOP SMARTER IN THE STORE

The secrets to sizing up TVs on a showroom floor. (Hint: Bring this magazine.)

This may come as a surprise, but it's practically impossible to evaluate a TV's picture quality in the store, according to Claudio Ciacchi, who heads up TV testing at Consumer Reports. “The brightness, color, and sharpness are all cranked to make the picture pop from across the floor in the retail environment,” Ciacchi says. “You'll only get a real sense of its performance once you get the TV home and adjusted for your viewing environment.” To choose a set with great picture quality, your best bet is to rely on our Ratings.

That said, you *can* get a feel for a TV's viewing angle in a store, at least relative to the other TVs on display. Move to the side of the TV and see how much the picture quality washes out, then move to the next set and do the same thing. Remember: It's not exactly what you're going to see at home, but it will give you some indication. See our Ratings for viewing-angle scores.

Today's thinner sets can deliver subpar sound; always adjust the volume to assess the sound quality.

Whatever your in-store experience, go home and try out your new TV right away—and return it if you're disappointed.

Last, say no to pricey HDMI cables and extended warranties—cheaper cables work just as well, and many credit cards will double the original warranty.



RAISING THE BAR

The next time you're admiring a TV's super-svelte profile, consider that its design probably makes for less-than-stellar sound quality. But there's an easy fix: a sound bar speaker system. Here are our can't-miss picks.

\$350 or LESS

1 | Sharp HT-SB602 \$330

Have a he-man-sized TV with wimpy sound? You can add some sonic muscle without busting your budget by choosing this 2.1-channel sound bar, designed for TVs 60 inches or larger. The HT-SB602 offers very good overall sound quality, and the piano-black finish on the sound bar and matching wireless subwoofer makes them an attractive couple. It has Bluetooth with near field communication (NFC) for easy pairing with mobile devices. Two HDMI inputs (and other audio connections) let you connect and switch among other pieces of gear using the included remote control.

RATING 65

\$400 to \$600

2 | Samsung HW-J6500 \$480

If you love the look of a curved TV but its sound isn't quite so stunning, this WiFi model from Samsung is an elegant remedy. The curved, aluminum main enclosure houses six front-firing speakers, and a wireless subwoofer adds some low-end oomph. It can also become part of a multiroom setup when paired with other Samsung wireless speakers. The sound bar will connect to your home network using either a wired Ethernet or WiFi connection, and it can access several streaming music services. It will also connect to a compatible Samsung TV via Bluetooth.

RATING 56

\$700 or MORE

3 | Sonos Playbar \$700

This WiFi model from Sonos is a sound bar with very good sound and lots of versatility. Unlike the Samsung option above, it can be used as the front-channel speaker in a full-blown multichannel surround-sound system in a single room. And it can stretch beyond its TV day job by teaming up with other Sonos speakers in a multiroom audio setup. A downloadable app can turn your phone or tablet into a remote control.

RATING 61

RATINGS



Samsung
UN65KS8500

The Best TVs of 2016

These are the top-rated TVs we've tested this year. As you can see, the best of the larger sets have UHD, or 4K, resolution (see page 39 for details), and virtually all top TVs can connect to the internet to access streaming services such as Netflix. However, even smart TV owners may still prefer to use a Roku or other streaming player (see page 36). Pay special attention to our Ratings for picture quality, which is almost impossible to judge by looking at a TV in the store or online.

☒ CR Best Buy ☒ Recommended

● Excellent ● Very Good ○ Good ● Fair ● Poor

Rec.	Rank	BRAND & MODEL	PRICE	SCORE	HD Picture Quality	Ultra HD Performance	3D Performance	Viewing Angle	Sound Quality	TV Resolution Type	Smart TV	HDR	Screen Size (in.)
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A. 60-INCH AND LARGER TVs

<input checked="" type="checkbox"/>	1	Samsung UN65KS8500	\$2,500	77	●	●	NA	○	●	Ultra HD	●	●	65
<input checked="" type="checkbox"/>	2	LG 60UH8500	\$1,800	75	●	●	○	●	○	Ultra HD	●	●	60
<input checked="" type="checkbox"/>	3	LG 65UF9500	\$3,500	75	●	●	●	●	●	Ultra HD	●	●	65
<input checked="" type="checkbox"/>	4	Samsung UN65KS9000	\$3,000	75	●	●	NA	○	●	Ultra HD	●	●	65
<input checked="" type="checkbox"/>	5	LG 65UH7700	\$2,000	74	●	●	NA	●	○	Ultra HD	●	●	65
<input checked="" type="checkbox"/>	6	LG 60UH6550	\$1,360	74	●	●	NA	●	○	Ultra HD	●	●	60
<input checked="" type="checkbox"/>	7	LG 65UH615A	\$1,400	72	●	●	NA	●	○	Ultra HD	●	●	65
<input checked="" type="checkbox"/>	8	Sony XBR-65X930D	\$3,000	71	●	●	NA	○	●	Ultra HD	●	●	65
<input checked="" type="checkbox"/>	9	LG 65UH6150	\$1,500	66	●	●	●	●	○	Ultra HD	●	●	65
	10	Vizio P65-C1	\$2,000	63	●	●	NA	○	●	Ultra HD	●	●	65
	11	Sony XBR-65X850D	\$2,200	62	●	●	NA	●	●	Ultra HD	●	●	65
	12	Vizio D60-D3	\$700	60	●	NA	NA	○	●	HD	●	●	60
	13	Sharp LC-60N7000U	\$1,100	59	○	●	NA	●	○	Ultra HD	●	●	60
	14	Philips 65PFL7900	\$1,000	55	○	●	NA	○	○	Ultra HD	●	●	65

B. 55- TO 59-INCH TVs

<input checked="" type="checkbox"/>	1	LG OLED55E6P	\$4,000	84	●	●	●	●	●	Ultra HD	●	●	55
<input checked="" type="checkbox"/>	2	Samsung UN55KS8000	\$1,500	78	●	●	NA	○	●	Ultra HD	●	●	55
<input checked="" type="checkbox"/>	3	Samsung UN55KS9500	\$2,500	74	●	●	NA	○	●	Ultra HD	●	●	55
<input checked="" type="checkbox"/>	4	Samsung UN55KU6500	\$1,000	74	●	●	NA	○	●	Ultra HD	●	●	55
<input checked="" type="checkbox"/>	5	LG 55UH6550	\$1,000	73	●	●	NA	●	○	Ultra HD	●	●	55
<input checked="" type="checkbox"/>	6	LG 55UH7700	\$1,200	73	●	●	NA	●	○	Ultra HD	●	●	55
<input checked="" type="checkbox"/>	7	Sony XBR-55X930D	\$2,000	71	●	●	●	●	●	Ultra HD	●	●	55
	8	LG 55LH5750	\$700	61	●	NA	NA	●	○	HD	●	●	55
	9	Insignia NS-55DR710NA17	\$560	59	●	○	NA	○	●	Ultra HD	●	●	55
	10	TCL 55US5800	\$550	57	●	●	NA	●	●	Ultra HD	●	●	55

C. 46- TO 52-INCH TVs

<input checked="" type="checkbox"/>	1	Samsung UN49KS8000	\$1,450	73	●	●	NA	○	○	Ultra HD	●	●	49
<input checked="" type="checkbox"/>	2	Samsung UN49KU7500	\$1,300	72	●	●	NA	○	○	Ultra HD	●	●	49
<input checked="" type="checkbox"/>	3	LG 49UH6100	\$600	66	●	●	NA	●	○	Ultra HD	●	●	49
	4	Vizio D50u-D1	\$550	63	●	○	NA	●	●	Ultra HD	●	●	50
	5	Vizio P50-C1	\$910	61	●	●	NA	●	●	Ultra HD	●	●	50
	6	LG 49LH5700	\$500	58	●	NA	NA	●	●	HD	●	●	49
	7	Vizio D48-D0	\$400	58	●	NA	NA	○	○	HD	●	●	48
	8	TCL 48FS3750	\$300	53	●	NA	NA	●	●	HD	●	●	48

D. 39- TO 43-INCH TVs

<input checked="" type="checkbox"/>	1	LG 43UH6500	\$720	66	●	●	NA	●	○	Ultra HD	●	●	43
	2	Insignia NS-43DR710NA17	\$380	61	●	●	NA	○	○	Ultra HD	●	●	43
	3	Vizio D43-D2	\$330	61	●	NA	NA	●	○	HD	●	●	43
	4	Philips 43PFL4609	\$340	61	●	NA	NA	●	●	HD	●	●	43
	5	Hisense 40H4C1	\$280	58	●	NA	NA	○	●	HD	●	●	40
	6	Vizio D40-D1	\$300	56	●	NA	NA	○	●	HD	●	●	40
	7	Hisense 40H5B	\$280	56	●	NA	NA	●	●	HD	●	●	40



Scan any page in this section using the Blippar app for our TV Buying Guide and to shop the products featured in this article (see page 7 for details).



LG
OLED55E6P



Samsung
UN49KS8000



LG
43UH6500



Vizio
D32x-D1

☒ CR Best Buy ☒ Recommended

● Excellent ● Very Good ○ Good ● Fair ● Poor

Rec.	Rank	BRAND & MODEL	PRICE	SCORE	TEST RESULTS					FEATURES			
					HD Picture Quality	Ultra HD Performance	3D Performance	Viewing Angle	Sound Quality	TV Resolution Type	Smart TV	HDR	Screen Size (in.)

E. 32-INCH TVs

	1	Vizio D32x-D1	\$200	59	●	NA	NA	●	●	HD	●		32
	2	Philips 32PFL4609	\$200	58	●	NA	NA	●	●	HD	●		32
	3	LG 32LH570B	\$180	57	●	NA	NA	●	●	HD	●		32
	4	Insignia NS-32D310NA17	\$130	56	●	NA	NA	●	●	HD			32
	5	TCL 32S3750	\$160	52	●	NA	NA	●	●	HD	●		32
	6	Magnavox 32ME306V	\$200	51	●	NA	NA	●	●	HD			32

F. 29-INCH AND SMALLER TVs

<input checked="" type="checkbox"/>	1	LG 28LH4530	\$200	59	●	NA	NA	●	●	HD	●		28
<input checked="" type="checkbox"/>	2	Vizio D28h-D1	\$180	58	●	NA	NA	●	●	HD	●		28
	3	Vizio D24-D1	\$150	54	●	NA	NA	○	●	HD	●		24
	4	LG 24LH4530	\$150	52	●	NA	NA	●	●	HD			24
	5	Insignia NS-24ER310NA17	\$140	50	●	NA	NA	●	●	HD	●		24



LG
65EF9500

2015 TVs—Get 'Em While You Can

All of the big-screen TVs below are worthy contenders for a spot in your living room, if you can still find them. Because they're leftover sets from 2015, you may be able to score especially good deals lower than the prices we've listed. If you're buying online, just confirm whether the TVs are used or refurbished models—those can be a good value, but you'll want to double-check the return and warranty conditions.

☒ CR Best Buy ☒ Recommended

● Excellent ● Very Good ○ Good ● Fair ● Poor

Rec.	Rank	BRAND & MODEL	PRICE	SCORE	TEST RESULTS					FEATURES			
					HD Picture Quality	Ultra HD Performance	3D Performance	Viewing Angle	Sound Quality	TV Resolution Type	Smart TV	HDR	Screen Size (in.)

60-INCH AND LARGER TVs

<input checked="" type="checkbox"/>	1	LG 65EF9500	\$4,500	81	●	●	●	●	○	Ultra HD	●	●	65
<input checked="" type="checkbox"/>	2	LG 60UH8500	\$1,800	75	●	●	○	●	○	Ultra HD	●	●	60
<input checked="" type="checkbox"/>	3	LG 60UH6550	\$1,360	74	●	●	NA	●	○	Ultra HD	●	●	60
<input checked="" type="checkbox"/>	4	Samsung UN60JU6500	\$1,300	71	●	●	NA	○	○	Ultra HD	●		60
<input checked="" type="checkbox"/>	5	Sony Bravia XBR-65X850C	\$1,800	71	●	●	○	○	○	Ultra HD	●	●	65
<input checked="" type="checkbox"/>	6	Sony Bravia KDL-65W850C	\$950	69	●	NA	●	○	○	HDTV	●		65
<input checked="" type="checkbox"/>	7	Samsung UN65J6300	\$1,700	68	●	NA	NA	○	○	HDTV	●		65
	8	Vizio E60-C3	\$700	63	●	NA	NA	○	●	HDTV	●		60

55- TO 59-INCH TVs

<input checked="" type="checkbox"/>	1	LG 55EG9100	\$1,800	80	●	NA	○	●	○	HDTV	●		55
<input checked="" type="checkbox"/>	2	Samsung UN55J620D	\$600	70	●	NA	NA	○	○	HDTV	●		55
<input checked="" type="checkbox"/>	3	LG 55LF6000	\$500	67	●	NA	NA	●	○	HDTV			55
	4	Vizio M55-C2	\$800	64	●	○	NA	○	○	Ultra HD	●		55

New digital platforms can manage your portfolio for a fraction of the price of a human financial adviser. Is it time to make a switch?

BY CYBELE WEISSER

THE RISE OF THE ROBO- ADVISER

SHORTLY AFTER Jared Franklin started working in 2007, he also began saving. But the now-29-year-old product manager at a Baltimore financial services start-up wasn't sure how to create a balanced, diversified portfolio. On the recommendation of his parents, he opened an account with a financial adviser. But when his quarterly statements started coming in, he wondered what he was getting for the fees he paid. "I couldn't understand why I was paying outrageous amounts when my balances weren't growing much," Franklin says.

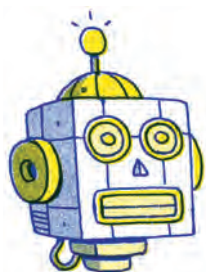
Then, three years ago, he decided to try Wealthfront, one of a new breed of online advisers that use computer algorithms to recommend diversified, low-cost portfolios. Because Franklin has referred several of his friends to Wealthfront, he's paying no adviser fees, but he will eventually pay 0.25 percent per year. "The strategy is simple, and at the end of the day I think the return on my investment will be better than the return I'd get on my own or with an adviser," says Franklin. "So far I'm pleased."

The frustration with fees that led Franklin to move his money is one that millions of individual investors share. The fact is, human financial advisers tend to be costly, usually charging around 1 percent of assets per year, regardless of whether the investments they manage gain or lose money. On an initial portfolio of \$500,000, that would cost you almost \$750,000 over a 30-year period, assuming average investment returns of 6 percent. Other advisers use a commission-based fee structure, lopping 3 to 6 percent off the top on any fund or annuity you buy.

Until recently, the only other option for fee-averse investors has been to manage their own accounts. Studies have shown, however, that such self-directed investors usually underperform the market—often by a lot—as a result of overtrading, panic-selling during downturns, and trying to time the market. A recent study by research firm Dalbar, for example, found that over a 30-year period, the Standard & Poor's 500 Index had an annualized return of 10.35 percent, while the average self-directed equity mutual fund investor earned only 3.7 percent.



HOW A ROBO'S BRAIN WORKS



Entrusting your retirement savings to a computer may give even technophiles pause. But the investment strategies devised and managed by them are hardly something the computers came up with on their own. To suggest your investment strategy and then manage your money, robo-advisers use a human-created algorithm—a complex mathematical formula that considers three main elements: the historical long-term performance data of assets like stocks, bonds, and commodities; information you’ve provided about your investing goals, timeline, and how much money you have to invest; and a menu of low-cost investments, primarily index funds and ETFs.

With that data, the algorithm decides the best way to achieve your financial goals. It will suggest an appropriate proportion of stocks, bonds, and cash, then over time buy and sell specific investments to make sure your asset allocation goals are met.

Because the various robo-adviser platforms draw on the same historical data and offer comparable ETFs and index funds, the portfolios they suggest for investors with similar profiles may differ little from one another. For example, no matter which robo-adviser a young investor who doesn’t expect to retire for a number of decades uses, he will probably be recommended a portfolio that’s almost entirely invested in equities (or stocks). That’s because over the long-term, stocks have outperformed other investments such as bonds and commodities, offering someone with more than a few years to go until retirement time to absorb the higher risk and maximize gains.

That created an opening for robo-advisers to offer investors a solution that may be better and cheaper, by primarily using computer algorithms to select investments for you. They charge just a fraction of the cost of a human adviser—about 0.15 to 0.5 percent per year, depending on how much you invest. Most robos have little or no investment minimums, so you don’t have to be mega-rich to benefit from their advice. They recommend portfolios made up of low-cost index mutual funds that track the shares of an index like the S&P 500, and exchange-traded funds (ETFs), which are similar to index funds but trade more like a stock. Wealthfront, for example, charges just 0.25 percent per year for accounts over \$10,000 (smaller accounts are free), with a \$500 minimum investment. At Betterment, another big robo-adviser firm, the fees range from 0.15 to 0.35 percent, with no minimum at all.

In addition to those firms, asset management giants like Schwab and Vanguard have rushed to catch up to the competition by launching their own versions. Robo-advice is even becoming specialized; in May, former Wall Street star and CEO of Citi Private Bank Sallie Krawcheck launched Ellevest, a robo-adviser that caters to women. It takes into account that because women live longer than men, they have a longer investing horizon and need a different asset allocation. “Robo-advisers are a phenomenon,” says Grant Easterbrook, who recently launched his own 401(k) advice firm. “Given the industry’s legacy of low transparency, expense, and conflicts of interest, this has been a long time coming,” he adds.

Certainly, robo-advisers are gathering assets fast. In just a few years, they’ve pulled in an estimated \$53 billion, according to the Boston financial research firm Aite Group. Though that’s a small slice of the \$20 trillion of retail investors’ total invested assets today, a recent report from Deloitte Consulting predicts that robos will be managing \$5 trillion to \$7 trillion within a decade. Moreover, though robos were initially aimed at tech-savvy millennials with small amounts to invest, they will probably take a substantial cut of the

assets expected to flow from retiring baby boomers who are rolling employer-held 401(k) plans into self-managed IRAs. The services are already gaining traction with older investors: Betterment, for example, says that about a third of the assets it manages are from customers older than 50. “Robo-advisers are forcing human advisers to offer a better value proposition on top of what technology can already provide,” says financial planner and industry expert Michael Kitces, based in Columbia, Md.

Getting Started

Setting up a robo-portfolio is a simple process. Just answer a series of questions to determine your risk tolerance, financial goals, and time horizon, and the computer picks an asset allocation and investments for you (if you like, you can usually tweak the asset allocation). The whole process can take less than 15 minutes. On the websites, you can see exactly what you’re holding and how each investment is performing.

Most robos periodically rebalance your account to make sure your stock and bond allocation doesn’t stray from your model. Some even offer tax advice, letting you know when it might be smart—or not—to sell your stock holdings. And unlike brokerage firms, robos don’t profit from investor trades, so they encourage their customers to buy and hold, and avoid damaging their returns by overtrading. “Most brokerage firms want you to trade even if it means doing the wrong thing, because that’s how they make money,” says Jon Stein, CEO of Betterment. “Our interests are aligned with our customers.” Because robos typically recommend a portfolio made up of ETFs and index funds, your returns will closely match the performance of those funds, minus the robos’ small fee.

Going robo requires a fair amount of faith in the technology, however, especially when the market is rocky. After all, if the stock market hits a rough patch, you can’t always call your adviser for reassurance—nor will your robo-adviser call you, as a human adviser may, to offer assurances. Your robo may, however, send you

a comforting email. According to some robo-firms, few customers pulled out or even changed their asset allocation during the tough period for the markets this past January. “We found that clients were more likely to call and check the website, but they stayed the course,” says Tobin McDaniel, president of Schwab Wealth Investment Advisory.

But human advisers argue that such a brief blip can’t be compared with a true bear market like the one that began in 2007, and robo-advisers weren’t around for that. “Many users of robo-services are young and invested aggressively. When you have a real bear market, those accounts are going to be hit the hardest and those investors are going to be the most skittish. That will be the real test for the robo-advisers,” says Darren Tedesco, a partner with Commonwealth Financial Network based in Waltham, Mass.

Moreover, there are some things that a computer-adviser simply can’t do. It can’t help you prioritize between several financial goals (say, paying down debt vs. saving), navigate a tricky financial situation like a divorce, or offer advice about how to save for college or handle your elderly parents’ financial woes. “The typical questions I get have nothing to do with asset allocation or investment projections,” says Boston-based financial planner Steve Stanganelli. “Of course, saving for retirement is important. But it’s only one of many pieces of a financial plan.” New York City retiree Dora Keller, 73, says that without her financial adviser, she might not even know how to formulate her questions. “The personal aspect is so important,” Keller says. “They’ve done this before, and they get what I mean right away. It’s a safe place to say things. To me, it really feels worth it.”

A human financial adviser can also give you a holistic, big-picture look at your total wealth, which is likely to include a 401(k) or other employer-held savings plan, or even a pension. Once all of those elements are considered together, notes Stanganelli, an investor’s ideal allocation might be different from the one the robo recommends. Some robo-advisers, however, will sync



Find the Adviser That Suits Your Style

You know you want smart financial advice. But would you be comfortable turning over some major decisions to a computer, or would you be better off paying for a little—or a lot—more hand-holding? Take the following quiz to sort out where you stand.

When it comes to your personal finances, what are your major priorities?

- ☐ A. Figuring out how to set up a diversified portfolio.
- ☐ B. A diversified retirement portfolio, plus some basic estate planning.
- ☐ C. I have so much going on, I don’t even know where to begin.

How do you do your taxes?

- ☐ A. I use tax software.
- ☐ B. I throw everything in a bag and take it to the local H&R Block.
- ☐ C. That’s what I pay my accountant for.

If the Dow drops 500 points, you do what?

- ☐ A. I take a deep breath and stay the course.
- ☐ B. I freak a little, but then I talk to someone I trust or research a bit to calm down.
- ☐ C. First I call my adviser, then I call my therapist, then I call my adviser again.

What financial chores do you handle online?

- ☐ A. Pretty much everything—banking, budgeting, investing, and taxes.
- ☐ B. I do some online banking and investing but prefer to do other things offline.
- ☐ C. I occasionally check my balances, but I don’t make any online transactions.

When was the last time you looked at your portfolio?

- ☐ A. When I clicked on the bookmarked page by accident.
- ☐ B. I check in a couple of times each year.
- ☐ C. I’m looking at it right now and thinking about making some trades.

Which statement best captures the way you use technology?

- ☐ A. I do everything on my mobile device.
- ☐ B. I still use an iPhone 4S.
- ☐ C. I remain partial to pen and ink.

How frequently do you think you should check up on your portfolio?

- ☐ A. As seldom as possible.
- ☐ B. A few times each year, so I can take action if something looks really out of whack.
- ☐ C. I want my portfolio continually monitored.

What major life changes do you expect in the next five years?

- ☐ A. I might get a new job.
- ☐ B. My partner and I are hoping to have a child.
- ☐ C. I’m planning to retire, downsize my home, and use the proceeds of my investment income to fund extensive travel.

Which quote best matches your personal philosophy?

- ☐ A. “To be simple is to be great.”—Ralph Waldo Emerson
- ☐ B. “Never be afraid to ask for help.”—Demi Lovato
- ☐ C. “Alone we can do so little; together we can do so much.”—Helen Keller

WHAT IT MEANS

Mostly A’s Best adviser: robo. You’re comfortable with technology and prefer to take a hands-off approach. Over the long haul, using a robo-adviser instead of a human could save you hundreds of thousands in fees.

Mostly B’s Best adviser: hybrid. You’re fairly self-sufficient, but your financial life is a little too complicated for a solo approach. A hybrid model will give you the option to reach out to a human adviser for extra advice or reassurance.

Mostly C’s Best adviser: human. You have some big financial decisions and/or challenges on your plate, and you’re not eager to sort through the muck on your own. Before you hire any adviser, make sure you understand how he or she will be compensated. Your adviser should also adhere to the fiduciary standard that requires that your best interests are put first.

HOW ROBOS HANDLE THE 'F' WORD

As traditional and robo-advisers alike attempt to entice baby boomers to sign up with them to get advice on rolling over the trillions of dollars in their 401(k) plans, the Department of Labor, which regulates tax-advantaged savings accounts, has enacted a new “fiduciary rule” to protect those investors. The rule, which takes effect in January 2018, requires that advisers put their clients’ best interests above their own when managing their retirement accounts. In other words, when choosing between investments, your adviser must recommend the one that he or she feels is best for your situation, not the one that offers a higher profit or commission. When the rule takes effect, all advisers—which includes brokers, insurance agents, and yes, computer-driven robo-advisers—will be held to that standard as well.

Many robo-advisers say they expect to benefit from the new rule. “It’s really good for us,” says Betterment CEO Jon Stein. That’s because Betterment, and other similar firms, charge you solely for advice—they don’t profit from recommending one ETF vs. another. Some robo-advisers that are offshoots of larger brokerage firms and recommend their own firms’ products, however, may need to restructure their fees or use their own products in order to comply with the rules, says adviser Michael Kitces. It’s also worth keeping in mind that because this new regulation applies only to tax-advantaged retirement accounts, advisers could skirt the rule by limiting their practice to taxable accounts, Kitces says. But buyer beware: “If any company is offering different services for taxable accounts, that should be a major red flag for any investor,” Kitces warns.

your 401(k) and other holdings with your robo account for a more holistic view.

In order to offer robo-investors a little more hand-holding, some firms have launched hybrid services that pair robo-advice with on-call human advisers. One such firm, Personal Capital, charges a monthly fee of 0.49 to 0.89 percent of assets (depending on your account balance). Vanguard’s service, available for customers with account balances of \$50,000 to \$500,000, has an annual fee of 0.30 percent. Both firms allow you the option to contact a professional adviser.

“We think the true value of a program like this is when you have a life event like a marriage or job change, you have the ability to reach out and have a conversation about it,” says Frank Kolimago, head of Vanguard’s Personal Advisor Services. “That’s the best of both worlds,” he adds.

Still, even with a hybrid service, you won’t always get the benefit of a relationship with a single person who is deeply familiar with your situation and has followed your financial life over a long period of time.

Adding It Up

So would you be better off ditching your pricey human adviser for a cheaper computer solution? The answer depends on a variety of factors, including your financial circumstances, reaction to risk, and comfort level with recently developed technology. “It’s just a matter of what makes sense for you,” says adviser Kitces. So consider the four factors below, then take the quiz in “Find the Adviser That Suits Your Style,” on page 47, to help you decide which option best suits your situation.

The size of your portfolio. If your total savings is less than six figures, it probably isn’t worth paying for a human adviser. Robos’ low minimums make them the appropriate option for investors with smaller portfolios, or for those who are just starting out, says Tricia Rothschild, head of Global Advisor Solutions at investment research firm Morningstar.

Your options for savings. If you or your spouse have access to a 401(k) or other tax-advantaged employer-sponsored savings



plan, that is probably the best place for you to funnel some or all of your retirement savings contributions (especially if you qualify for a match). A human adviser can review your 401(k) and factor that in when recommending an overall allocation; many robos don’t take employer-based plans into account, so if that’s where you mainly save, you probably won’t get any advice in that area.

Your overall financial situation. Even human advisers agree that for setting up a basic, diversified portfolio, it’s tough to beat the low cost of a robo-adviser. But “there’s a natural evolution where life goes from being somewhat simple to more complicated,” says Elliot Weissbluth, head of Chicago-based financial services firm High Tower. If you’re trying to decide among several financial goals, or your financial plans involve one or several other people (such as a spouse or aging parents), you may need to talk to someone who can run the numbers on several different scenarios.

Your prior track record. Did you freak out during the bear market of 2008 and pull out of stocks? If so, keep in mind that it’s pretty easy to bail out of a robo-portfolio with just a few clicks. If you tend to get very anxious about market drops, you may benefit from the ability to reach a knowledgeable person who knows you on the phone. “An adviser serves as a coach, like having a trainer at the gym,” Rothschild says.

RATINGS



Vanguard

Investment Companies: Which Ones Do It Best?

Today the number of companies offering robo-advice are a sliver of the investment management landscape, too small to capture in our Ratings. Our tables below, therefore, rate more traditional investment companies on the services they provide. A total of 118,662 ratings from small investors and 45,447 from large investors were provided by subscribers. Reader score reflects overall satisfaction with the handling of the investment account. A score of 100 means that all respondents are completely satisfied; 80, that respondents are very satisfied, on average; 60, fairly well-satisfied. Differences of fewer than 5 points are not meaningful for small investors; 4 points for large investors. Source: Consumer Reports' 2015 Spring Survey.

Better ← → Worse

INVESTMENT FIRM	READER SCORE	TEST RESULTS				
		Investment Returns	Met Goals	Customer Service	Advice	Online Reports

RATINGS BY LARGE INVESTORS (\$500,000-PLUS INVESTED)

Vanguard	94	●	●	●	●	●
T. Rowe Price	89	●	●	●	●	●
USAA	89	●	●	●	●	●
Edward Jones	88	●	●	●	●	●
Scottrade	88	●	●	●	●	●
Northwestern Mutual	87	●	●	●	●	○
Charles Schwab	87	●	●	●	●	●
Thrivent Financial	87	●	●	●	●	●
E-Trade	87	●	●	●	○	●
Stifel	86	●	●	●	●	●
First Command Financial Services	86	●	●	●	○	●
Raymond James	86	●	●	●	●	●
Fidelity Investments	86	●	●	●	●	●
Janney Montgomery Scott LLC	86	●	●	●	●	○
Commonwealth Investment Advisors	86	●	●	●	●	●
Ameriprise Financial	85	●	●	●	●	○
RBC Wealth Management	85	●	●	●	●	○
Robert W. Baird & Co.	85	●	●	●	●	●
TIAA	85	●	●	●	●	○
American Funds	85	●	●	●	●	●
OppenheimerFunds	84	○	●	●	●	○
UBS Financial Services, Inc.	83	●	●	●	●	○
TD Ameritrade	83	○	●	●	○	○
Waddell & Reed	83	●	●	●	●	○
LPL Financial	82	○	●	●	●	○
Merrill Lynch	82	●	●	●	●	○
Morgan Stanley	82	○	●	●	●	○
Wells Fargo	81	○	●	●	●	○
Prudential Financial	81	○	●	●	●	●
Voya Financial	80	○	●	○	●	○
Chase Bank	77	○	●	○	●	○

RATINGS BY SMALL INVESTORS (LESS THAN \$500,000 INVESTED)

Vanguard	89	●	●	●	●	●
Dodge & Cox	88	●	●	●	—	●
USAA	87	●	●	●	●	●
TradeKing	85	○	○	●	—	○
Navy Federal Credit Union	85	○	●	●	—	●
T. Rowe Price	84	●	●	●	●	○
Scottrade	84	○	○	●	●	○
Commonwealth Investment Advisors	83	●	●	●	●	—
Robert W. Baird & Co.	83	●	●	●	●	○
Hilliard Lyons	83	●	●	●	●	—
D.A. Davidson & Co.	82	○	○	●	●	—
Charles Schwab	82	○	○	●	○	○
Edward Jones	82	○	●	●	●	●
RBC Wealth Management	81	○	●	●	●	○
Thrivent Financial	81	○	○	●	●	○
Sharebuilder (Capital One Investing)	81	○	○	●	—	○
TD Ameritrade	80	○	○	●	○	○

INVESTMENT FIRM	READER SCORE	TEST RESULTS				
		Investment Returns	Met Goals	Customer Service	Advice	Online Reports

RATINGS BY SMALL INVESTORS continued

E-Trade	80	○	●	●	○	○
TIAA	80	○	●	●	●	○
Fidelity Investments	80	○	○	●	○	○
Raymond James	80	○	●	●	●	○
Northwestern Mutual	80	○	●	●	●	○
State Farm	80	○	○	●	●	○
Interactive Brokers Group	79	○	○	●	—	○
American Century Investments	79	○	○	●	●	○
Stifel	79	○	●	●	●	○
Firsttrade	79	○	○	●	—	○
American Funds	78	○	○	●	●	○
Allianz	78	○	○	●	●	○
Waddell & Reed	78	○	●	●	●	○
AssetBuilder	77	○	●	●	●	○
Jackson National	77	○	○	●	●	○
Cetera Financial Group	77	○	○	●	●	○
Janney Montgomery Scott LLC	77	○	●	●	●	○
LPL Financial	77	○	○	●	●	○
Lincoln Financial Group	76	○	○	●	●	○
Franklin Templeton Investments	76	○	○	●	●	○
Folio Investing	76	○	○	○	—	●
Pershing LLC	76	○	○	○	○	○
Janus Capital Group	76	○	○	●	—	○
Principal Funds	76	●	○	○	●	○
Nationwide Financial	76	○	●	○	○	○
UBS Financial Services, Inc.	76	○	●	●	●	○
New York Life	75	○	○	○	●	○
Ameriprise Financial	75	○	●	○	●	○
VALIC	75	○	○	○	○	○
MassMutual	75	○	○	○	●	○
Prudential Financial	74	○	○	○	○	○
Voya Financial	74	○	●	○	○	○
First Command Financial Services	74	○	●	○	●	○
Merrill Lynch	74	○	○	○	●	○
MetLife	74	○	○	○	●	○
Wells Fargo	74	○	○	○	●	○
Morgan Stanley	73	○	○	○	●	○
Primerica	73	○	○	○	●	○
AXA	73	○	○	○	●	○
PNC Financial Services	73	○	○	○	●	○
Great-West Financial	73	○	●	○	—	○
Dreyfus Corporation	72	○	○	●	—	—
OppenheimerFunds	72	○	○	○	○	○
John Hancock Financial	72	○	○	○	—	○
Transamerica Financial Advisers	72	○	○	○	●	○
First Investors Financial Services	70	○	○	○	—	—
Chase Bank	70	○	○	○	○	○
Invesco Ltd.	69	○	○	○	—	—
Putnam Investments	68	○	○	○	—	○
Citigroup	63	○	○	○	○	○



SPOILER ALERT

Most of us end up tossing one bag of groceries out of every four we buy. Find out how to waste less food—and why it matters so much.

BY MARY H.J. FARRELL



T

THE AVOCADO has turned brown, the cilantro is slimy, and the tomato became watery mush days ago. So much for the guacamole you planned to make—a week ago (or was it two?). All of the ingredients go into the garbage. Multiply that by a whole country’s worth of good food intentions gone bad, and the ultimate result is that 40 percent of the food produced in the U.S. ends up in the trash

It’s not just your unmade menus that are to blame. Waste occurs all along the food chain—from farms to processors, from grocery stores to restaurants. But the single largest source of food waste is individuals in the home.

That kind of wastefulness could be costing you a lot. A family of four loses \$1,500 each year on food it throws away. But the damage is global as well when you take into account how much water, energy, and labor it takes to grow, package, and transport the food that never gets eaten. What’s more, food that has been tossed is the biggest component of landfills, and as it decomposes, it produces the greenhouse gas methane.

The problem is so serious that, one year ago this month, the Department of Agriculture and the Environmental Protection Agency announced the country’s first waste-reduction goal—to lower the nation’s food waste by 50 percent by the

year 2030. And two members of Congress recently introduced the Food Date Labeling Act. If enacted, the legislation would establish a uniform national date-labeling system and eliminate the confusing array of labels that result in people tossing out perfectly good food (see page 56).

Private industry and nonprofits are getting in on the act, too. Aesthetic guidelines set by grocery stores have contributed to food waste by ruling out so-called “ugly” but entirely nutritious produce. Now those forlorn fruits and veggies—knobby potatoes and gnarled carrots—are being championed by celebrity chefs, food entrepreneurs, and some stores trying to get them back into the food stream. Other groups are doing their part to contribute solutions, too (see page 55).

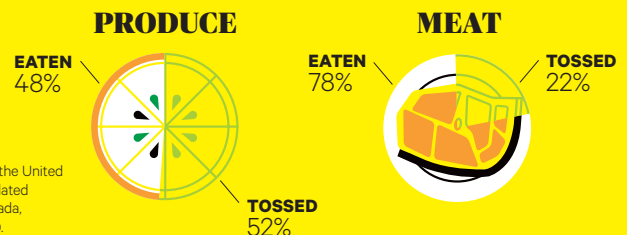
And don’t underestimate how much you can do in your own home to reduce food waste. Let’s be clear: Nobody’s asking you to eat bananas that have turned brown or cheese covered in mold. But the healthy, delicious food you pay for should make it to your table while it’s still healthy and delicious. To that end, we’ve culled expert advice on how you can start eating—and enjoying—more of your food. That will save you time, money, and the trouble of swabbing soggy spinach out of the crisper—and possibly help save the planet, too.

FOOD WASTE BY THE NUMBERS

From what foods get thrown out most to how waste depletes our natural resources, this hard data is worth a closer look

FOOD EATEN VS. FOOD TOSSED

Source: Food and Agriculture Organization of the United Nations (percentages calculated collectively for the U.S., Canada, Australia, and New Zealand).



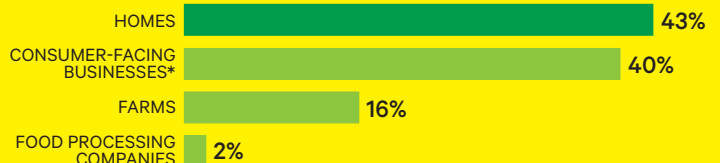
THE AMOUNT THAT FOOD WASTE COSTS A U.S. FAMILY OF FOUR PER YEAR



\$1,500

Source: Department of Agriculture.

WHO'S WASTING THE MOST IN THE U.S.?



*Supermarkets, restaurants, institutional and food services, and government.

WHITTLE YOUR WASTE

Shopping and cooking strategies from the woman who helped start the waste-free movement

Fighting food waste begins at home. Dana Gunders, author of the book “Waste Free Kitchen Handbook” and “Wasted,” a 2012 report from the Natural Resources Defense Council that sparked attention to the crisis in America’s kitchens, has some suggestions.

KNOW YOURSELF.

Track what you throw out and why, then adjust your shopping and cooking habits accordingly.

SHOP WITH A LIST.

And be sure you’ve planned on when you’ll make those meals. “People are aspirational at the store,” Gunders says. “But think, when will you have time to cook what you buy?”

USE EVERY LAST BIT.

When trimming veggies, remove just the very ends or the stem. Put greens such as beet greens in salads or cook them just as you would collard and other greens. Make stock out of vegetable scraps and bits and pieces of meat or poultry.

PLAN A CATCH-UP MEAL.

Pick one night a week when you’ll eat the food that’s already in your fridge. Place whatever needs to be eaten first in the front to keep it top of mind.

MIX IT UP. Don’t be afraid to experiment with eclectic ingredients. Got an open jar of salsa and some extra chicken broth? Gunders recently turned that combo into the base for a tortilla soup.

PLAN YOUR PARTIES.

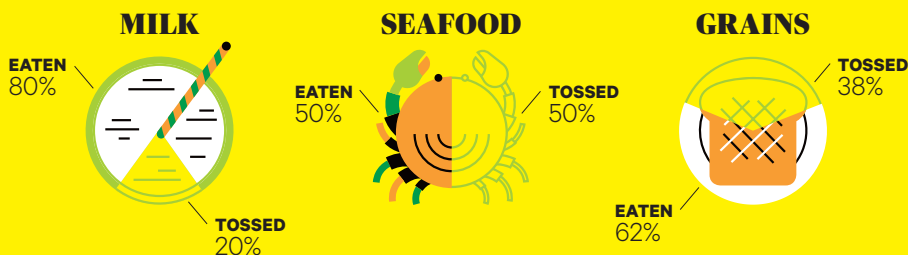
Most partygoers won’t eat a full portion of every dish, so when you entertain, cook for just three-fourths the number of guests you expect. Keep storage containers on hand so that you can send any leftovers home with your friends.

SHARE THE BOUNTY.

Home gardeners who can’t eat everything that they grow can find a food pantry eager to accept their garden-fresh extra produce at ampleharvest.org.

FREEZE YOUR ASSETS

Gunders says some unexpected foods do well in the freezer—including milk, bread, cheese, and raw eggs if you crack and beat them lightly first. You can freeze most vegetables after blanching them, too.



THE WEIGHT OF WHAT'S WASTED IN THE U.S.



63
MILLION TONS PER YEAR.

Source: ReFED Roadmap to Reduce U.S. Food Waste.

HOW WASTING FOOD WASTES NATURAL RESOURCES

Land

28 percent of the world’s agricultural area is used to produce food that never gets eaten.

Freshwater

25 percent of water in the U.S. grows food that’s ultimately tossed.

Oil

4 percent of total U.S. consumption is used for transporting food that goes uneaten.

Source: 2012 Natural Resources Defense Council report “Wasted.”

BEST FOR STRAWBERRIES

Rubbermaid FreshWorks Produce Saver \$20 for a two-piece set
Elevates food on a tray; lid has a vent. The strawberries in the FreshWorks and those in the original container in the dual-evaporator fridge fared best. Those in the control container became dry but not moldy. The others all developed mold by the end of two weeks.



BEST FOR RASPBERRIES

Debbie Meyer UltraLite GreenBoxes \$25 for a 16-piece set
Resemble regular food containers. At the end of weeks one and two, the raspberries in these and the berries still in the original containers stored in the main compartments of the test refrigerator and the dual-evaporator fridge looked best. All of the others were moldy at the two-week mark.

BEST FOR SALAD GREENS

Oxo Good Grips GreenSaver Produce Keeper \$20
Features a colander, an adjustable vent, space for water, and an activated charcoal filter to capture off-gasses. A week in, both kinds of lettuce were doing well in the Oxo, and the mixed greens in the original containers were fine. After two weeks, they all smelled funky and bits and pieces were rotting. By then, the top layer of the mesclun in the Oxo was the most wilted.



PROTECTING YOUR PRODUCE

Can special storage containers keep your greens and fruits fresh longer?

Of all our favorite foods, fruits and vegetables are the most likely to end up in the garbage. Consumers throw out more than half of the produce they buy. Knowing that, certain manufacturers of food-storage containers are making claims that their products can prolong the life of fruits and veggies by anywhere from 33 to 80 percent. We bought seven preservation systems with freshness claims and tested them. We followed the directions for each, adding water where indicated and setting vents to the proper position.

We also kept some produce samples in their original containers. Although clamshells and other containers might seem flimsy, some forethought has gone into their design, says Julia Collin Davison of America's Test Kitchen. And some produce does better when left alone, especially if handling it can cause bruising.

For our tests, we bought supermarket containers of strawberries, raspberries, and two kinds of lettuce—mesclun mix

and heads of leaf lettuce. We transferred produce to containers made by Debbie Meyer, Oxo, Prepworks, and Rubbermaid, and kept some in original containers. We put the strawberries in one refrigerator, the lettuce in another, and so on, with one original container in the produce drawer with an ExtraLife Produce Saver disc and a second (our control) in the main compartment. The third original container of each type went into the main compartment of a dual-evaporator fridge. Then we waited, checking every few days during the next two weeks to see how the produce looked, smelled, and felt. In the first week, certain containers extended produce life a bit, but none were much better than the original containers. After two weeks none of the food was good enough to eat. The bottom line: Use produce as soon as possible. That said, the containers have some convenience features and the virtue of being stackable. At left, those that did best in the tests.

REMAINS OF THE DAY

Treating leftovers with a little TLC can make them just as tasty at a second meal

THE COOKS and food scientists at America's Test Kitchen sometimes test a recipe as many as 70 times, and they don't like to see all of those leftovers thrown out, says Julia Collin Davison, executive editor of the book division and co-host of ATK's shows

on PBS. She shares some of their favorite second-act strategies.

MEAT "Turn it into something else," Davison says. "It will never taste as good on its own as it did originally." Slice the meat very thin and reheat quickly in a stir fry, hash, or burrito. But avoid adding already cooked meat to a stew; it might become dry and mealy.

POULTRY It needs a moist reheating environment, so warm turkey or chicken in a pan with a little broth.

VEGETABLES "I save little bits and add them to soups, salads, quesadillas, and pasta,

too," Davison says.

BREAD Throw stale bread into the food processor to make breadcrumbs, then store them in the freezer. You can also make croutons or use the bread in a recipe that calls for stale bread, such as panzanella.

PIZZA Put it "in a ripping-hot oven," Davison advises. That melts the cheese but keeps the crust crispy.

SPICES They can lose their punch over time, but you can revive some, such as cumin and turmeric, by toasting them in a frying pan or warming them in hot oil.



Scan this page using the Blippar app to shop for the featured storage containers (see page 7 for details).

PHOTOGRAPH BY CLAIRE BENOIST

NOTABLES IN THE WASTE-NOT MOVEMENT

These stores, schools, cities, organizations, and individuals deserve credit for coming up with creative ways to reduce food waste

The Environmental Protection Agency and Department of Agriculture's food-waste-reduction goal is to cut food waste by 50 percent by 2030. Many food banks and food-recovery programs across the nation are working hard on the problem. But a cornucopia of other institutions are also doing their best to rescue food before it's wasted. Here's just a sample:



Celebrities and Entertainment

NASCAR Through its Nascar Green program, zoomed into the food-recovery movement by encouraging food donations and composting at many of its events at racetracks around the country.

JOHN OLIVER Devoted a segment of his HBO show, "Last Week Tonight," to food waste. The YouTube video (at youtube.com/watch?v=i8xwLWbOILY) has gotten well over 6 million views.

DAN BARBER Executive chef and co-owner of Blue Hill and Blue Hill at Stone Barns in New York, transforms food scraps into upscale dishes to show that even what's usually considered waste can be tasty.

MARIO BATALI AND JOSEPH BASTIANICH Hired Elizabeth Meltz as director of food safety and sustainability for their many restaurants. She created recycling and composting programs, and a system that tracks food waste to save money and food.



Governments

FRANCE The first country in Europe to ban supermarkets from throwing away or destroying unsold food. French law also bars supermarkets from deliberately ruining food to prevent it from being foraged from dumpsters.

SEATTLE Like other progressive cities including San Francisco, Seattle mandates composting and has proposed issuing fines to businesses and residences if garbage contains items that should be composted or otherwise recycled.



Restaurants and Supermarkets

STARBUCKS Formed Starbucks FoodShare with two food-rescue groups, and all 7,600 of its company-operated stores will donate unsold food to food banks.

WALMART Received permission from the USDA to repackage intact eggs from cartons in which only one was broken, preventing 37 million eggs from being thrown away per year.

GIANT EAGLE The 420-store supermarket chain based in Pennsylvania partners with local farms to package "ugly" fruits and vegetables under the Produce with Personality label, selling them at 20 stores in Pennsylvania and Ohio.

THE DAILY TABLE A not-for-profit grocery store in a low-income Boston neighborhood, founded by a former president of Trader Joe's, recovers food from growers, supermarkets, and distributors, and sells it at a deep discount.



Transport Companies

MOVE FOR HUNGER Teams up with moving companies to pack and pick up non-perishable food items that homeowners leave behind. The food ends up at local food banks.

COMPOST CAB Based in Washington, D.C., it picks up bins of food scraps from homes, schools, and businesses, and delivers them to urban farms for composting. The organic-rich dirt is made available at farmers markets or delivered back to homeowners.

FOOD COWBOY Uses a mobile app to divert truckloads of fresh, wholesome food that, for various reasons, has been rejected on loading docks to nearby charities and food banks.



Schools and Food Service

UNIVERSITY OF TEXAS AT AUSTIN Audited food waste in its dining halls and after seeing how much was tossed, began allowing students to sample food before taking an entire serving. And like some other universities, had the cafeterias go trayless, which drastically cut food waste because students take only what they can carry.

CHESTERBROOK ELEMENTARY SCHOOL Students at this school in McLean, Va., learn how to separate uneaten food waste into recyclables, food that can be donated, things that can be upcycled or reused, and general trash. Sixth-graders on the Eco Team police the project.

COMPASS GROUP A food-service group that serves 8 million meals per day in schools, hospitals, and other institutions, it launched Imperfectly Delicious Produce, which buys "imperfect" produce from farmers for use in its prepared foods.

A DOUBLE DOSE OF FRESHNESS

You'll hear plenty of fanciful claims, but our lab tests reveal the single feature that holds the key to keeping foods fresher

FOOD FRESHNESS CLAIMS from refrigerator manufacturers are on the rise. We've encountered built-in air purifiers said to eliminate airborne bacteria, and we've seen small pouches that sit inside crisper drawers, supposedly absorbing the ethylene gas that causes some produce to ripen.

Those claims are difficult to measure because food quality and storage requirements vary. But our lab tests have confirmed that the refrigerators that are best at preserving food are those that maintain steady temperature and humidity. And one relatively new innovation does more than any other to create optimal climate conditions. It's called dual-evaporator cooling.

Typical refrigerators use a single evaporator, or cooling coil, in the freezer section, alongside a circulating fan. When a cooler temperature is needed in the refrigerator section, additional air is diverted into the fridge from the freezer section through a damper positioned between the two compartments.

Single evaporators come with two big trade-offs. First, the evaporator must operate at cold temperatures to keep food frozen. But that removes moisture from the air, and the cold, dry freezer air lowers humidity levels in the refrigerator section, which is bad for many foods. Second, odors can migrate between the two chambers, causing your ice cubes to taste like salmon or other smelly foods in the fridge.

Dual-evaporative refrigerators take care of both problems by creating two distinct climates, one for the freezer and one for the refrigerator. The feature used to be available only on top-of-the-line refrigerators, but it's slowly migrating to more price ranges, as shown in the Ratings on page 58, featuring 46 recently tested models with dual evaporators.

One standout to consider is the **Samsung RF28HDEDPWW**, which holds the current high score among all refrigerators we've tested and is competitively priced at \$2,700. In addition to its dual evaporators, the 36-inch-wide French-door model features a temperature-controlled meat and deli bin, good for keeping cold cuts and beverages in their ideal climate, and its crisper drawers are excellent at maintaining optimal humidity levels. Like all of the best refrigerators in our tests, the Samsung also keeps the fridge at 37° F, which the government says protects most foods from spoilage and foodborne illness.

—Daniel DiClerico

TIME WARPS

'Best if used by.' 'Sell by.' How can you tell whether your food is still good? Why labels are so confusing and what may help.



At the Food Waste Summit in Washington, D.C., this May, Tom Vilsack, the U.S. secretary of agriculture, told a story about his adult son going

through the Vilsacks' refrigerator and throwing out everything that was past the date on its packaging—even if it was frozen. The secretary's point: If

his own son doesn't understand what the dates mean, who does?

The answer: not many of us. In a recent survey led by the Harvard Food Law and Policy Clinic, almost 85 percent of consumers said that they'd thrown out food based on the date on the package.

With the exception of baby formula, there are no federal regulations on date labeling. Forty-one states and the District of Columbia require date labeling on certain food items, nine states do not, and no two states have the same law. Often the "best if used by," "sell by," and "use by" designations are just manufacturers' best guesses about how long their food will taste its freshest. Supermarkets may also use the dates as a guide when stocking shelves. But the dates have nothing to do with how safe the food is.

The result? Take something as basic as milk. In most states the "sell by" date for milk is 21 to

24 days after pasteurization. But in Montana, milk can no longer be sold 12 days after pasteurization, a point made in the film "Expired," which shows milk being taken off supermarket shelves and poured down the drain—even though it would be deemed just fine in most of the rest of the country.

More clarity on what dates on food labels mean may be coming, as Congress considers the Food Date Labeling Act. "One of the most common arguments people seem to have at home is about whether or not food should be thrown out just because the date on the label has passed," says Rep. Chellie Pingree, D-Maine, who introduced the bill with Sen. Richard Blumenthal, D-Conn. "It's time to settle that argument, end the confusion, and stop throwing away perfectly good food."

The legislation proposes two labels to be used nationally: one that indicates

quality, when food is at its peak freshness, and another that indicates safety, the date past which food is considered unsafe to eat. The wording has yet to be decided, but in the Harvard survey, more consumers understood that "best if used by" means quality and "expires on" signals safety, according to Emily Broad Leib, the clinic's director.

In the meantime, another way to tell whether food is still edible is to trust your own senses. If it seems off to you, it probably is. Food that's getting funky is likely to look, smell, and taste bad before it becomes unsafe. (Foodborne illness comes from contamination, not from the natural process of decay.)

If you have questions about your food, download the Department of Agriculture's FoodKeeper app or go to [foodsafety.gov/keep/foodkeeperapp](https://foodsafety.gov/keep/). You'll find advice on how best to store your food to maximize freshness and flavor.



Scan this page using the Blippar app for our guide on how to choose the refrigerator that's right for you (see page 7 for details).

HOW TO HAVE MORE SHELF CONTROL

Bring 'raw and order' to your food storage by making the best use of the bins and shelving in your refrigerator



*Refrigerators with adjustable-humidity crisper drawers; models with the feature are footnoted in Ratings.

RATINGS



Samsung
RF28HDEDPWW

Refrigerators: Climate Controllers

Of the 328 refrigerators we tested, the highest scored 87; the lowest, 29. The chart below includes only models from our latest tests that feature dual-evaporative cooling, which results in higher humidity levels in the fresh food section, helping extend the useful life of produce. Recommended models deliver top performance overall. CR Best Buys offer the very best for the money. For full Ratings, available to online subscribers, go to [ConsumerReports.org](https://www.consumerreports.org)

☑ CR Best Buy ☑ Recommended

● Excellent ● Very Good ○ Good ● Fair ● Poor

Recommended	Rank	BRAND & MODEL	PRICE	SCORE	TEST RESULTS				FEATURES				
					Temperature Performance	Energy Efficiency	Noise	Ease of Use	Claimed Capacity (Cu. Ft.)	Total Usable Capacity (Cu. Ft.)	Water Dispenser	Energy Cost/Yr.	Dimensions (HxWxD, in.)

THREE-DOOR FRENCH-DOOR

☑	1	Samsung RF28HDEDPWW ²	\$2,700	87	●	●	●	●	27.8	20.0	External	\$70	69x36x34
☑	2	Kenmore Elite 74093 ²	\$2,800	85	●	●	●	●	31.7	21.5	External	\$74	69x36x36
☑	3	LG LFXS32766S ²	\$3,600	85	●	●	●	●	31.5	21.5	External	\$74	69x36x36
☑	4	GE GFE26GSKSS ²	\$1,990	84	●	●	●	●	25.7	17.1	External	\$48	70x36x35
☑	5	GE GNE29GSKSS ²	\$2,000	83	●	●	●	●	28.7	20.9		\$66	70x36x34
☑	6	Samsung RF28HFPDBSR	\$2,000	83	●	●	●	●	28.1	20.0	External	\$56	69x36x34
☑	7	GE Profile PFH28PSHSS ^{1 2}	\$2,900	82	●	●	●	●	27.7	19.8	External	\$57	70x36x36
☑	8	Kenmore Elite 74033 ^{1 2}	\$3,100	81	●	●	●	●	29.6	19.1	External	\$68	69x36x34
☑	9	LG LFCS31626S	\$2,000	80	●	●	●	●	30.6	20.8		\$70	69x36x34
☑	10	GE Profile PFE28KSKSS ^{1 2}	\$2,200	80	●	●	●	●	27.7	20.1	External	\$73	69x36x35
☑	11	GE Café CYE22USHSS ^{1 2}	\$2,970	80	●	●	●	●	22.2	15.1	External	\$66	70x36x30
	12	GE Café CYE22TSHSS ²	\$2,800	79	●	●	●	●	22.2	15.1	External	\$66	70x36x30
	13	KitchenAid KRFF507ESS	\$2,900	79	●	●	●	●	26.8	18.3	External	\$74	69x36x34
	14	Samsung RF20HFENBSR ²	\$1,400	78	●	●	●	○	19.4	14.8		\$66	71x32x30
	15	Samsung RF26J7500SR ²	\$1,800	77	●	●	●	●	25.5	16.4	External	\$68	69x36x34
	16	GE GFE28GSKSS ^{1 2}	\$1,900	77	●	●	●	●	27.7	19.4	External	\$86	70x36x34
	17	GE Café CFE28TSHSS ^{1 2}	\$3,100	75	●	●	●	●	27.8	15.1	External	\$70	70x36x35
	18	Samsung RF18HFENBSR ²	\$1,250	75	●	●	●	○	17.5	13.0		\$54	71x33x29
	19	Kenmore Elite 74053 ^{1 2}	\$2,800	75	●	●	●	●	23.5	15.0	External	\$67	69x36x29

FOUR-DOOR (OR MORE) FRENCH-DOOR

☑	1	Kenmore Elite 72483 ²	\$3,600	84	●	●	●	●	29.9	21.1	External	\$70	69x36x36
☑	2	LG LMXS30786S	\$3,500	82	●	●	●	●	29.9	20.1	External	\$67	69x36x36
☑	3	Samsung RF28JBEDBSR ²	\$2,400	82	●	●	●	●	27.8	16.8	External	\$70	70x36x34
☑	4	Samsung RF28HMEDBSR ²	\$2,700	80	●	●	●	●	28.2	18.8	External	\$73	69x36x34
☑	5	Samsung RF23J9011SR ²	\$3,000	80	●	●	●	●	22.5	16.1	External	\$64	72x36x29



Kenmore Elite
72483



Liebherr
CS1660



Samsung
RH25H5611SR



KitchenAid
KBFN502ESS

How we test refrigerators. To measure **TEMPERATURE PERFORMANCE** we see how uniformly models maintain 37° F in the fridge and 0° F in the freezer, even as we crank up the heat in our labs. Storage is also important, so we measure **TOTAL USABLE CAPACITY**, excluding nooks that manufacturers include but we don't think are usable. We also measure **DIMENSIONS** (height, width, and depth), rounded to the nearest inch. **NOISE** is measured with the compressor running. **ENERGY COST** is how much the unit will cost to run per year based on average electricity prices.

☒ CR Best Buy ☒ Recommended

● Excellent ● Very Good ○ Good ● Fair ● Poor

Recommended	Rank	BRAND & MODEL	PRICE	SCORE	TEST RESULTS				FEATURES				
					Temperature Performance	Energy Efficiency	Noise	Ease of Use	Claimed Capacity (Cu. Ft.)	Total Usable Capacity (Cu. Ft.)	Water Dispenser	Energy Cost/Yr.	Dimensions (HxWxD, in.)

FOUR-DOOR (OR MORE) FRENCH-DOOR continued

	6	LG LMXC23746S ²	\$2,800	79	●	●	●	●	22.7	14.7	External	\$58	71x36x29
	7	Samsung Chef Collection RF24J9960S4	\$5,000	76	●	○	●	●	24.1	15.4	External	\$81	70x36x29
	8	Fulgor Milano FM36CDFDS1 ²	\$2,500	76	●	●	●	●	20.8	14.3		\$76	70x36x29
	9	Bertazzoni Professional Series REF36X ¹ ²	\$2,850	74	●	●	●	●	20.7	14.2		\$57	70x36x29
	10	Maytag MFX2876DRM	\$2,900	73	●	○	●	●	26.2	17.5	External	\$88	69x36x34
	11	KitchenAid KRMF706EBS	\$4,000	71	●	○	●	●	25.8	17.1	External	\$88	70x36x34

BOTTOM-FREEZERS

	1	Liebherr CS1660	\$4,500	70	○	●	●	●	15.5	13.1		\$43	80x30x25
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SIDE-BY-SIDES

<input checked="" type="checkbox"/>	1	Samsung RH25H5611SR	\$1,600	80	●	●	●	●	24.7	19.0	External	\$63	70x36x35
	2	Kenmore Elite 51773 ²	\$1,800	67	○	●	●	●	27.6	21.8	External	\$47	69x36x34

BUILT-INS

<input checked="" type="checkbox"/>	1	Miele MasterCool KF1903SF	\$8,600	81	●	●	●	●	18.7	14.1		\$56	83x36x25
<input checked="" type="checkbox"/>	2	KitchenAid KBFN502ESS	\$9,000	80	●	●	●	○	24.2	17.0		\$58	83x42x26
<input checked="" type="checkbox"/>	3	Jenn-Air JF42NXFXDE	\$8,500	80	●	●	●	○	24.2	17.0		\$58	83x42x26
<input checked="" type="checkbox"/>	4	KitchenAid KBBR306ESS	\$8,200	80	●	●	●	●	20.9	14.9		\$61	83x36x26
<input checked="" type="checkbox"/>	5	Jenn-Air JB36NXFXRE	\$7,400	80	●	●	●	●	20.9	14.9		\$61	83x36x26
	6	Miele MasterCool KF1803SF	\$8,100	77	●	●	●	●	15.2	11.4		\$51	83x30x25
	7	Samsung RS27FDBTNSR ²	\$6,570	76	●	●	●	●	26.5	20.3	External	\$76	84x48x26
	8	Sub-Zero BI-42UFD/S	\$9,800	72	●	●	●	●	24.2	17.4		\$64	83x42x26
	9	Viking VCSB5423SS ²	\$10,160	70	●	●	●	●	27.5	18.3		\$76	83x42x26
	10	KitchenAid KBFN406ESS	\$8,500	69	●	●	●	○	20.8	14.5		\$66	83x36x26
	11	Jenn-Air JF36NXFXDE	\$8,000	69	●	●	●	○	20.8	14.5		\$66	83x36x26
	12	Sub-Zero BI42SIDS/PH	\$9,800	69	●	●	●	●	23.7	16.4	Internal	\$71	84x42x26
	13	Sub-Zero IT36CI	\$7,600	67	●	●	●	●	19.7	15.1		\$64	83x36x25

¹ Has temperature-controlled meat/deli bin. ² Has adjustable-humidity crisper drawer.

ROAD REPORT

RATINGS FROM OUR TEST TRACK *plus* EXPERT CAR ADVICE



Mazda CX-3

Rumbling Through the Urban Jungle

We pick the top eight city cars—and point out the ones to avoid
by Mike Monticello

NAVIGATING THE CONGESTION of city streets requires a car that's nimble enough to dart into openings in snarled traffic and able to show a pothole who's boss. Urban driving also requires a car with good outward visibility (to easily spot pedestrians) and an origami-like ability to fit into petite parking spots.

For city dwellers, small cars can be a smart way to make urban driving easier. And small doesn't have to mean flimsy.

Our tests have shown that small cars don't have to feel like they were built with materials from a 2-year-old's pedal car.

The mini-utility segment has grown from just one model in 2011 (the frog-eyed Nissan Juke) to more than a dozen—with the addition of snappy so-called cute-utes that prove it's cool to be minuscule. Most of the vehicles are targeted toward people in the early stages of their careers, doing double-duty



Scan this page using the Blippar app to sign up for our free Cars email newsletter (*see page 7 for details*).



Audi A3



Honda Fit

Audi A3

ROAD-TEST SCORE: 77
RELIABILITY: ○
OWNER SATISFACTION: ●
OVERALL MPG: 27
PRICE RANGE: \$30,900-\$48,650

OVERALL SCORE 73 The A3's small size makes it a great choice for entry-level luxury in the city. Handling is responsive, and the 170-hp four-cylinder turbo engine has ample midrange power once you pull away at a green light. The cabin is austere for an Audi but well-made. Reliability is good, and a rearview camera is standard. The front seats are comfortable; the rear seats are a bit tight. The ride is firm, but the A3 absorbs downtown's big ruts well. All-wheel drive is optional.

Kia Soul

ROAD-TEST SCORE: 74
RELIABILITY: ●
OWNER SATISFACTION: ●
OVERALL MPG: 26
PRICE RANGE: \$15,900-\$35,950

OVERALL SCORE 72 There's more to the Soul than quirky-cool styling, such as abundant interior space, upright seats, easy access, and an airy cabin with big windows that afford excellent outward views. Go for the larger of the two available engines, a 164-hp four-cylinder mated to a smooth six-speed automatic. The stiff ride may not be appreciated over bumpy streets. Forward-collision warning and lane-departure warning systems are available, along with a rearview camera.

Mazda CX-3

ROAD-TEST SCORE: 64
RELIABILITY: ●*
OWNER SATISFACTION: ●*
OVERALL MPG: 28
PRICE RANGE: \$19,960-\$26,240

OVERALL SCORE 67 Unlike most wee SUVs, the CX-3 doesn't make you wish that you were riding your bicycle instead. It sits low and drives like a car, navigating sharp corners with ease. Its 146-hp four-cylinder likes to rev, and acceleration is willing if not overly quick. The car can be loud at highway speeds, and the rear seat is the definition of "snug." CX-3s come with a rearview camera. Forward-collision warning, lane-departure warning and blind-spot monitoring are available.

Honda Fit

ROAD-TEST SCORE: 67
RELIABILITY: ○
OWNER SATISFACTION: ●
OVERALL MPG: 33
PRICE RANGE: \$15,890-\$21,165

OVERALL SCORE 67 The Fit is unquestionably one of the best urban runabouts on the market thanks to its tidy size, voluminous interior, and marvel-of-engineering folding/flipping rear seat for a variety of storage options. With a taller profile, the Fit makes cabin entry easy, and tall plants and bicycles can fit upright in the cargo area. Cabin noise is loud and the ride is stiff on longer drives, but handling is fun and responsive. Forward-collision warning isn't available, but a rearview camera comes standard.

as weekday commuter vehicles and weekend escape pods.

The cars on this list are about 10 inches shorter in wheelbase and overall length than vehicles in the next-larger class. But their often ingenious design and efficient use of space means you don't have to endure cramped, spartan interior quarters. The Honda Fit and Kia Soul feel more airy and spacious than you'd think, and the well-crafted interior of

the Audi A3 doesn't make you feel like you settled for a bare-bones car. But that improved packaging of interior space mostly results in more room for stuff than people. Most city cars won't hold more than four occupants, and those in back often will be cramped.

Every car here is recommended by Consumer Reports. That means they did well in our road tests, with sprightly acceleration and crisp handling that's

rare to find in smaller cars. These mini-mighties have average or better predicted reliability and praiseworthy fuel economy, and they did well in federal or insurance-industry crash-safety tests.

Our great eight prove you can go small yet still drive a car that doesn't make you feel as if you should have spent more money. After all, in the city, size matters.

Note: (*) means our information is based on limited data.

ROAD REPORT

Honda HR-V



Chevrolet Sonic



Honda HR-V

ROAD-TEST SCORE: 66
RELIABILITY: ○*
OWNER SATISFACTION: ●*
OVERALL MPG: 29
PRICE RANGE: \$19,215-\$25,990

OVERALL SCORE 66 The HR-V is based on the Honda Fit. Its diminutive size makes this subcompact SUV a boon for city driving, with easy maneuverability in tight spots, good outward views, and a standard rearview camera. Like the Fit, the HR-V has a rear seat that can fit two adults comfortably or fold in a variety of configurations to accommodate tons of stuff. This cute-ute has a stiff ride and is loud on the highway, but it gets 29 mpg overall.

Nissan Versa Note

ROAD-TEST SCORE: 61
RELIABILITY: ●
OWNER SATISFACTION: ●
OVERALL MPG: 31
PRICE RANGE: \$14,230-\$18,710

OVERALL SCORE 66 The Versa Note hatchback (not to be confused with the uninspiring Versa sedan) offers amazing versatility. Its tall stance and wide doors make it easy to maneuver, park, and hop into and out of—key components of any good city car. The driving position is a bit awkward and interior storage is lacking, but the rear seat is roomy. The ride is more relaxed than most competitors. A rearview camera is an inexpensive option.

Scion iA

ROAD-TEST SCORE: 60
RELIABILITY: ●*
OWNER SATISFACTION: ●*
OVERALL MPG: 35
PRICE RANGE: \$15,700-\$16,800

OVERALL SCORE 65 The Scion iA (which will be called the Toyota Yaris iA for 2017) is based on Mazda mechanicals—and that's a good thing. It's pleasant to live with for a subcompact car because of nimble handling, a civilized ride, and a decent interior décor. It garnered the best overall fuel economy of this group (35 mpg), and has the tightest turning circle. It also comes standard with a low-speed pre-collision system and a rearview camera.

Chevrolet Sonic 1.8

ROAD-TEST SCORE: 66
RELIABILITY: ○
OWNER SATISFACTION: ●
OVERALL MPG: 28
PRICE RANGE: \$14,345-\$21,495

OVERALL SCORE 65 For basic transportation, the subcompact Sonic feels like a more finished product than most cars in its class. It's reasonably quiet and evens out the ruts and bumps of city streets surprisingly well. Of the two four-cylinder engines available, the smaller-displacement turbo is quicker. The sedan version has a big trunk, but the hatchback offers more cargo space. Forward-collision warning and lane-departure warning are available.

SKIP THESE RIDES

Not every city car is a winner, so we've included a list of underwhelming urbanites to avoid. There are alluring markdowns available, but there's a reason these cars are discounted. We found the cabins snug, the ride jittery, the engines raspy, and acceleration plodding.

Mitsubishi Mirage

Engine vibrates like a nervous Chihuahua; low-rent cabin; poor IIHS crash-test score.

Jeep Renegade

Rough shifts; so-so fuel economy; likely to have bottom-feeder reliability.

Mitsubishi i-MiEV

Slow and clumsy, with a stiff ride; spare accommodations; meager EV range.

Nissan Versa

Engine drone worsens as speeds increase; cheap interior; unsettled ride.

Jeep Patriot/Compass

Claustrophobic, austere cabin; poor fuel economy for the size.

Fiat 500/500X/500L

Poor reliability; rough shifts; unimpressive fuel economy; uncomfortable seats.

Smart ForTwo



Smart ForTwo

Buzzy engine; stiff ride; hesitation off line; seats only two people.



When Your Teen Takes the Wheel

If you're shopping for a car for a first-time driver, be sure to keep your eye on the features that matter most
by Mike Monticello

IT MAY BE the moment to upend the time-honored tradition of giving your fledgling teen driver your hand-me-down clunker. Rather than debating whether your new car will be cherry red or electric blue, we recommend that the newest driver in the house get the newest car.

Why would we suggest that cruel reversal of fortune? Because new cars today have key safety and accident-avoidance systems such as electronic stability control—which wasn't required until 2012—as well as forward-collision warning and automatic emergency braking.

Of course, every driver needs those features. But a more experienced motorist can more deftly navigate an

emergency maneuver in an older car with fewer safety devices.

For teen drivers, we recommend a moderately sized sedan or hatchback, or a small, car-based SUV. Consider a car with a stick shift; with both hands engaged, the temptation to text is eliminated. But a base-model stick shift often won't offer forward-collision warning or automatic emergency braking.

Also nix full-sized pickups and large, truck-based SUVs. Their higher center of gravity makes them more prone to roll over in a sudden move, handling is cumbersome, and braking distances are longer. Three-row vehicles are another no-no, because the extra seats tend to get filled

with distracting friends. Also avoid sporty cars, which beg to be driven too fast and usually have higher insurance premiums.

The cars on our list performed well in our testing and did adequately or better in government and insurance-industry crash tests, plus they have average or better predicted reliability.

We ruled out cars with 0-60 mph acceleration times faster than 7.5 seconds or slower than 11 seconds—the better to avoid drag racing or sluggish highway merging—as well as cars with braking distances longer than 145 feet in dry conditions, and those with mediocre emergency-handling scores.

Go to ConsumerReports.org/teen for more info on teen driving.



Subaru Legacy



Toyota RAV4

Subaru Forester

ROAD-TEST SCORE: 85
RELIABILITY: ●
OWNER SATISFACTION: ●
OVERALL MPG: 26
PRICE RANGE: \$22,395-\$33,795

OVERALL SCORE 83 This all-wheel-drive SUV is noteworthy for its frumpy functionality rather than fun form. Its upright body is space-efficient, large windows provide great visibility, big square doors make cabin access a breeze when carting football or hockey gear, and the base 170-hp engine gives decent acceleration. The lowest-priced Forester with the EyeSight safety system (with forward-collision warning and automatic emergency braking) costs \$27,940. All Foresters come with a rearview camera.

Subaru Legacy

ROAD-TEST SCORE: 89
RELIABILITY: ●
OWNER SATISFACTION: ●
OVERALL MPG: 26
PRICE RANGE: \$21,745-\$29,945

OVERALL SCORE 83 The Legacy effectively blends a supple ride, responsive handling, a roomy and quiet interior, simple controls, and great visibility all-around thanks to thin roof pillars and tall windows. On rainy or snowy days, your kid will appreciate the standard all-wheel drive as well as the rearview camera when backing up. Subaru's EyeSight (with pre-collision braking) isn't available on the base model, but a 2.5i Premium with that option costs \$26,135.

Honda Accord

ROAD-TEST SCORE: 85
RELIABILITY: ●
OWNER SATISFACTION: ●
OVERALL MPG: 30
PRICE RANGE: \$22,305-\$34,680

OVERALL SCORE 82 The midsize Accord is highly affordable, even after adding on optional front crash-prevention systems (\$24,840). The reason? You can order Honda Sensing on even the base LX model, and a rearview camera comes standard. We recommend that you stick with the four-cylinder engine because the V6 could be too lively for some young drivers. The Accord is a pleasant-driving car with a roomy and well-finished interior.

Toyota RAV4

ROAD-TEST SCORE: 75
RELIABILITY: ●
OWNER SATISFACTION: ○
OVERALL MPG: 24
PRICE RANGE: \$24,350-\$33,610

OVERALL SCORE 76 The refreshed-for-2016 RAV4 gains a quieter cabin and an improved ride. Handling remains stable and predictable, even at the limits of tire grip. A high seating position, thin windshield pillars, and big windows aid visibility, along with a standard rearview camera. The front-drive XLE can be optioned with a pre-collision system for \$29,600, and all-wheel drive is available. It's super-reliable, too, meaning the RAV4 will probably last until your kid has kids. Gulp.

TOP USED CARS FOR TEENS

Not every family can afford a brand-new car. If you're watching your budget, a used car with low mileage can fit the bill, too. Here are our recommendations.

- Acura TSX
- Buick Regal (2012-13)
- Chevrolet Equinox (4-cyl., 2012 or later)
- Chevrolet Malibu (4-cyl., 2009 or later)
- Ford Focus sedan (2010-12)
- Ford Fusion (4-cyl. and hybrid, 2010-12, 2014 or later)

- Honda Accord (4-cyl., 2008 or later)
- Honda Civic (2012 or later)
- Honda CR-V (2015 or later)
- Honda Fit (2011 or later)
- Hyundai Elantra (2012 or later)

- Hyundai Santa Fe (2007-09 and 2011-14, non-3rd row)
- Hyundai Sonata (4-cyl., nonturbo, 2006 or later)
- Hyundai Tucson (2010 or later)
- Kia Forte (2010-11)

- Kia Optima (nonturbo, 2011 or later)
- Kia Soul
- Kia Sportage (4-cyl., nonturbo, 2011 or later)
- Mazda3 (2011 or later)
- Mazda6 i (4-cyl.)
- Mazda CX-5

ROAD REPORT

Scion iA



Mazda3

ROAD-TEST SCORE: 72-73
RELIABILITY: ●
OWNER SATISFACTION: ●
OVERALL MPG: 32-33
PRICE RANGE: \$17,845-\$26,495

OVERALL SCORE 74 The Mazda3, available in sedan or hatchback form, boasts sharp handling and sporty styling. It also gets excellent fuel economy, at 33 mpg overall. The interior is well-appointed, but the ride is firm to the point of harsh. You'll need to spend \$29,230 to get automatic emergency braking (but only at low speeds, not highway speeds), although \$21,980 gets you blind-spot monitoring and rear cross-traffic alert. A rearview camera comes standard.

Honda Civic

ROAD-TEST SCORE: 76
RELIABILITY: ○*
OWNER SATISFACTION: ●*
OVERALL MPG: 32
PRICE RANGE: \$18,640-\$26,500

OVERALL SCORE 73 The redesigned Civic LX is substantial, refined, and capable. The comfortable ride soaks up bumps well, yet handling is precise and secure—exactly what new drivers need. Honda lets you add forward-collision warning and automatic emergency braking to even the base trim (LX with Honda Sensing: \$21,275), and a rearview camera is standard. We recommend the LX with its 158-hp engine because the EX-T turbo (0-60 mph in 7.1 seconds) could be too tempting for teens.

Kia Soul

ROAD-TEST SCORE: 74
RELIABILITY: ●
OWNER SATISFACTION: ●
OVERALL MPG: 26
PRICE RANGE: \$15,900-\$35,950

OVERALL SCORE 72 Your kids will love the Soul because of its urban runabout styling. You'll love it because Kia's budget hatchback offers lots of glass and thin roof pillars for good visibility, making the car easy to navigate in tight quarters. The Soul's uplevel 2.0-liter four-cylinder has sufficient power for safe merging. To please the family budget, the car's starting price is less than \$16,000. But you're forced to spend \$26,550 if you want a forward-collision warning system.

Scion iA

ROAD-TEST SCORE: 60
RELIABILITY: ●*
OWNER SATISFACTION: ●*
OVERALL MPG: 35
PRICE RANGE: \$15,700-\$16,800

OVERALL SCORE 65 Toyota's youthful Scion iA has an up-market feel. It's based on the Mazda2 sedan (which isn't sold in the U.S.). This car is affordable and fuel-efficient, garnering 35 mpg overall in our tests. An automatic transmission-equipped model runs \$17,595, with standard low-speed automatic emergency braking and a rearview camera. The Scion brand goes away this summer, so good deals could be had on leftover units. The car returns as the Toyota Yaris iA for the 2017 model year.

- Mitsubishi Outlander (non-3rd row, 2007-13)
- Nissan Altima (4-cyl., 2010-12)
- Nissan Rogue (2010-13 and 2015)
- Nissan Sentra (2011-12)
- Scion xB (2008 or later)

- Scion xD (2012 or later)
- Subaru Crosstrek
- Subaru Forester (nonturbo, 2009 or later)
- Subaru Impreza (nonturbo, 2011 or later)

- Subaru Legacy (4-cyl., 2009 or later)
- Subaru Outback (4-cyl., 2009 or later)
- Toyota Camry (4-cyl., 2010 or later)
- Toyota Corolla (2010 or later)

- Toyota Matrix (2010 or later)
- Toyota Prius (2010 or later)
- Toyota RAV4 (4-cyl., non-3rd row, 2004 or later)
- Volkswagen Jetta (2009-14)

- Volkswagen Jetta
- Volkswagen SportWagen
- Volkswagen Rabbit (2009)/Golf (2010-14)
- Volkswagen Tiguan (2013 or later)
- Volvo S60 (2012 or later)

Going for a Cruze

This compact car boasts big-car virtues in a small package

OVERALL
SCORE
66



COMPACT SEDANS

Chevrolet Cruze

CHEVROLET HAS TAKEN the best attributes of its accomplished Malibu and Impala sedans and tucked them into a compact, fuel-efficient package. Boasting a comfortable ride,

a relatively roomy interior, and effortless power, the Cruze is a competitive entry in a class dominated by Asian cars.

With its 2016 redesign, the Cruze is more technologically advanced—and more capable—with a road-test score near the top of its class.

All of that adds to the Cruze's maturity. It shines with an uncanny ability to swallow bumps. It's also quiet, and there's no need to rev the turbo

engine to get it going. But the Cruze doesn't like to be rushed, preferring relaxed cruising to sporty handling.

Inside the somewhat drab cabin, we appreciate the relatively roomy rear seat, power driver's seat, and heated front seats. The standard 7-inch touch-screen infotainment system with Apple CarPlay and Android Auto compatibility is also handy.

A rear camera is standard. Blind-spot monitoring and cross-traffic alert are a \$495 option. Forward-collision warning requires the top-tier Premier trim. Automatic emergency braking is not available.

The Cruze imparts the feeling of an enjoyable midsize sedan but in a compact package—which is what many new-car customers may seek.

TESTED VEHICLE	
ROAD-TEST SCORE	77
HIGHS	Ride, quietness, among roomiest in class
LOWS	Front-seat support, rear visibility
POWER-TRAIN	153-hp, 1.4-liter 4-cylinder turbo engine; 6-speed automatic transmission; front-wheel drive
FUEL	30 mpg
PRICE AS TESTED	\$23,145

More Fizzle Than Spark

This subcompact hatchback doesn't know what it wants to be when it grows up

OVERALL
SCORE
48



SUBCOMPACT CARS

Chevrolet Spark

MORE OF A MICROCAR than a proper subcompact like the Honda Fit or Scion iA, the Spark seems ideal for city drivers or students on a budget. But the Spark gets only a few things right.

An elevated driving position makes you feel in command and lets you see parking spots from afar. The Spark's steering is light—which works when darting through tight traffic—but can be disconcerting at highway speeds. Parking is a cinch, by virtue of a wee footprint and tight turning circle.

But the stiff, unyielding ride; engine drone; and lackluster acceleration make you feel shortchanged. The backseat

barely fits a backpack. Given that the 33 mpg is no better than larger cars, and the \$16,000 price isn't exactly cheap, where's the allure?

One gesture to millennials: A standard touch-screen infotainment system enables Bluetooth pairing and steering wheel controls. Compatibility with Apple CarPlay and Android Auto allows easy access to some apps, including navigation.

As for safety features, a rear camera is standard. Forward-collision warning is available on the top 2LT trim, but automatic emergency braking is surprisingly absent.

We recommend that you upgrade to a proper compact car rather than this pretender. Other inexpensive cars are quicker, quieter, roomier, and more sparing with fuel.

TESTED VEHICLE	
ROAD-TEST SCORE	47
HIGHS	Easy to park, braking
LOWS	Acceleration, ride, noise, seat comfort, driving position
POWER-TRAIN	98-hp, 1.4-liter 4-cylinder engine; continuously variable transmission; front-wheel drive
FUEL	33 mpg
PRICE AS TESTED	\$16,660



Scan these pages using the Blippar app to see how the cars perform on our test track (see page 7 for details).

Elantra Lacks Élan

Improved fuel economy and a user-friendly interior highlight the Elantra's redesign, but ride and refinement lag the competition

OVERALL
SCORE
66



COMPACT SEDANS

Hyundai Elantra

FOR MANY PEOPLE, getting from point A to point B in an automotive appliance is just fine. But you can do better.

Start with the Elantra's handling, which is safe and secure,

but it never feels inspired to provide any driving thrills. Comfortwise, the ride absorbs lesser road bumps, but hit a sharp dip and the suspension loses its composure.

No trim level feels loaded with power, whether it's the SE's and Limited's 147-hp 2.0-liter or the "Eco" version's 128-hp, 1.4-liter turbo. Acceleration is leisurely for the compact segment, and getting up to speed requires pushing the

engine hard, which elicits an unpleasant buzz. On the flip side, our tested SE model turned in an exemplary 33 mpg overall.

Another sour note: Road noise is pronounced, making the car feel less substantial.

The standard cloth seats lack lower-back support; we'd pick the Limited's more supportive power leather seats.

The Elantra's interior remains a bastion of straightforward controls with a clear, uncomplicated infotainment touch screen. Bluetooth and a rearview camera come with the Popular Equipment package, topping off at a still-reasonable \$20,090.

Though the new Elantra is roomy, frugal, and user-friendly, driving this ordinary car lacks any gratifying experience.

TESTED VEHICLE

ROAD-TEST SCORE	66
HIGHS	Relatively roomy, easy controls, fuel economy
LOWS	Engine noise, ride, front-seat comfort
POWER-TRAIN	147-hp, 2.0-liter 4-cylinder engine; 6-speed automatic transmission; front-wheel drive
FUEL	33 mpg
PRICE AS TESTED	\$20,090

A Maximum Mini

The largest member of the Mini family, the Clubman retains the brand's fun and funky nature

OVERALL
SCORE
63



COMPACT HATCHBACKS

Mini Clubman

CAN A MINI with the footprint of a VW Golf still be called a Mini? In the case of the Clubman, the answer is yes, because it's still blessed with the charm that makes this brand unique.

For instance, the cargo-van rear doors compromise both cargo loading and rear visibility, but wow, do they look cool.

The base model, with its 134-hp, 1.5-liter turbo three-cylinder, sends decent power to the front wheels; a sportier 189-hp, 2.0-liter turbo-four and all-wheel drive are optional.

The base engine feels stronger than its poky 0 to 60 mph time of 10.5 seconds. It's a bit hesitant from a full stop, but

there's midrange passing clout backed by a gravelly engine note. We measured 28 mpg, disappointing for a small car.

Despite being the largest Mini, the Clubman hasn't lost the Mini fun factor. It hugs the road, turns into corners with verve, and snakes through the avoidance maneuver at our track with ease. The ride is firm, without transmitting the kidney punches of its brethren.

A fun and funky interior features chrome-tipped toggle switches and a round infotainment screen—which requires a steep learning curve to comprehend. The front seats are comfortable and supportive, and the rear seat is hospitable for adults, although head, knee, and foot room are stingy.

Other small cars are more practical, but few are more fun.

TESTED VEHICLE

ROAD-TEST SCORE	67
HIGHS	Handling, character, roomier than any other Mini
LOWS	Ride, noise, visibility, controls have steep learning curve
POWER-TRAIN	134-hp, 1.5-liter 3-cylinder turbo engine; 6-speed automatic transmission; front-wheel drive
FUEL	28 mpg
PRICE AS TESTED	\$31,550

RATINGS



Honda Fit EX

Small Cars of all Stripes and Shapes

Scores in context: Recommended models did well in our road-test score and had average or better predicted reliability. They also performed adequately in government or insurance industry crash tests, if tested. The Overall Score factors in road-test score, reliability, safety, and owner satisfaction. For full Ratings, available to online subscribers, check out [ConsumerReports.org/cars](https://www.consumerreports.org/cars)

☒ Recommended

● Better ← → Worse ●

		MAKE & MODEL	PRICE		RELIABILITY	SATISFACTION	SAFETY					ROAD-TEST RESULTS					
Recommended	Rank		As Tested	OVERALL SCORE	Predicted	Owner	Front Crash Prevention	Road-Test Score	Overall MPG	Acceleration, 0-60 MPH, Sec.	Dry Braking, 60-0 MPH, Ft.	Avoidance-Maneuver Speed, MPH	Routine Handling	Ride/Noise	Seat Comfort, Front/Rear	Controls	Luggage, Suitcases-Buffets

SUBCOMPACT CARS

<input checked="" type="checkbox"/>	1	Honda Fit EX	\$19,025	67	○	●	NA	67	33	10.0	132	55.0	●	●/●	●/●	●	2+2
<input checked="" type="checkbox"/>	2	Nissan Versa Note SV	\$17,495	66	●	●	NA	61	31	10.9	135	54.5	●	○/○	○/●	●	1+2
<input checked="" type="checkbox"/>	3	Chevrolet Sonic LT (1.8L)	\$17,290	65	○	●	Opt.	66	28	9.3	128	54.0	●	○/○	○/●	●	3+0
<input checked="" type="checkbox"/>	4	Scion iA	\$17,570	65	●*	●*	Std.	60	35	10.3	139	55.0	●	○/○	○/●	○	3+0
!	5	Hyundai Accent Sport (MT)	\$16,695	64	●	●	NA	68	32	8.5	136	55.0	●	○/○	●/○	●	2+2
	6	Toyota Yaris LE	\$17,290	55	●*	○	NA	47	32	10.8	137	54.0	○	○/●	○/○	●	1+1
	7	Kia Rio EX (hatchback)	\$17,475	51	●	●	NA	62	29	9.9	136	55.0	●	○/○	●/○	●	1+3
!	8	Nissan Versa SV (sedan)	\$15,490	48	○*	●	NA	56	32	10.6	140	54.5	○	○/●	○/●	●	4+0
	9	Chevrolet Spark 1LT	\$16,660	48	●*	○*	Opt.	47	33	12.0	129	57.5	○	●/●	○/●	●	1+1
	10	Ford Fiesta SES (hatchback, 4-cyl MT)	\$17,795	44	●	●	NA	66	32	10.7	134	55.0	●	○/●	●/●	○	1+2
!	11	Mitsubishi Mirage ES	\$16,050	34	○*	○	NA	29	37	12.1	138	52.5	●	○/●	○/○	●	1+1

COMPACT SEDANS

<input checked="" type="checkbox"/>	1	Subaru Impreza Premium	\$21,345	79	●	○	Opt.	79	27	9.2	129	52.5	●	●/○	●/○	●	2+2
<input checked="" type="checkbox"/>	2	Mazda3 i Touring (2.0L)	\$21,740	74	●	●	Opt.	72	33	8.3	133	54.5	●	○/○	●/○	●	2+3
<input checked="" type="checkbox"/>	3	Honda Civic LX	\$20,275	73	○*	●*	Opt.	76	32	8.7	129	56.0	●	●/○	○/○	●	3+1
<input checked="" type="checkbox"/>	4	Toyota Corolla LE Plus	\$20,652	72	●	●	NA	71	32	9.9	138	54.5	○	●/○	○/●	●	3+1
<input checked="" type="checkbox"/>	5	Kia Forte LX (1.8L)	\$19,570	71	○	○	NA	78	28	10.1	128	52.5	●	●/●	●/○	●	3+1
<input checked="" type="checkbox"/>	6	Volkswagen Jetta SE (1.4T)	\$21,235	71	○	○	Opt.	79	32	9.1	131	53.0	●	●/●	●/●	●	3+2
	7	Chevrolet Cruze LT	\$23,145	66	●*	○*	Opt.	77	30	8.5	125	56.0	○	●/●	○/○	●	3+1
	8	Hyundai Elantra SE (2.0L)	\$20,090	66	○*	○*	Opt.	66	33	9.9	133	54.0	○	○/○	○/○	●	3+1
	9	Ford Focus SE (2.0L)	\$20,485	51	●	○	NA	67	29	9.8	128	51.5	●	●/●	○/○	●	2+1

COMPACT HATCHBACKS/WAGONS

<input checked="" type="checkbox"/>	1	Kia Soul Plus	\$24,115	72	●	●	Opt.	74	26	8.8	127	53.5	●	○/○	●/●	●	1+1
	2	Volkswagen Golf SE (1.8T)	\$25,315	63	●	●	Opt.	82	28	8.7	130	54.0	●	●/●	●/●	●	2+1
	3	Mini Clubman Base (1.5T)	\$31,550	63	○*	●*	Opt.	67	28	10.5	129	56.5	●	○/○	●/●	○	1+2
!	4	Fiat 500L Easy**	\$24,595	31	●	●	NA	50	27	9.5	132	51.5	●	●/○	○/●	○	2+2

! Subpar crash-test results. *Based on limited data. ** Powertrain has changed since last tested.

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September Smorgasbord

The promos for these foods and drink will make you stop and think

Frankfooter!

Thanks for clarifying, Ikea! Now we don't have to worry about where to get all that mustard.

Submitted by Bruce Fernandez of Poway, Calif.



*not actual size

Pasta Before Progeny

Way to set up some *really* unhealthy sibling rivalry.

Submitted by Debi Ziebert of N. Royalton, Ohio.



Table for Five

So the sixth person in your party gets to dine alone?

Submitted by Bob Waas of Ocala, Fla.

School Spirit

This really isn't the kind of "proof" you want your college student working on.

Submitted by Steve Robins of Cary, Ill.



SHARE Be on the lookout for goofs and glitches like these. Share them with us—by email at SellingIt@cro.consumer.org;

by mail to Selling It, Consumer Reports, 101 Truman Ave., Yonkers, NY 10703; or by social media using the hashtag #CRSellingIt—and we might publish yours. Please include key information, such as the publication's name and date.

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How to Use the Canada Extra Section

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

You can use this section in either of two ways: Start with the main report, read about the products that interest you, and turn to this section to find whether they're sold—and for what price—in Canada. Or start here, find products sold in Canada whose price and overall score appear promising, and read more about them in the main report and full Ratings chart; page numbers appear with each Canadian report. (For some products, the Canadian model designation differs slightly from the one used in the U.S.)

In most cases, the prices we list here are

the approximate retail in Canadian dollars; manufacturers' list prices are indicated by an asterisk (*). Check marks identify CR Best Buys or recommended products in the U.S. Ratings. "NA" in a chart means that information wasn't available from the manufacturer. We include, in the Contact Info list on page 36d, the manufacturer's phone number and web address in Canada so that you can call or go online to get information on a model you can't find in the stores. (Many products that aren't available in Canadian stores can be bought online.)

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

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

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

TVs

Thirty-two of the tested TVs are available, including 20 of the recommended models. **Report and Ratings, pages 34-43**

Rec.	Rank	BRAND & MODEL	PRICE	SCORE
------	------	---------------	-------	-------

A. 60-INCH AND LARGER

<input checked="" type="checkbox"/>	1	Samsung UN65KS8500	\$4,800	77
<input checked="" type="checkbox"/>	2	LG 60UH8500	\$3,200	75
<input checked="" type="checkbox"/>	3	LG 65UF9500	\$4,000	75
<input checked="" type="checkbox"/>	4	Samsung UN65KS9000	\$5,200	75
<input checked="" type="checkbox"/>	5	LG 65UH7700	\$3,100	74
<input checked="" type="checkbox"/>	6	LG 60UH6550	\$2,300	74
<input checked="" type="checkbox"/>	8	Sony XBR-65X930D	\$5,000	71
<input checked="" type="checkbox"/>	9	LG 65UH6150	\$2,300	66
	11	Sony XBR-65X850D	\$3,200	62

B. 55- TO 59-INCH

<input checked="" type="checkbox"/>	2	Samsung UN55KS8000	\$3,200	78
<input checked="" type="checkbox"/>	3	Samsung UN55KS9500	\$4,200	74
<input checked="" type="checkbox"/>	4	Samsung UN55KU6500	\$2,000	74
<input checked="" type="checkbox"/>	5	LG 55UH6550	\$1,900	73
<input checked="" type="checkbox"/>	6	LG 55UH7700	\$2,100	73
<input checked="" type="checkbox"/>	7	Sony XBR-55X930D	\$3,200	71
	8	LG 55LH5750	\$1,000	61
	10	TCL 55US5800	\$2,000	57

Rec.	Rank	BRAND & MODEL	PRICE	SCORE
------	------	---------------	-------	-------

C. 46- TO 52-INCH

<input checked="" type="checkbox"/>	1	Samsung UN49KS8000	\$2,800	73
<input checked="" type="checkbox"/>	2	Samsung UN49KU7500	\$2,100	72
<input checked="" type="checkbox"/>	3	LG 49UH6100	\$1,100	66
	4	Vizio D50u-D1	\$750	63
	6	LG 49LH5700	\$800	58

D. 39- TO 43-INCH

<input checked="" type="checkbox"/>	1	LG 43UH6500	\$1,050	66
	6	Vizio D40-D1	\$400	56

E. 32-INCH

	1	Vizio D32x-D1	\$250	59
	2	Philips 32PFL4609	\$300	58
	3	LG 32LH570B	\$370	57
	4	Insignia NS-32D310NA17	\$200	56

F. 29-INCH AND SMALLER

<input checked="" type="checkbox"/>	1	LG 28LH4530	\$290	59
<input checked="" type="checkbox"/>	2	Vizio D28h-D1	\$220	58
	3	Vizio D24-D1	\$200	54
	4	LG 24LH4530	\$200	52

Refrigerators

Thirty-two of the tested refrigerators are available, including 14 of the recommended models. **Report and Ratings, pages 50-59**

Rec.	Rank	BRAND & MODEL	PRICE	SCORE
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A. THREE-DOOR FRENCH-DOOR

✓	4	GE GFE26GSKSS	\$3,200	84
✓	5	GE GNE29GSKSS	\$3,100	83
✓	6	Samsung RF28HFEDBSR	\$2,000	83
✓	8	Kenmore Elite 74033	\$4,200	81
✓	9	LG LFCS31626S	\$3,000	80
✓	11	GE Café CYE22USHSS	\$4,900	80
	12	GE Café CYE22TSHSS	\$4,600	79
	13	KitchenAid KRFF507ESS	\$3,600	79
	14	Samsung RF20HFENBSR	\$2,200	78
	15	Samsung RF26J7500SR	\$2,200	77
	17	GE Café CFE28TSHSS	\$4,400	75
	18	Samsung RF18HFENBSR	\$1,800	75

B. FOUR-DOOR (OR MORE) FRENCH-DOOR

✓	3	Samsung RF28JBEDBSR	\$4,000	82
✓	4	Samsung RF28HMEDBSR	\$2,500	80
✓	5	Samsung RF23J9011SR	\$4,200	80
	6	LG LMXC23746S	\$3,400	79
	9	Bertazzoni Professional Series REF36X	\$4,300	74
	10	Maytag MFX2876DRM	\$3,800	73
	11	KitchenAid KRMF706EBS	\$4,330	71



GE GFE26GSKSS

Rec.	Rank	BRAND & MODEL	PRICE	SCORE
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C. BOTTOM-FREEZER

	1	Liebherr CS1660	NA	70
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E. BUILT-INS

✓	1	Miele MasterCool KF1903SF	\$12,100	81
✓	2	KitchenAid KBFN502ESS	\$9,520	80
✓	3	Jenn-Air JF42NXFXDE	NA	80
✓	4	KitchenAid KBBR306ESS	\$8,000	80
✓	5	Jenn-Air JB36NXFXRE	\$6,400	80
	6	Miele MasterCool KF1803SF	\$11,600	77
	7	Samsung RS27FDBTNSR	\$8,000	76
	8	Sub-Zero BI-42UFD/S	NA	72
	10	KitchenAid KBFN406ESS	\$10,000	69
	11	Jenn-Air JF36NXFXDE	NA	69
	12	Sub-Zero BI42SIDS/PH	NA	69
	13	Sub-Zero IT36CI	NA	67



Samsung RF28JBEDBSR

Recalls

2003-2013 Mitsubishi models

On certain vehicles, road salt can corrode the front crossmember assembly, which may ultimately lead to separation of the control arm, allowing the wheel to rotate off its designed axis. That could result in a loss of vehicle control.

Models 64,305 2003-2006 Lancer and 2003-2013 Outlander vehicles.

What to Do Have the dealer inspect the crossmember and apply an anti-corrosion treatment or replace the assembly, as required.

2006-2012 Kia Sedona models

On certain vehicles, road salt can corrode the front control arms, which may ultimately lead to failure and the loss of vehicle control.

Models 14,091 vehicles.

What to Do For 2006-2007 model year vehicles, have the dealer replace the front lower control arms if they were not previously replaced under recall 2013-388. For 2008-2012 model year vehicles, have the dealer inspect the control arms and either apply an anti-corrosion treatment or replace the control arms, as necessary. Note: This recall supersedes recall 2013-388.

2006-2014 Kia Sedona models

On certain vehicles, the secondary hood latch could corrode, which may result in the mechanical binding of the latch allowing the secondary hood latch to remain in the open position when the hood is closed. There is a potential that the secondary hood latch may not hold the hood closed as designed while the vehicle is in motion, which could compromise the driver's ability to see the road and other vehicles, as well as cause damage to the windshield.

Models 23,397 vehicles.

What to Do Have the dealer replace the secondary latch with an improved secondary latch that has an enhanced corrosion coating.

2008-2009 Audi models

On certain vehicles, a power-supply component within the airbag control unit may corrode and cause the unit to fail. Safety systems such as seat-belt pretensioners and airbags

may not deploy in the event of a crash.

Models 9,700 2008-2009 A4, A5, and Q5 vehicles.

What to Do Have the dealer replace the affected airbag control module.

2009-2016 Dodge Journey models

On certain vehicles, if the vehicle is exposed to extended cold-weather conditions, the power-steering return hose could rupture at engine start-up, resulting in the loss of power-steering assist and increased steering effort.

Models 186,767 vehicles.

What to Do Have the dealer replace the return-side power-steering lines with new parts that are validated for extreme cold-weather performance.



Hyundai Santa Fe

2010-2011 Hyundai Santa Fe models

On certain vehicles, the front suspension coil springs may be susceptible to corrosion and—over time—failure, damaging the front tires and causing rapid air loss and/or tire failure.

Models 40,288 vehicles.

What to Do Have the dealer inspect and repair or replace coil springs as necessary, under a special service campaign.

2011 Hyundai models

On certain vehicles, the front suspension coil springs may be susceptible to corrosion, possibly causing the springs to fail—damaging the front tires and causing rapid air loss and/or tire failure.

Models 14,866 Elantra and Sonata vehicles.

What to Do Have the dealer inspect and repair or replace coil springs, as necessary. Note: This recall supersedes recall 2015-469. Vehicles repaired under the previous recall will require reinspection and repair.

2011-2012 Ford and Lincoln models

Certain vehicles equipped with a 6-speed automatic transmission may experience an intermittent loss of the transmission output shaft speed (OSS) sensor signal to the powertrain control module (PCM), which could potentially cause an unintended downshift into first gear. The rear tires may slide or lock up until the vehicle slows, resulting in a loss of vehicle control without warning.

Models 17,900 2011-2012 Ford F150, 2012 Ford Expedition and Ford Mustang, and 2012 Lincoln Navigator vehicles.

What to Do Have the dealer reprogram the PCM with updated software.

2011-2017 BMW models

On certain vehicles, the lower anchor bars that are used for installing child seats using the European-ISOFIX-type, rigid-style connector may become damaged during vehicle operation, increasing the risk of injury to the child.

Models 30,023 2011-2017 X3 and 2015-2017 X4 vehicles.

What to Do Have the dealer weld a reinforcing bracket to the lower anchor bars and the vehicle body. Note: Child restraint systems using LATCH-type, flexible-style connectors, which reflect the vast majority of child restraint systems used in Canada, do not cause the problem.

2012-2016 Fiat 500 models

On certain vehicles equipped with a manual transmission, the clutch diaphragm springs may crack or become damaged, resulting in the driver's inability to shift gears or potentially resulting in a loss of motive power.

Models 7,819 vehicles.

What to Do Have the dealer install a pedal travel limiter and a pedal switch.

2014 Ford Explorer models

Certain vehicles may have been built with an improperly welded rear suspension toe link, which could possibly fracture while the vehicle is in motion, resulting in rear suspension noise, difficulty steering, and/or a loss of steering control.

Models 4,615 vehicles.

What to Do Have the dealer replace the rear toe links.

Autos

All of the tested vehicles are available in Canada. **Report and Ratings, pages 66-68**

MAKE & MODEL	PRICE RANGE	ACCELERATION (SEC.)				FUEL ECONOMY (LITERS PER 100 KM)		
		0-50 KM/H	0-100 KM/H	80-100 KM/H	500 METERS	CITY DRIVING	HIGHWAY DRIVING	OVERALL
SUBCOMPACT HATCHBACK								
Chevrolet Spark	\$9,995–\$18,295	4.7	12.7	4.8	21.8	10.3	5.4	7.2
COMPACT SEDANS								
Chevrolet Cruze	\$15,995–\$23,995	3.5	8.9	3.6	19.0	12.2	5.1	7.7
Hyundai Elantra	\$15,999–\$28,799	3.9	10.5	4.5	20.1	11.2	4.8	7.2
COMPACT HATCHBACK								
Mini Clubman	\$24,990–\$29,990	4.1	11.0	4.0	20.5	12.7	5.8	8.4



Chevrolet Cruze



Mini Clubman

Contact Info

How to reach manufacturers in Canada.

Bertazzoni

Western Canada
866-905-0010
Eastern Canada
800-561-7265
us.bertazzoni.com

GE

888-261-2088
geappliances.ca

Insignia

866-237-8289
bestbuy.ca

Jenn-Air

800-688-2002
jennair.ca

Kenmore

800-267-3277
sears.ca

KitchenAid

800-807-6777
kitchenaid.ca

LG

888-542-2623
lg.ca

Liebherr

888-543-2437
liebherr.ca

Maytag

800-688-2002
maytag.ca

Miele

800-643-5381
miele.ca

Philips

866-771-4018
philips.ca

Samsung

800-726-7864
samsung.ca

Sharp

800-567-4277
sharp.com

Sony

877-899-7669
store.sony.com

Sub-Zero

800-222-7820
subzero-wolf.com

TCL

877-300-8837
tclusa.com

Viking

888-845-4641
vikingrange.com

Vizio

877-878-4946
vizio.ca